

December 2, 2022
ECT No. 220238-0200

Mr. Ashton Martin
Free State Solar Project, LLC
422 Admiral Boulevard
Kansas City, Missouri 64106

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

Dear Mr. Martin:

Environmental Consulting & Technology, Inc. (ECT) prepared this addendum letter for the Phase I Environmental Site Assessment (ESA), dated March 18, 2022, which was completed for Free State Solar Project located in Douglas County, Kansas ("Subject Property"). The purpose of this addendum letter was to provide a summary of state records received subsequent to the issuance and finalization of the Phase I ESA. This letter has been prepared to amend the original findings of the March 2022 Phase I ESA.

The Kansas Department of Health and Environment (KDHE) provided electronic copies of available records for the Midland Feed Store (also known as Capital City Oil) at 1401 North 1941 Diagonal Road in Lawrence, Kansas in May 2022. This property will hereafter be referred to as "the former gasoline station." The former gasoline station is situated immediately north of Ottawa Cooperative Association - Midland (also known as Midland Coop) at 1941 Diagonal Road (hereafter referred to as the "coop property"). At the time of the March 2022 Phase I ESA, the regulatory database listings could not be differentiated based on the limited data available. Based on the newly provided state records, the former gasoline station included the southeast corner of Highway 24 and East 1400 Road (see [Figure](#)). A summary of the records received has been included below, as well as the Environmental Professional (EP)'s updated opinion.

Phase I ESA completed by Terracon Consultants, Inc. (Terracon); July 28, 2021

A Phase I ESA dated July 28, 2021 was prepared by Terracon for the former gasoline station. At the time of the 2021 reconnaissance, this property consisted of approximately 0.4 acres of land, developed with a two-story commercial building totaling approximately 2,250 square feet. The building was vacant in 2021, but was previously occupied by Midland Feed Store. The commercial building was constructed in the 1920s or 1930s. A historical gasoline station operated on the property with the store. During the 2021 reconnaissance, five aboveground storage tanks (ASTs) within secondary containment were connected via underground piping to six associated fuel dispensers observed on the property to the west and north of the building, respectively. These ASTs were reportedly installed no later than 1967. A septic system was reportedly present with an associated leach field on the eastern adjacent property. Terracon identified the historical use of the property

as a gasoline station with the unknown integrity of the underground piping as a Recognized Environmental Condition (REC). Additionally, Terracon identified the historical use of agricultural chemicals and storage on the property as a separate REC.

Limited Site Investigation (LSI) completed by Terracon; July 28, 2021

Terracon completed this investigation to determine if the RECs described above had impacted the former gasoline station property's subsurface. On July 16, 2021, a geophysical survey was completed using ground penetrating radar (GPR) and electromagnetic (EM) technology in an effort to identify any potential underground storage tanks (USTs) and/or evidence of historical USTs. No obvious indicators of current or former USTs were observed. Subsequent to the geophysical survey, four soil borings (SB-1 through SB-4) were advanced 25 to 30 feet below ground surface (bgs), including one in the area of the dispensers (SB-1), one in the area of the ASTs (SB-2), one on the southernmost portion of the property (SB-3), and one to the southeast of the building (SB-4). The closest boring relative to the Subject Property was SB-1 at approximately 175 feet southeast of of Strong parcel no. 061-01-0-00-00-012.00-0. Remaining borings were a minimum of 200 feet south-southeast of the Subject Property (Strong parcel no. 061-01-0-00-00-012.00-0) to 375 feet north-northeast (Strong parcel no. 061-12-0-00-00-003.00-0).

Each soil sample was field screened for volatiles using a photoionization detector (PID). PID readings ranged from 0 to 560.3 parts per million (ppm) (SB-1, 15-20 feet bgs). Additionally, groundwater samples were collected from borings SB-1, SB-2, and SB-4; groundwater in these borings was encountered at approximately 20 feet bgs. No groundwater was encountered in boring SB-3. Soil and groundwater samples collected from SB-1 and SB-2 were analyzed for volatile organic compounds (VOCs), lead, and total petroleum hydrocarbons (TPH) Low, Mid, and High-Range Hydrocarbons (LRH, MRH, and HRH). Soil samples collected from SB-3, and soil and groundwater samples collected from SB-4 were submitted for laboratory analysis of pesticides, herbicides, and ammonia nitrogen. Multiple VOCs, TPH, and/or lead were detected in soil and groundwater samples from SB-1 and SB-2 at concentrations exceeding applicable criteria. Pesticides and herbicides were not detected above laboratory detection limits in soil samples collected from SB-3 or SB-4, nor in the groundwater sample collected from SB-4. Ammonia nitrogen was detected in SB-3 and SB-4 soil and/or groundwater samples above laboratory detection limits, but below applicable criteria. Based on the analytical data, Terracon recommended that the property be enrolled in the KDHE Voluntary Cleanup and Property Redevelopment Program (VCPRP). A VCPRP application for the property was submitted by Environmental Works in March 2022.

Copies of reviewed documents are included in the appendices ([Regulatory Documentation](#)).

Therefore, given the distance of this property relative to the Subject Property and its hydraulically down to cross-gradient location, it is the opinion of the EP that the former gasoline station does not constitute a REC.

Mr. Ashton Martin
Free State Solar Project, LLC
December 2, 2022
Page 3

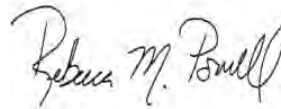
Please feel free to contact us should you have any questions concerning this letter, or if we may assist you in any other matter.

Sincerely,

Environmental Consulting & Technology, Inc.



Lindsay R. Landin
Associate Project Manager



Rebecca M. Powell
National Due Diligence Practice Leader
Environmental Professional

Appendix A

Figure



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

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager:	BD
Drawn by:	KL
Checked by:	KL
Approved by:	BD

Project No.	02217262
Scale:	AS SHOWN
File Name:	Click
Date:	7/19/2021

Terracon
 15620 W 113th St
 Lenexa, KS 66219-5102

SITE DIAGRAM

Midland Feed Store LSI
 1401 N 1941 Diagonal Road
 Lawrence, KS

Exhibit	2
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Appendix B

Regulatory Documentation



ENVIRONMENTAL WORKS

Science. Safety. Grit. Ingenuity.

C4-023-73812, 2.0

March 2, 2022

Voluntary Cleanup Coordinator,
Remedial Section
Kansas Department of Health and Environment
Bureau of Environmental Remediation
1000 SW Jackson, Suite 410
Topeka, Kansas 66612-1367

RECEIVED
MAR 07 2022
BUREAU OF ENVIRONMENTAL REMEDIATION

**RE: Voluntary Cleanup and Property Redevelopment Program Application
1401 N. 1941 Diagonal Road, Lawrence, Kansas 66044**

Environmental Works, Inc. (EWI), on behalf of The Mid, LLC, is submitting the enclosed Voluntary Cleanup and Property Redevelopment Program Application (VCPRP) Application for the property located at the above-name address.

The following documents are also included in this package:

- \$200 application fee payable to the Kansas Department of Health and Environment VCPRP.
- A site diagram.
- A Phase I Environmental Assessment (ESA) report for the subject property dated July 28, 2021 provided on the enclosed flash drive.
- A Limited Site Investigation (LSI) report for the subject property dated July 28, 2021 provided on the enclosed flash drive.

The Phase I ESA contains an Executive Summary which includes an overview of the site history as requested in Section I of the VCPRP Application. Information regarding known contaminants and recently sampled soil and groundwater is included in the LSI. In brief, the subject property consists of one 0.42-acre parcel with a 2,250 square-foot building. Three 10,000-gallon aboveground storage tanks (ASTs), one 500-gallon AST, one 250-gallon AST and six petroleum dispensers are located on the facility. COCs identified in soil and/or groundwater at the Site during the 2021 LSI include total petroleum hydrocarbons, volatile organic compounds and lead.



environmentalworks.com



ER: 877.827.9500



816.285.8410



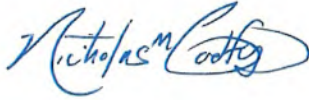
1731 Locust St. | Kansas City, MO 64108

SPRINGFIELD, MO · KANSAS CITY · ST. LOUIS · NW ARKANSAS · TULSA · MEMPHIS · DECATUR, IL · DENVER

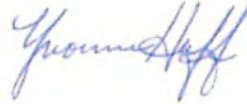
March 2, 2022

Thank you for your consideration in enrolling the Site in the VCPRP. If you have any questions, including site eligibility, please contact one of the below at (816) 285-8432.

Sincerely,
ENVIRONMENTAL WORKS, INC.



Nick Godfrey
Program Manager



Yvonne Huff, R.G.
Project Manager

Enclosures

cc: Ms. Brandy Sutton, The Mid, LLC (application only)



KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
BUREAU OF ENVIRONMENTAL REMEDIATION Application
 to Participate
VOLUNTARY CLEANUP AND PROPERTY REDEVELOPMENT
PROGRAM



Application Form Instructions: Please type or print legibly. Incomplete applications and/or applications not accompanied by the required \$200 may be returned to the applicant. If any of the information requested is not applicable, enter "NA" in the blank. **VCPRP Application Form Page 1 of 3**

SECTION I PROPERTY INFORMATION

Property Name (facility or owner name) Midland Farm and Feed
 Property Address 1401 N. 1941 Diagonal Road
 City (or Township) Lawrence County Douglas Zip Code 66044
 Legal Description: CB 7-29-97 WITH 3Z00076 OKW/CPA 7-12-20 BEG 65(S) & 33 E OF NW COR NW/4, SELY 140(S), S 120(S), W 132(S), N 155(S) TO POB 155(S) X 140(S)(I)
 Township 12 South Range 20 E (E/W) SectionQuarter(s) Sec 7, NW 1/4, NW 1/4, NW 1/4
 Tax Lot # PIN 23-073-07-0-00-00-006 00-0 Property Size (in acres) 0.42

*** Please include a map that clearly depicts the property boundaries (see instructions).**

Briefly describe the historical use of property with corresponding years of operation _____
The property was operated as Midland Feed Store beginning in the 1920s or 1930s. The building was used for retail sale of farm supplies and gasoline and was occasionally used as a community center. By 1967, the current aboveground storage tank system was constructed for sale of retail petroleum.

Current use of property: vacant property

Future use of property (if known): retail petroleum sales

Land use surrounding property (check most applicable description or combination of descriptions):
 Residential Industrial Commercial Agricultural Other (explain) _____

SECTION II APPLICANT INFORMATION

Applicant Name Brandy Sutton Title Commercial Property Manager
 Organization The Mid, LLC
 Mailing Address PO Box 1797
 City Lawrence State Kansas Zip Code 66044
 Email Address bsutton@firstmanagementinc.com
 Telephone (785) 371-4352 Fax (785) 841-8492

Applicant's interest in or relation to property (check all that apply):

- Owner of property
- Previous owner of property
- Prospective owner of property
- Disposed of contaminants on property
- Acquired by default (bankruptcy, tax delinquency, abandonment, or other circumstances)
- Other _____
- Operates facility on property
- Previously operated facility on property
- Prospective facility owner or operator on property
- Legal entity controlling property

If Applicant is not the owner of the property, provide the following information:

Owner's Name _____ Organization _____
 Owner's Mailing Address _____
 City _____ State _____ Zip Code _____
 Telephone () _____ Fax () _____

Kansas Department of Health and Environment
 Bureau of Environmental Remediation **Voluntary**
Cleanup and Property Redevelopment Program
Application to Participate
VCPRP Application Form Page 2 of 3

SECTION III NATURE OF POTENTIAL CONTAMINATION

Chemical products/ wastes present, used, or stored at the property (check all that you are aware of):

- | | | |
|--|---|--|
| <input type="radio"/> Solvents/degreasers | <input type="radio"/> Pesticides (herbicides, insecticides, etc.) | <input type="radio"/> Metals |
| <input checked="" type="checkbox"/> Petroleum products | <input type="radio"/> Inorganics (salt, soda ash, etc.) | <input type="radio"/> PCBs |
| <input type="radio"/> Acids/bases | <input type="radio"/> Fertilizer | <input type="radio"/> Other (list) _____ |
| <input type="radio"/> Paint/paint wastes | <input type="radio"/> Sludge | _____ |

Media potentially contaminated (check all that apply and indicate if contamination is confirmed or suspected):

- | | | |
|---|---|---------------------------------|
| <input type="radio"/> Surface Soil | <input type="radio"/> Confirmed | <input type="radio"/> Suspected |
| <input checked="" type="checkbox"/> Subsurface Soil | <input checked="" type="checkbox"/> Confirmed | <input type="radio"/> Suspected |
| <input checked="" type="checkbox"/> Ground Water | <input checked="" type="checkbox"/> Confirmed | <input type="radio"/> Suspected |
| <input type="radio"/> Surface Water | <input type="radio"/> Confirmed | <input type="radio"/> Suspected |

Known or suspected source(s) of contaminants (check all that apply):

- | | | |
|---|--|--|
| <input type="radio"/> Surface spill or discharge | <input type="radio"/> Underground tank/piping | <input type="radio"/> Lagoons or ponds |
| <input type="radio"/> Dumping or burial of waste | <input checked="" type="checkbox"/> Above ground tank/piping | <input type="radio"/> Seepage Pit or dry well |
| <input type="radio"/> Septic tank/lateral field | <input type="radio"/> Pipeline release | <input type="radio"/> Source not known |
| <input type="radio"/> Drums or other storage containers | <input type="radio"/> Adjacent property | <input checked="" type="checkbox"/> Other (list) <u>Hist. Operations</u> |

Briefly describe the contamination problem on the property: Petroleum hydrocarbons are present

KDHE Tier 2 RSK residential and non-residential levels near the former dispensers.

List the contaminants, maximum concentrations (if known), and media impacted (if known):

<u>Contaminant(s)</u>	<u>Maximum Concentration (state, or circle units)</u>	<u>Media</u>
Refer to tables and lab reports included in the		(ppb/ppm)
enclosed Limited Site Investigation report		(ppb/ppm)
_____		(ppb/ppm)
_____		(ppb/ppm)

(attach additional sheets if necessary)

Investigative work conducted at the property:

- | | | |
|--|--|--|
| Has investigative work been conducted at the property? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Has an environmental audit been conducted? | Phase I <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| | Phase II <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Have other investigations/sampling been conducted? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Are water wells or monitoring wells located on the property? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Who conducted the investigation? Terracon Consultants, Inc. (2021)

(Copies of all investigative reports and sampling data must be attached and submitted with application)

Kansas Department of Health and Environment
 Bureau of Environmental Remediation **Voluntary
 Cleanup and Property Redevelopment Program**
Application to Participate
VCPRP Application Form Page 3 of 3

SECTION IV ELIGIBILITY INFORMATION

- Yes No Unknown Has a CERCLA investigation been conducted on the property?
- Yes No Unknown Has the property ever been listed, or proposed for listing, on the National Priorities List of Superfund sites established under CERCLA?
- Yes No Unknown Is the property, owner, operator, etc., currently subject to enforcement action issued pursuant to city, county, state, or federal environmental laws?
- Yes No Unknown Is the property currently the subject of environmental orders or agreements with city, county, state, or federal governmental agencies?
- Yes No Unknown Does the property have, or has the property ever had, a RCRA Permit or RCRA Interim Status? If so, provide the following information:

Type (Permit)	Identification Number	Date Issued	Expiration Date

- Yes No Unknown Are or were there activities conducted at the property requiring classification as an EPA or Kansas Hazardous Waste Generator? Provide the Hazardous Waste Generator Identification Number: I.D.# _____
- Yes No Unknown Have activities that are regulated by the Kansas Corporation Commission been conducted at the property?
- Yes No Unknown Does contamination at the property pose an immediate risk of harm to human health or the environment?
- Yes No Unknown Does contamination at the property threaten or impact public or private drinking water wells or surface water used for drinking water supply?

SECTION V APPLICATION TO PARTICIPATE TERMS/APPLICATION SIGNATURE

The undersigned requests technical oversight, guidance and/or assistance from the Kansas Department of Health and Environment (KDHE)/Bureau of Environmental Remediation (BER) with investigation and cleanup of contamination at the property for which this application is being made. A nonrefundable application fee of \$200 is enclosed to cover processing and application review costs incurred by KDHE.

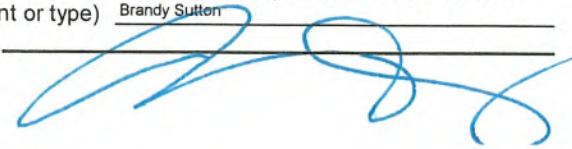
BER shall determine, and notify the undersigned accordingly, if the subject property is eligible for the Voluntary Cleanup and Property Redevelopment Program (VCPRP). If the subject property is determined eligible to participate in the VCPRP, the undersigned shall sign and submit to BER a Voluntary Agreement within 30 days of receiving the Voluntary Agreement from BER. Execution of this application form does not constitute a Voluntary Agreement, and the undersigned shall not be bound to proceed with the voluntary action. By completing and signing this application, the undersigned does not admit or assume liability for investigation or cleanup of the property. The undersigned may terminate this Application for Participation at any time by notifying BER.

The application, attachments and \$200 nonrefundable fee (made payable to the Kansas Department of Health and Environment) should be submitted to:



Voluntary Cleanup Coordinator,
 Remedial Section
 Kansas Department of Health and Environment
 Bureau of Environmental Remediation
 1000 SW Jackson, Suite 410
 Topeka, Kansas 66612-1367

Name: (print or type) Brandy Sutton
 Signature _____

Title: Director of Operations
 Date: 2/2/22

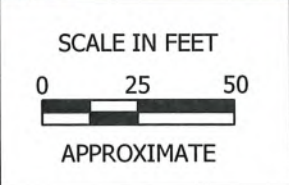




LEGEND	
	= SITE BOUNDARY
	= BORING LOCATION (2021)

CHECKED BY:
Y. HUFF

E.W.I. # 213450
DRAWN BY: JLB
Feb. 28, 2022



SITE DIAGRAM

MIDLAND FARM & FEED
1401 N. 1941 DIAGONAL ROAD
LAWRENCE, KS

FIGURE
1

BER REDEVELOPMENT
RECIEVED
MAR 7, 2022

C4-023-73812, 8.1

Limited Site Investigation

Midland Feed Store
1401 N. 1941 Diagonal road
Lawrence, Douglas County, Kansas

Accepted into
administrative file

July 28, 2021
Terracon Project No. 02217266



Prepared for:
First Management, Inc.
Lawrence, Kansas

Prepared by:
Terracon Consultants, Inc.
Springfield, MO

terracon.com

Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials



July 28, 2021

First Management, Inc.
P.O. Box 1797
Lawrence, KS 66044

Attn: Ms. Brandy L. Sutton
P: (785) 371-4352
E: bsutton@firstmanagementinc.com

Re: **Limited Site Investigation**
Midland Feed Store
1401 N. 1941 Diagonal Road
Lawrence, Douglas County, Kansas 66044
Terracon Project No. 02217266

Dear Ms. Sutton:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Limited Site Investigation (LSI) report for the above-referenced site. This assessment was performed in general accordance with Terracon's proposal (P02217266) dated July 14, 2021.

Terracon appreciates the opportunity to provide environmental services to you on this project. Should you have any questions or require additional information, please contact our office.

Sincerely,
Terracon Consultants, Inc.


Kameron L. Long
Staff Scientist

for: 
Karen Rieker, P.E.
Senior Engineer

Terracon Consultants Inc. 4765 W. Junction Street Springfield, Missouri 65802

P 417-864-5100 F 417-864-0871 terracon.com



Environmental



Facilities



Geotechnical



Materials

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APPENDIX A – EXHIBITS

- Exhibit 1 Topographic Map
- Exhibit 2 Site Diagram

APPENDIX B – BORING LOGS

APPENDIX C – ANALYTICAL DATA TABLES

- Table 1 Summary of Soil Analytical Data (SB-1 and SB-2)
- Table 2 Summary of Soil Analytical Data (SB-3 and SB-4)
- Table 3 Summary of Groundwater Analytical Data (TW-1 and TW-2)
- Table 4 Summary of Groundwater Analytical Data (TW-4)

APPENDIX D – ANALYTICAL LABORATORY REPORTS AND CHAIN OF CUSTODY

APPENDIX E – PRIVATE LOCATE / GROUND PENETRATING RADAR (GPR)

LIMITED SITE INVESTIGATION
Midland Feed Store
1401 N. 1941 Diagonal Road
Lawrence, Douglas County, Kansas 66044
Terracon Project No. 02217266
July 28, 2021

1.0 SITE DESCRIPTION

The site is located at 1401 N 1941 Diagonal Road in Lawrence, Douglas County, Kansas, and is comprised of approximately 0.42 acres of land developed with a two-story commercial building that has a footprint of 2,250 square-feet (ft²). Currently the site building is vacant, but it was formerly occupied by the Midland Feed Store, a retail store that sold farm supplies including bagged feed, fuel, tools and hardware, and vehicle tires.

Exhibit 1 provides a topographic map illustrating the general site location. Exhibit 2 provides a diagram illustrating the site, adjoining properties, and boring locations.

2.0 SCOPE OF SERVICES

Terracon's Limited Site Investigation (LSI) was undertaken at the request of the client to assess potential environmental impacts that may be present as a result of the below-listed site concerns. These concerns are based on historical use of the property as a farm supply store and gasoline station. Please note that Terracon did not conduct a Phase I Environmental Site Assessment (ESA) of the property prior to the LSI, and that the scope of services for this proposal is based solely on information provided by the client.

Site Concern	Description
On-Site ASTs and associated piping	Interview with the client indicated the site historically sold kerosene, gasoline, and diesel.
Former Feed Store that may have sold pesticides, herbicides, and fertilizers	Interview with the client indicated the site historically has been used as a feed store since the early 1900's.

The LSI was conducted to evaluate the presence of indicator contaminants in the on-site soils and/or groundwater associated with the site concerns identified by the client. The scope of services was not intended to identify every chemical possibly associated with the site or determine the extent or magnitude of existing contamination.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, express or implied, regarding the findings, conclusions, or recommendations. Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These LSI services were performed in accordance with the scope of services agreed with you, our client, as reflected in our proposal.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of First Management, Inc. Authorization for use or reliance of this report by another party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization First Management, Inc. and Terracon. Unauthorized distribution or reuse is at First Management, Inc. sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, LSI report, and Terracon's Agreement for Services. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to First Management, Inc. unless otherwise agreed in writing.

3.0 FIELD INVESTIGATION

Terracon conducted the fieldwork under a safety plan developed for this project. Work was performed using United States Environmental Protection Agency (USEPA) Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots. Terracon contacted the Kansas One Call System utility hotline and requested location and markings for all utilities that the service was responsible for before commencing intrusive activities at the site. In addition, a private utility locate company was utilized to clear each boring location.

Terracon mobilized to the site on July 16, 2021, first to perform Ground Penetrating Radar (GPR) and Electromagnetic (EM) survey to identify possible USTs or former UST cavities at the site. Baker Utility Partners, LLC performed the GPR and EM survey and did not see obvious indications of USTs or former UST cavities. Information provided by Baker Utility Partners, LLC can be seen in Appendix E.

Terracon advanced a total of four soil borings (SB-1, SB-2, SB-3, and SB-4) to 25-30 feet below ground surface (bgs) on July 16, 2021. The locations of the soil borings are presented in Exhibit 2, located in Appendix A. Terracon collected soil samples continuously for observation and field screening.

Terracon field screened soil samples for organic vapors using a photoionization detector (PID). This device provides a direct reading in parts per million (ppm) isobutylene equivalents. Upon removal of the sampler from the borehole, Terracon put a portion of each sample in a sealable plastic bag. After a stabilization period, Terracon screened the headspace above the soil using the PID equipped with an approximate 10 electron-volt (eV) ultraviolet lamp source. Terracon calibrated the PID in accordance with the manufacturer's recommendations before the field activities. The boring logs include the field screening results for each soil boring.

Limited Site Investigation

Midland Feed Store ■ Lawrence, Kansas
July 28, 2021 ■ Terracon Project No. 02217266



After the completion of soil borings SB-1, SB-2, and SB-4, Terracon inserted a Geoprobe Systems SP-16 screen sampler to facilitate groundwater sampling using polyethylene tubing and a peristaltic pump. Terracon inserted sections of disposable polyvinyl chloride (PVC) well riser and screen into SB-4 to facilitate the collection of groundwater samples. Groundwater was not encountered in SB-3.

After packaging each sample in laboratory-provided containers, Terracon recorded the sample time on each container label in permanent ink and placed the filled containers in an ice-filled cooler for transport to Terracon's office. At the office, Terracon transferred the samples from the coolers to a refrigerator to await pick-up. A laboratory courier picked up the samples from our office and delivered them to Pace Analytical (Pace) in Lenexa, Kansas, a National Environmental Laboratory Accreditation Program (NELAP)-accredited laboratory.

The soil and groundwater samples collected from SB-1 and SB-2 were analyzed for Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) 8260, Resource Conservation and Recovery Act (RCRA) Lead by EPA 6010, Total petroleum hydrocarbons, Low-Range hydrocarbons (TPH-LRH) by EPA 8260, and Total petroleum hydrocarbons Mid-Range Hydrocarbons (TPH-MRH) and Total petroleum hydrocarbons High-Range Hydrocarbons (TPH-HRH) by EPA 8015. The soil and groundwater samples collected from SB-3 and SB-4 were analyzed for Pesticides by EPA 8081/8141, Herbicides by EPA 8151, and Ammonia Nitrogen (Nitrate as Nitrogen, Nitrite as Nitrogen, Ammonia as Nitrogen) by EPA 350.1/9056/353.2.

At the completion of field activities, Terracon abandoned the borings with soil cuttings mixed with commercial bentonite sealant. The borings were to surface level with similar cover as surrounding area.

4.0 RESULTS OF THE FIELD INVESTIGATION

4.1 Geology/Hydrogeology

The boring logs in Appendix B detail the observed soil lithology. In general, Terracon encountered a brownish sandy lean clay underlain by brownish sandy fat clay to boring termination depth. SB-1, SB-2, and SB-4 were terminated at 25 bgs. SB-3 was terminated as 30 feet bgs.

Groundwater was encountered in SB-1, SB-2, and SB-4 at approximately 20 feet bgs. Groundwater was not encountered in SB-3.

4.2 Field Screening

The field screening results are summarized on the boring logs in Appendix B. PID readings ranged from 0.1 to 560.3 ppm in the soil samples collected and screened.

4.3 INVESTIGATION DERIVED WASTES

No investigative derived waste was generated during the investigation. Soil cuttings were returned to the borings from where they originated. Borings were filled at the surface with similar material as surrounding area.

5.0 ANALYTICAL RESULTS

Soil and groundwater results were compared to the Kansas Department of Health and Environment (KDHE) Tier 2 Risk-Based Standards in Kansas (RSK) for residential and non-residential scenarios provided in the RSK Manual (revised September 2015). The Tier 2 RSK residential screening levels are the lowest risk-based contaminant concentrations calculated by the KDHE Bureau of Environmental Remediation (BER).

According to KDHE, the RSK Manual is only applicable to contaminated properties or sites participating in appropriate state cleanup programs with KDHE/BER oversight. However, soil and groundwater results for this site were compared to KDHE RSKs for general data screening purposes.

Soil results for nitrate-nitrite nitrogen and ammonia nitrogen were screened against the values below 8 inches in depth in a non-vegetated scenario, and for the groundwater pathway as provided in the KDHE Presumptive Remedy Policy – Investigation and Cleanup of Nitrogen at Agriculture-Related Sites in Kansas (December 2014).

5.1 Soil Sample Results

Laboratory analyses were performed for soil samples collected from soil boring SB-1 through SB-4. Soil sample analytical detections are summarized in Table 1 and Table 2 (Appendix C). A copy of the laboratory analytical report and chain-of-custody is provided as Appendix D.

TPH

HRH was detected in SB-1 and SB-2 above laboratory detection limits, but below the residential and non-residential KDHE RSK. LRH was detected above the residential and non-residential KDHE RSK in all pathways in SB-1. MRH was detected above the residential and non-residential KDHE RSK for the soil to groundwater exposure pathway in SB-1.

RCRA Lead

Lead was detected in SB-1 and SB-2 above laboratory detection limits, but below the residential and non-residential KDHE RSK.

VOCs

Benzene was detected above the residential and non-residential soil to groundwater pathway KDHE RSK, but below the residential and non-residential soil pathway KDHE RSK. Multiple other VOCs were detected in SB-1 above laboratory detection limits, but below the residential and non-residential KDHE RSK.

Pesticides

Pesticides were not detected above laboratory detection limits in SB-3 and SB-4.

Herbicides

Herbicides were not detected above laboratory detection limits in SB-3 and SB-4.

Ammonia Nitrogen

Ammonia Nitrogen was detected above laboratory detection limits in SB-3, but below the KDHE RSK value for non-vegetated soils below 8 inches of depth scenario. Nitrate as Nitrogen was detected above laboratory detection limits in SB-4, but below the KDHE RSK value for non-vegetated soils below 8 inches of depth scenario.

5.2 Groundwater Sample Results

Laboratory analyses were performed for the groundwater samples collected from soil borings SB-1, SB-2, and SB-4. Groundwater sample analytical results are summarized in Table 3 and Table 4 (Appendix C). A copy of the laboratory analytical report and chain-of-custody is provided as Appendix D.

TPH

LRH, MRH, and HRH were detected above the residential and non-residential KDHE RSK in TW-1. LRH was detected above laboratory detection limits in TW-2, but below the KDHE RSK.

RCRA Lead

Lead was detected above the residential and non-residential KDHE RSK in TW-1 and TW-2.

VOCs

Benzene, n-Butylbenzene, chloroform, Ethylbenzene, and 1,3,5-Trimethylbenzene were detected in TW-1 above the residential and non-residential KDHE RSK. Isopropylbenzene (Cumene) and n-Propylbenzene were detected above the residential KDHE RSK in TW-1. Sec-Butylbenzene was detected above laboratory detection limits, but below the KDHE RSK in TW-1. Ethylbenzene and Methyl-tert-butyl ether were detected above laboratory detection limits, but below the KDHE RSK in TW-2.

Pesticides

Pesticides were not detected above laboratory detection limits in TW-4.

Herbicides

Herbicides were not detected above laboratory detection limits in TW-4.

Ammonia Nitrogen

Nitrate as Nitrogen was detected above laboratory detection limits, but below the KDHE RSK in TW-4.

6.0 CONCLUSIONS

Based on the scope of services described in this report and subject to the limitations described herein, Terracon concludes the following.

- HRH was detected in SB-1 and SB-2 above laboratory detection limits, but below the residential and non-residential KDHE RSK. LRH was detected above the residential and non-residential KDHE RSK in all pathways in SB-1. MRH was detected above the residential and non-residential KDHE RSK for the soil to groundwater pathway in SB-1. LRH, MRH, and HRH were detected above the residential and non-residential KDHE RSK in TW-1. LRH was detected above laboratory detection limits in TW-2, but below the KDHE RSK.
- Lead was detected in SB-1 and SB-2 above laboratory detection limits, but below the residential and non-residential KDHE RSK. Lead was detected above the residential and non-residential KDHE RSK in TW-1 and TW-2.
- Benzene was detected above the residential and non-residential soil to groundwater pathway KDHE RSK, but below the residential and non-residential soil pathway KDHE RSK. Multiple other VOCs were detected in SB-1 above laboratory detection limits, but below the residential and non-residential KDHE RSK. Benzene, n-Butylbenzene, chloroform, Ethylbenzene, and 1,3,5-Trimethylbenzene were detected in TW-1 above the residential and non-residential KDHE RSK.

Limited Site Investigation

Midland Feed Store ■ Lawrence, Kansas
July 28, 2021 ■ Terracon Project No. 02217266



- Pesticides and Herbicides were not detected in SB-3, SB-4, TW-3, and TW-4 above laboratory detection limits.
- Ammonia Nitrogen was detected above laboratory detection limits in SB-3, but below the KDHE RSK value for non-vegetated soils below 8 inches of depth scenario. Nitrate as Nitrogen was detected above laboratory detection limits in SB-4, but below the KDHE RSK value for non-vegetated soils below 8 inches of depth scenario. Nitrate as Nitrogen was detected above laboratory detection limits, but below the KDHE RSK in TW-4.
- In general, the site appears to have petroleum impact in soil and groundwater above residential and non-residential KDHR RSKs in the vicinity of the ASTs and the fuel pumps.

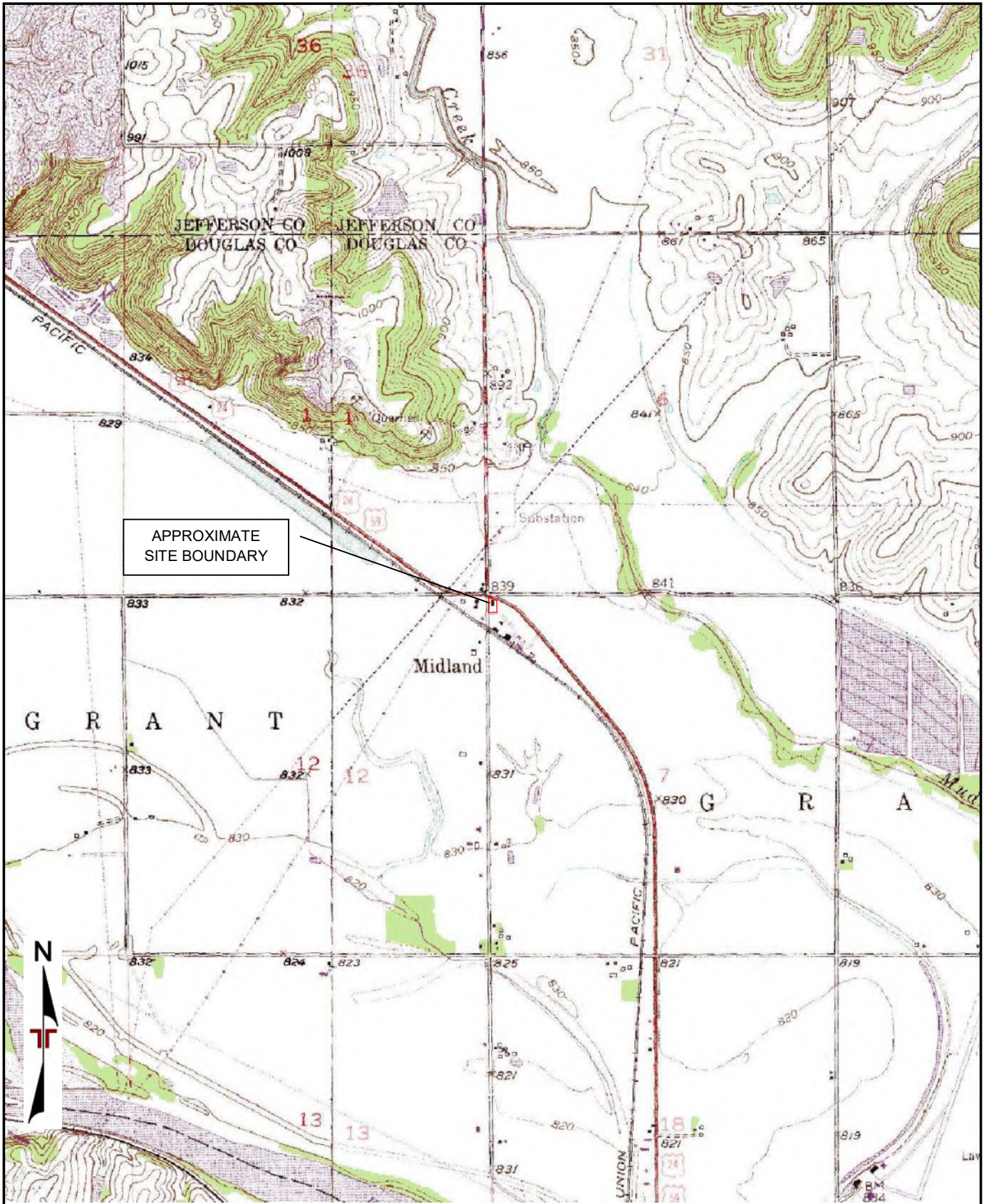
7.0 RECOMMENDATIONS

Although there is no obligation to report these findings, to address the concentrations detected above residential RSKs during this LSI, the client may consider enrolling the site in the KDHE Voluntary Cleanup and Property Redevelopment Program (VCPRP) in pursuit of a No Further Action (NFA) letter. Please note our investigation was limited in nature and was not intended to characterize the site. Requirements to pursue an NFA may involve additional site characterization that would be required to evaluate exposure risks to site occupants. Additional site characterization might include additional borings, installation of groundwater monitoring wells, and quarterly groundwater monitoring. Implementation of activity and land use limitations may be required to avoid physical remediation. The benefits of the issuance of a NFA would provide documentation that environmental issues at the site have been fully evaluated and risks mitigated to the satisfaction of the KDHE.

APPENDIX A – EXHIBITS

Exhibit 1 – Topographic Map

Exhibit 2 – Site Diagram



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
 QUADRANGLES INCLUDE: WILLIAMSTOWN, KS (1/1/1978) and MIDLAND, KS (1/1/1978).

Project Manager: BD	Project No. 02217262	 15620 W 113th St Lenexa, KS 66219-5102	TOPOGRAPHIC MAP	Exhibit
Drawn by: KL	Scale: 1"=2,000'		Midland Feed Store LSI 1401 N 1941 Diagonal Road Lawrence, KS	1
Checked by: KL	File Name: 02217262.dwg			
Approved by: BD	Date: 7/19/2021			



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

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager:	BD
Drawn by:	KL
Checked by:	KL
Approved by:	BD

Project No.	02217262
Scale:	AS SHOWN
File Name:	Click
Date:	7/19/2021

Terracon
 15620 W 113th St
 Lenexa, KS 66219-5102

SITE DIAGRAM

Midland Feed Store LSI
 1401 N 1941 Diagonal Road
 Lawrence, KS

Exhibit	2
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APPENDIX B – SOIL BORING LOGS












General Notes

Unified Soil Classification System

Boring Logs for B-1 through B-3

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING			WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP) Hand Penetrometer	
	Auger	Split Spoon			Water Level After a Specified Period of Time		(T) Torvane	
					Water Level After a Specified Period of Time		(b/f) Standard Penetration Test (blows per foot)	
	Shelby Tube	Macro Core		Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.			(PID) Photo-Ionization Detector	
							(OVA) Organic Vapor Analyzer	
Ring Sampler	Rock Core							
								
Grab Sample	No Recovery							

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests^A

				Soil Classification	
				Group Symbol	Group Name ^B
Coarse Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3^E$	GW	Well-graded gravel ^F
			$Cu < 4$ and/or $1 > Cc > 3^E$	GP	Poorly graded gravel ^F
		Gravels with Fines More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}
		Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}	
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3^E$	SW	Well-graded sand ^I
			$Cu < 6$ and/or $1 > Cc > 3^E$	SP	Poorly graded sand ^I
Sands with Fines More than 12% fines ^D		Fines classify as ML or MH	SM	Silty sand ^{G,H,I}	
		Fines Classify as CL or CH	SC	Clayey sand ^{G,H,I}	
Fine-Grained Soils 50% or more passes the No. 200 sieve	Sils and Clays Liquid limit less than 50	inorganic	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}
		organic	Liquid limit - oven dried < 0.75	OL	Organic clay ^{K,L,M,N}
			Liquid limit - not dried	OH	Organic silt ^{K,L,M,O}
	Sils and Clays Liquid limit 50 or more	inorganic	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}
			PI plots below "A" line	MH	Elastic Silt ^{K,L,M}
		organic	Liquid limit - oven dried < 0.75	OH	Organic clay ^{K,L,M,P}
			Liquid limit - not dried	OT	Organic silt ^{K,L,M,Q}
Highly organic soils	Primarily organic matter, dark in color, and organic odor			PT	Peat

^ABased on the material passing the 3-in. (75-mm) sieve

^BIf field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^CGravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^DSands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E C_u = D_{60}/D_{10} \quad C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^FIf soil contains $\geq 15\%$ sand, add "with sand" to group name.

^GIf fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^HIf fines are organic, add "with organic fines" to group name.

^IIf soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^JIf Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^KIf soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^LIf soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

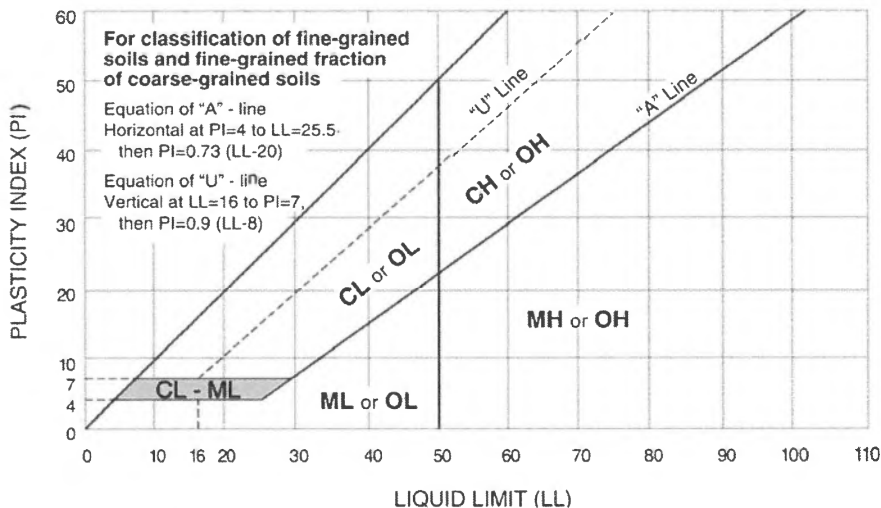
^MIf soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



BORING LOG NO. SB-1

PROJECT: Midland Feed Store

**CLIENT: First Management, Inc.
P.O. Box 1797**

**SITE: 1401 B. 1941 Diagonal Road
Lawrence, Kansas**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG. MIDLAND FEED STORE.GPJ TERRACON. DATATEMPLATE.GDT 7/20/21

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PID (ppm)
	DEPTH MATERIAL DESCRIPTION					
0.5	ASPHALT					0
2.0	FILL - GRAVELLY LEAN CLAY (CL) , brown					0
5.0	SANDY LEAN CLAY (CL) , brown					0
6.0	SANDY LEAN CLAY (CL) , brown, moist					0
12.5	SANDY FAT CLAY (CH) , brown					0
15.0	SANDY FAT CLAY (CH) , brown, weak odor					4.1
20.0	SANDY FAT CLAY (CH) , brownish gray, moderate odor					5.2
20.0	SANDY FAT CLAY (CH) , brownish gray, weak odor, wet		▽			204.9
25.0	SANDY FAT CLAY (CH) , brownish gray, weak odor, wet					560.3
25.0	Boring Terminated at 25 Feet					49.3
						93.7

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic SPT Hammer

Advancement Method: Continuous push.	See Appendices for description of field procedures.	Notes:	
Abandonment Method: Boring backfilled with bentonite chips after delayed ground water sample was taken.	See Appendices for description of laboratory procedures and additional data (if any).	See Appendices for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS			
▽ <i>First Observed</i>		Boring Started: 07-16-2021	Boring Completed: 07-21-2021
		Drill Rig: Geoprobe	Driller: BGS
		Project No.: 02217266	Exhibit: B-1

BORING LOG NO. SB-2

PROJECT: Midland Feed Store

**CLIENT: First Management, Inc.
P.O. Box 1797**

**SITE: 1401 B. 1941 Diagonal Road
Lawrence, Kansas**

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/IPID (ppm)
	DEPTH MATERIAL DESCRIPTION					
	FILL - GRAVELLY LEAN CLAY (CL) , brown	3.0				0.4
	SANDY FAT CLAY (CH) , dark brown	5.0				0.4
	SANDY FAT CLAY (CH) , dark brown, moist	10.0				0.5
	SANDY FAT CLAY (CH) , dark brown	11.0				0.2
	SANDY FAT CLAY (CH) , dark brown	15.0				0.8
	SANDY FAT CLAY (CH) , light brown	15.0				0.3
	SANDY FAT CLAY (CH) , light brown	20.0				0.2
	SANDY FAT CLAY (CH) , light brown, wet	20.0	▽			0
	SANDY FAT CLAY (CH) , light brown, wet	25.0				0
	Boring Terminated at 25 Feet	25				0

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic SPT Hammer

Advancement Method: Continuous push.	See Appendices for description of field procedures.	Notes:	
Abandonment Method: Boring backfilled with bentonite chips after delayed ground water sample was taken.	See Appendices for description of laboratory procedures and additional data (if any).	See Appendices for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS ▽ First Observed		Boring Started: 07-16-2021	Boring Completed: 07-21-2021
		Drill Rig: Geoprobe	Driller: BGS
		Project No.: 02217266	Exhibit: B-3

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG. MIDLAND FEED STORE.GPJ TERRACON_DATATEMPLATE.GDT 7/20/21

BORING LOG NO. SB-3

PROJECT: Midland Feed Store

**CLIENT: First Management, Inc.
P.O. Box 1797**

**SITE: 1401 B. 1941 Diagonal Road
Lawrence, Kansas**

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PI/D (ppm)
	DEPTH MATERIAL DESCRIPTION					
	1.0 FILL - GRAVELLY LEAN CLAY (CL) , brown					
	GRAVELLY LEAN CLAY (CL) , brown					0.6
	5.0 SANDY FAT CLAY (CH) , brown	5				0.3
						0.1
						0
			10			0
						0
						0
			15			0
						0
	12.5 SANDY FAT CLAY (CH) , light brown, moist	20				0
						0
		25				0

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic SPT Hammer

Advancement Method: Continuous push.	See Appendices for description of field procedures.	Notes:	
Abandonment Method: Boring backfilled with bentonite chips after delayed water levels were measured.	See Appendices for description of laboratory procedures and additional data (if any).	See Appendices for explanation of symbols and abbreviations.	
WATER LEVEL OBSERVATIONS		Boring Started: 07-16-2021	Boring Completed: 07-21-2021
		Drill Rig: Geoprobe	Driller: BGS
		Project No.: 02217266	Exhibit: B-5

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG. MIDLAND FEED STORE.GPJ TERRACON_DATATEMPLATE.GDT. 7/20/21

BORING LOG NO. SB-3

PROJECT: Midland Feed Store

**CLIENT: First Management, Inc.
P.O. Box 1797**

**SITE: 1401 B. 1941 Diagonal Road
Lawrence, Kansas**

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PID (ppm)
	DEPTH MATERIAL DESCRIPTION					
	SANDY FAT CLAY (CH) , light brown, moist <i>(continued)</i>					0
						0
	30.0 Boring Terminated at 30 Feet	30				

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic SPT Hammer

Advancement Method: Continuous push.	See Appendices for description of field procedures.	Notes:	
Abandonment Method: Boring backfilled with bentonite chips after delayed water levels were measured.	See Appendices for description of laboratory procedures and additional data (if any). See Appendices for explanation of symbols and abbreviations.		
WATER LEVEL OBSERVATIONS		Boring Started: 07-16-2021	Boring Completed: 07-21-2021
		Drill Rig: Geoprobe	Driller: BGS
		Project No.: 02217266	Exhibit: B-6

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG. MIDLAND FEED STORE.GPJ TERRACON_DATATEMPLATE.GDT 7/20/21

BORING LOG NO. SB-4

PROJECT: Midland Feed Store

**CLIENT: First Management, Inc.
P.O. Box 1797**

**SITE: 1401 B. 1941 Diagonal Road
Lawrence, Kansas**

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PIID (ppm)
	DEPTH MATERIAL DESCRIPTION					
1.0	FILL - GRAVELLY LEAN CLAY (CL) , dark brown					
1.0	SANDY LEAN CLAY (CL) , dark brown					0.7
7.5	SANDY FAT CLAY (CH) , dark brown	5				0.8
7.5	SANDY FAT CLAY (CH) , dark brown					0.7
7.5	SANDY FAT CLAY (CH) , dark brown	10				0.3
15.0	SANDY FAT CLAY (CH) , light brown					0.7
15.0	SANDY FAT CLAY (CH) , light brown	15				0.2
15.0	SANDY FAT CLAY (CH) , light brown					0.8
20.0	SANDY FAT CLAY (CH) , light brown, wet		▽			0.4
20.0	SANDY FAT CLAY (CH) , light brown, wet	20				0
25.0	Boring Terminated at 25 Feet	25				0

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic SPT Hammer

Advancement Method:
Continuous push.

See Appendices for description of field procedures.

Notes:

Abandonment Method:
Boring backfilled with bentonite chips after delayed ground water sample was taken.

See Appendices for description of laboratory procedures and additional data (if any).

See Appendices for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ First Observed

Boring Started: 07-16-2021

Boring Completed: 07-21-2021

Drill Rig: Geoprobe

Driller: BGS

Project No.: 02217266

Exhibit: B-7

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG. MIDLAND FEED STORE.GPJ TERRACON_DATATEMPLATE.GDT 7/20/21

APPENDIX C – ANALYTICAL DATA TABLES

TABLE 1 - SUMMARY OF SOIL ANALYTICAL DATA
(SB-1 AND SB-2)

TABLE 2 - SUMMARY OF SOIL ANALYTICAL DATA
(SB-3 AND SB-4)

TABLE 3 - SUMMARY OF GROUNDWATER
ANALYTICAL DATA (TW-1 AND TW-2)

TABLE 4 - SUMMARY OF GROUNDWATER
ANALYTICAL DATA (TW-4)

Table 1
 Summary of Soil Analytical Data
 SB-1 SB-2
 Midland Feed Store
 Lawrence, Kansas
 Terracon Project No. 02217262

Sample ID	SB-1	SB-2	KDHE TIER 2 RSK Soil Pathway Residential Scenario		KDHE TIER 2 RSK Soil to Groundwater Residential Scenario	KDHE TIER 2 RSK Soil Pathway Non-Residential Scenario	KDHE TIER 2 RSK Soil to Groundwater Pathway Non-Residential Scenario
			Collection Date	Units			
Collection Depth Below Ground Surface (feet)	17.5-20	10-12.5					
Collection Date	7/16/2021	7/16/2021					
Analyte	Method	Units					
Total Petroleum Hydrocarbons (TPH)							
LRH (C5-C8)	8015C Mod	mg/kg	639	ND	550	950	150
MRH (C9-C18)	8015C Mod	mg/kg	221	ND	250	350	150
HRH (C19-C35)	8015C Mod	mg/kg	13.3	15.3	6,000	27,500	13,000
RCRA 8 Metals							
Lead	6010	mg/kg	11.2	22	400	1000	NA
Volatile Organic Compounds (VOCs)							
Benzene	8260	mg/kg	0.4	ND	15.9	28.2	0.168
n-Butylbenzene	8260	mg/kg	3.4	ND	1,420	3,440	118
sec-Butylbenzene	8260	mg/kg	1.4	ND	2,760	6,540	202
Ethylbenzene	8260	mg/kg	6.2	ND	82	145	65.6
Isopropylbenzene (Cumene)	8260	mg/kg	3.2	ND	2,540	5,680	140
p-Isopropyltoluene	8260	mg/kg	1.0	ND	---	---	---
Naphthalene	8260	mg/kg	8	ND	30.5	64.7	0.659
n-Propylbenzene	8260	mg/kg	6.5	ND	4,070	14,300	320
1,3,5-Trimethylbenzene	8260	mg/kg	1.4	ND	243	530	11.1
Xylene (Total)	8260	mg/kg	0.84	ND	936	1,410	809

Sources

Laboratory analysis performed by Pace Analytical April 2021.
 Tier 2 Kansas Department of Health and Environment (KDHE) Risk-Based Standards (RSK) Manual - 5th Version (revised September 2015).
 KDHE Tier 2 RSK Presumptive Remedy Policy – Investigation and Cleanup of Nitrogen at Agriculture-Related Sites in Kansas, December 2014.
 KDHE Guidance – Investigation and Remediation of Salt (Chloride)-Impacted Soil and Ground Water, March 2004, Revised 2005.

Notes

Soil concentrations in milligrams per kilogram (mg/kg).
 ND = Not detected above the laboratory analytical reporting limit. See individual lab reports for chemical specific reporting limits.
 TPH – Total Petroleum Hydrocarbons (per Kansas Department of Health and Environment Bureau of Environmental Remediation Policy #BER-041).
 LRH – Low-Range Hydrocarbons (formerly "GRO") for carbon ranges C5-C8
 MRH – Mid-Range Hydrocarbons (formerly "DRO" and "ORO" combined) for carbon range C9-C18
 HRH – High-Range Hydrocarbons for carbon range C19-C35.

Bold = Detection reported above the laboratory reporting limit.

Yellow highlighted results are above the applicable KDHE RSK Residential Scenarios (Soil Pathway).

Orange highlighted results are at or above the applicable KDHE RSK Non-Residential and Residential Scenarios (Soil to Groundwater Pathway).

Red highlighted results are above the applicable KDHE RSK non-residential scenarios.

--- = KDHE screening value has not been established.

TABLE 2
Summary of Soil Analytical Data
SB-3 and SB-4
Midland Feed Store
Lawrence, Kansas
Terracon Project No. 02217262

Sample ID		SB-3	SB-4	KDHE TIER 2 RSK Soil Pathway No Vegetation Below 8 inches in Depth of Soil Scenario
Collection Depth Below Ground Surface (inches or ft)	Collection Date	3'-5'	3'-5'	
Analyte	Method	Units	7/16/2021	7/16/2021
Nitrate/Nitrite/Ammonia				
Nitrogen, Ammonia	350.1	mg/kg	1.7	ND
Nitrate as N	9056	mg/kg	ND	1.8
Nitrite as N	9056	mg/kg	ND	ND

Source

Pace Analytical June 2021
 Kansas Department of Health and Environment (KDHE) Tier 2 Risk-Based Standards (RSK) Presumptive Remedy Policy – Investigation and Cleanup of Nitrogen at Agriculture-Related Sites in Tier 2 Kansas Department of Health and Environment (KDHE) Risk-Based Standards (RSK) Manual - 5th Version, dated September 2015.

Notes

Soil concentrations in milligrams per kilogram (mg/kg).
 ND = Not detected above the laboratory analytical reporting limit. See individual lab reports for chemical specific reporting limits.
Bold = Detected above the laboratory reporting limits.

Highlighted results are above the applicable KDHE RSK scenarios.

Orange highlighted results are at or above the applicable KDHE RSK Non-Residential and Residential Scenarios (Soil to Groundwater Pathway).

*Common laboratory contaminant.

Table 3
 Summary of Groundwater Analytical Data
 TW-1 and TW-2
 Midland Feed Store
 Lawrence, Kansas
 Terracon Project No. 02217262

Analyte	Method	Units	Sample ID		KDHE TIER 2 RSK Groundwater Pathway Residential Scenario	KDHE TIER 2 RSK Groundwater Pathway Non-Residential Scenario
			TW-1	TW-2		
Total Petroleum Hydrocarbons (TPH)						
LRH (C5-C8)	8015M	mg/L	120	0.058	0.35	0.95
MRH (C9-C18)	8015M	mg/L	208	ND	0.15	0.4
HRH (C19-C35)	8015M	mg/L	7.3	ND	1	2.5
RCRA 8 Metals						
Lead	6010	mg/L	0.74	0.72	0.015	0.015
Volatile Organic Compounds (VOCs)						
Benzene	8260	mg/L	0.76	ND	0.005	0.005
n-Butylbenzene	8260	mg/L	0.52	ND	0.169	0.392
sec-Butylbenzene	8260	mg/L	0.21	ND	0.305	0.745
Chloroform	8260	mg/L	0.22	ND	0.008	0.008
Ethylbenzene	8260	mg/L	2.0	0.0016	0.7	0.7
Isopropylbenzene (Cumene)	8260	mg/L	0.54	ND	0.451	0.968
Methyl-tert-butyl ether	8260	mg/L	ND	0.012	0.133	0.262
n-Propylbenzene	8260	mg/L	1.0	ND	0.66	1.91
1,3,5-Trimethylbenzene	8260	mg/L	0.24	ND	0.044	0.0884

Sources

Laboratory analysis performed by Pace Analytical April 2021.
 Tier 2 Kansas Department of Health and Environment (KDHE) Risk-Based Standards (RSK) Manual - 5th Version (revised September 2015).
 Kansas Department of Health and Environment (KDHE) Tier 2 Risk-Based Standards (RSK) Presumptive Remedy Policy – Investigation and Cleanup of Nitr
 at Agriculture-Related Sites in Kansas, December 2014.
 KDHE Guidance – Investigation and Remediation of Salt (Chloride)-Impacted Soil and Ground Water, March 2004, Revised 2005.

Notes

Groundwater concentrations in milligrams per Liter (mg/L).
 TPH – Total Petroleum Hydrocarbons (per Kansas Department of Health and Environment Bureau of Environmental Remediation Policy #BER-041).
 LRH – Low-Range Hydrocarbons (formerly "GRO") for carbon ranges C5-C
 MRH – Mid-Range Hydrocarbons (formerly "DRO" and "ORO" combined) for carbon range C9-C18
 HRH – High-Range Hydrocarbons for carbon range C19-C35.
 NA = Not Analyzed.
 ND = Not detected above the laboratory analytical reporting limit. See individual lab reports for chemical specific reporting limits.
Bold = Detection reported above the laboratory reporting limit.
Yellow highlighted results are at or above the applicable KDHE RSK Residential Scenario, but below the Non-Residential Scenario.
Red highlighted results are at or above the applicable KDHE RSK Non-Residential Scenarios.
 --- = KDHE screening value has not been established.

TABLE 4
Summary of Groundwater Analytical Data
TW-4
Midland Feed Store
Lawrence, Kansas
Terracon Project No. 02217262

Sample ID		TW-4		KDHE TIER 2 RSK Groundwater Pathway
Collection Date		7/16/2021		
Analyte	Method	Units		
Nitrate/Nitrite/Ammonia				
Nitrate as Nitrogen	353.2	mg/L	1.8	10
Nitrite as Nitrogen	353.2	mg/L	ND	1
Nitrogen, Ammonia	350.1	mg/L	ND	10

Source

Pace Analytical August 2018, August 2019, and July 2020.
 Kansas Department of Health and Environment (KDHE) Tier 2 Risk-Based Standards (RSK) Presumptive Remedy Policy – Investigation and Cleanup of Nitrogen at Agriculture-Related Sites in Kansas, December 2014.
 Tier 2 Kansas Department of Health and Environment (KDHE) Risk-Based Standards (RSK) Manual - 5th Version, dated September 2015.

Notes

Groundwater concentrations in milligrams per Liter (mg/L).
 ND = Not detected above the laboratory analytical reporting limit. See individual lab reports for chemical specific reporting limits.

Bold = Detected above the laboratory reporting limits.

Highlighted results are above the applicable KDHE RSK scenario.

**APPENDIX D – ANALYTICAL LABORATORY
REPORT AND CHAIN OF CUSTODY**

July 26, 2021

Kameron Long
Terracon
4765 W. Junction St.
Springfield, MO 65802

RE: Project: Lawrence, KS
Pace Project No.: 60375151

Dear Kameron Long:

Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Kansas City

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jeffrey Shopper
jeff.shopper@pacelabs.com
1(913)563-1408
Project Manager

Enclosures

cc: Becki Davis, Terracon



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Lawrence, KS

Pace Project No.: 60375151

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055

Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05

Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: VT2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 998093910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Lawrence, KS
Pace Project No.: 60375151

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60375151001	B-1 17.5-20'	Solid	07/16/21 10:30	07/16/21 15:10
60375151002	TW-1	Water	07/16/21 10:45	07/16/21 15:10
60375151003	B-2 10-12.5'	Solid	07/16/21 11:15	07/16/21 15:10
60375151004	TW-2	Water	07/16/21 11:30	07/16/21 15:10
60375151005	B-3 3-5'	Solid	07/16/21 11:50	07/16/21 15:10
60375151006	B-4 3-5'	Solid	07/16/21 12:30	07/16/21 15:10
60375151007	TW-4	Water	07/16/21 12:45	07/16/21 15:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Lawrence, KS
Pace Project No.: 60375151

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60375151001	B-1 17.5-20'	KS MRH/HRH	AHS	3	PASI-K
		EPA 8015B	JLO	3	PASI-K
		EPA 6010	KSK	1	PASI-K
		EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60375151002	TW-1	EPA 8015C	AHS	3	PASI-K
		KS LRH: EPA 5030B/8015C	JLO	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 5030B/8260	PGH	69	PASI-K
60375151003	B-2 10-12.5'	KS MRH/HRH	AHS	3	PASI-K
		EPA 8015B	JLO	3	PASI-K
		EPA 6010	KSK	1	PASI-K
		EPA 8260B	RAD	68	PASI-K
		ASTM D2974	DWC	1	PASI-K
60375151004	TW-2	EPA 8015C	AHS	3	PASI-K
		KS LRH: EPA 5030B/8015C	JLO	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 5030B/8260	PGH	69	PASI-K
60375151005	B-3 3-5'	EPA 8081B	AO	23	PAN
		EPA 8141B	HMH	27	PAN
		EPA 8151A	JMB	11	PAN
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	KDW	1	PAN
		EPA 350.1	CRN2	1	PASI-K
		EPA 353.2	AJS2	3	PASI-K
60375151006	B-4 3-5'	EPA 8081B	AO	23	PAN
		EPA 8141B	HMH	27	PAN
		EPA 8151A	JMB	11	PAN
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	KDW	1	PAN
		EPA 350.1	CRN2	1	PASI-K
		EPA 353.2	AJS2	3	PASI-K
60375151007	TW-4	EPA 8081B	HMH	23	PAN
		EPA 8141B	JMB	27	PAN
		EPA 8151A	SSH	11	PAN
		EPA 350.1	CRN2	1	PASI-K
		EPA 353.2	AJS2	3	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Lawrence, KS
Pace Project No.: 60375151

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PAN = Pace National - Mt. Juliet
PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: B-1 17.5-20' **Lab ID: 60375151001** Collected: 07/16/21 10:30 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
KS MRH/HRH								
Analytical Method: KS MRH/HRH Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
HRH (C19-C35)	13.3	mg/kg	8.6	1	07/19/21 09:23	07/20/21 14:11		
MRH (C9-C18)	221	mg/kg	6.5	1	07/19/21 09:23	07/20/21 14:11		
Surrogates								
1-Chloro-octadecane (S)	100	%	40-140	1	07/19/21 09:23	07/20/21 14:11	3386-33-2	
LRH (C5 - C8) Soil								
Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
Pace Analytical Services - Kansas City								
LRH (C5-C8)	639	mg/kg	61.9	10	07/20/21 11:43	07/21/21 11:22		
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	10	07/20/21 11:43	07/21/21 11:22	460-00-4	
Dibromofluoromethane (S)	0	%	70-130	10	07/20/21 11:43	07/21/21 11:22	1868-53-7	S4
6010 MET ICP Red. Interference								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Kansas City								
Lead	11.2	mg/kg	0.98	1	07/19/21 15:31	07/20/21 12:53	7439-92-1	
8260 MSV 5035A VOA								
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B								
Pace Analytical Services - Kansas City								
Acetone	ND	mg/kg	0.81	1	07/19/21 15:39	07/19/21 17:58	67-64-1	L1
Benzene	0.40	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	71-43-2	
Bromobenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	108-86-1	
Bromochloromethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	74-97-5	
Bromodichloromethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-27-4	
Bromoform	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-25-2	
Bromomethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.40	1	07/19/21 15:39	07/19/21 17:58	78-93-3	L1
n-Butylbenzene	3.4	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	104-51-8	
sec-Butylbenzene	1.4	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	135-98-8	
tert-Butylbenzene	ND	mg/kg	1.0	1	07/19/21 15:39	07/19/21 17:58	98-06-6	
Carbon disulfide	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	56-23-5	
Chlorobenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	108-90-7	
Chloroethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-00-3	
Chloroform	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	67-66-3	
Chloromethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.40	1	07/19/21 15:39	07/19/21 17:58	96-12-8	
Dibromochloromethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	106-93-4	
Dibromomethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-71-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: B-1 17.5-20' Lab ID: 60375151001 Collected: 07/16/21 10:30 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030B						
Pace Analytical Services - Kansas City								
1,1-Dichloroethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	107-06-2	
1,2-Dichloroethene (Total)	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	540-59-0	
1,1-Dichloroethene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	10061-02-6	
Ethylbenzene	6.2	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	87-68-3	
2-Hexanone	ND	mg/kg	0.81	1	07/19/21 15:39	07/19/21 17:58	591-78-6	L1
Isopropylbenzene (Cumene)	3.2	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	98-82-8	
p-Isopropyltoluene	1.0	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	99-87-6	
Methylene Chloride	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.40	1	07/19/21 15:39	07/19/21 17:58	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	1634-04-4	
Naphthalene	8.0	mg/kg	0.40	1	07/19/21 15:39	07/19/21 17:58	91-20-3	
n-Propylbenzene	6.5	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	103-65-1	
Styrene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	79-34-5	
Tetrachloroethene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	127-18-4	
Toluene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	79-00-5	
Trichloroethene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	95-63-6	
1,3,5-Trimethylbenzene	1.4	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	108-67-8	
Vinyl chloride	ND	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	75-01-4	
Xylene (Total)	0.84	mg/kg	0.20	1	07/19/21 15:39	07/19/21 17:58	1330-20-7	
Surrogates								
Toluene-d8 (S)	111	%	80-120	1	07/19/21 15:39	07/19/21 17:58	2037-26-5	
4-Bromofluorobenzene (S)	111	%	83-119	1	07/19/21 15:39	07/19/21 17:58	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%		1	07/19/21 15:39	07/19/21 17:58	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS
Pace Project No.: 60375151

Sample: B-1 17.5-20' **Lab ID: 60375151001** Collected: 07/16/21 10:30 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture								
Analytical Method: ASTM D2974								
Pace Analytical Services - Kansas City								
Percent Moisture	20.4	%	0.50	1		07/19/21 11:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample:	Lab ID:	Collected:	Received:	Matrix:				
TW-1	60375151002	07/16/21 10:45	07/16/21 15:10	Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 MOD KS TPH								
Analytical Method: EPA 8015C Preparation Method: EPA 3511								
Pace Analytical Services - Kansas City								
HRH (C19-C35)	7.3	mg/L	2.1	10	07/19/21 18:56	07/21/21 09:59		
MRH (C9-C18)	208	mg/L	0.64	10	07/19/21 18:56	07/21/21 09:59		
Surrogates								
1-Chloro-octadecane (S)	0	%	40-140	10	07/19/21 18:56	07/21/21 09:59	3386-33-2	S4
LRH (C5 - C8) Water								
Analytical Method: KS LRH: EPA 5030B/8015C								
Pace Analytical Services - Kansas City								
LRH (C5-C8)	120	mg/L	5.0	100		07/20/21 16:03		
Surrogates								
4-Bromofluorobenzene (S)	115	%	70-130	100		07/20/21 16:03	460-00-4	
Preservation pH	1.0			100		07/20/21 16:03		
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Kansas City								
Lead	0.74	mg/L	0.030	3	07/19/21 09:57	07/19/21 15:44	7439-92-1	
8260 MSV								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Kansas City								
Acetone	ND	mg/L	2.0	200		07/20/21 18:47	67-64-1	
Benzene	0.76	mg/L	0.20	200		07/20/21 18:47	71-43-2	
Bromobenzene	ND	mg/L	0.20	200		07/20/21 18:47	108-86-1	
Bromochloromethane	ND	mg/L	0.20	200		07/20/21 18:47	74-97-5	
Bromodichloromethane	ND	mg/L	0.20	200		07/20/21 18:47	75-27-4	
Bromoform	ND	mg/L	0.20	200		07/20/21 18:47	75-25-2	
Bromomethane	ND	mg/L	1.0	200		07/20/21 18:47	74-83-9	
2-Butanone (MEK)	ND	mg/L	2.0	200		07/20/21 18:47	78-93-3	
n-Butylbenzene	0.52	mg/L	0.20	200		07/20/21 18:47	104-51-8	
sec-Butylbenzene	0.21	mg/L	0.20	200		07/20/21 18:47	135-98-8	
tert-Butylbenzene	ND	mg/L	0.20	200		07/20/21 18:47	98-06-6	
Carbon disulfide	ND	mg/L	1.0	200		07/20/21 18:47	75-15-0	
Carbon tetrachloride	ND	mg/L	0.20	200		07/20/21 18:47	56-23-5	
Chlorobenzene	ND	mg/L	0.20	200		07/20/21 18:47	108-90-7	
Chloroethane	ND	mg/L	0.20	200		07/20/21 18:47	75-00-3	
Chloroform	0.22	mg/L	0.20	200		07/20/21 18:47	67-66-3	
Chloromethane	ND	mg/L	0.20	200		07/20/21 18:47	74-87-3	
2-Chlorotoluene	ND	mg/L	0.20	200		07/20/21 18:47	95-49-8	
4-Chlorotoluene	ND	mg/L	0.20	200		07/20/21 18:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/L	0.50	200		07/20/21 18:47	96-12-8	
Dibromochloromethane	ND	mg/L	0.20	200		07/20/21 18:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/L	0.20	200		07/20/21 18:47	106-93-4	
Dibromomethane	ND	mg/L	0.20	200		07/20/21 18:47	74-95-3	
1,2-Dichlorobenzene	ND	mg/L	0.20	200		07/20/21 18:47	95-50-1	
1,3-Dichlorobenzene	ND	mg/L	0.20	200		07/20/21 18:47	541-73-1	
1,4-Dichlorobenzene	ND	mg/L	0.20	200		07/20/21 18:47	106-46-7	
Dichlorodifluoromethane	ND	mg/L	0.20	200		07/20/21 18:47	75-71-8	
1,1-Dichloroethane	ND	mg/L	0.20	200		07/20/21 18:47	75-34-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: TW-1	Lab ID: 60375151002	Collected: 07/16/21 10:45	Received: 07/16/21 15:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
1,2-Dichloroethane	ND	mg/L	0.20	200		07/20/21 18:47	107-06-2	
1,2-Dichloroethene (Total)	ND	mg/L	0.20	200		07/20/21 18:47	540-59-0	
1,1-Dichloroethene	ND	mg/L	0.20	200		07/20/21 18:47	75-35-4	
cis-1,2-Dichloroethene	ND	mg/L	0.20	200		07/20/21 18:47	156-59-2	
trans-1,2-Dichloroethene	ND	mg/L	0.20	200		07/20/21 18:47	156-60-5	
1,2-Dichloropropane	ND	mg/L	0.20	200		07/20/21 18:47	78-87-5	
1,3-Dichloropropane	ND	mg/L	0.20	200		07/20/21 18:47	142-28-9	
2,2-Dichloropropane	ND	mg/L	0.20	200		07/20/21 18:47	594-20-7	
1,1-Dichloropropene	ND	mg/L	0.20	200		07/20/21 18:47	563-58-6	
cis-1,3-Dichloropropene	ND	mg/L	0.20	200		07/20/21 18:47	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/L	0.20	200		07/20/21 18:47	10061-02-6	
Ethylbenzene	2.0	mg/L	0.20	200		07/20/21 18:47	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/L	0.20	200		07/20/21 18:47	87-68-3	
2-Hexanone	ND	mg/L	2.0	200		07/20/21 18:47	591-78-6	
Isopropylbenzene (Cumene)	0.54	mg/L	0.20	200		07/20/21 18:47	98-82-8	
p-Isopropyltoluene	ND	mg/L	0.20	200		07/20/21 18:47	99-87-6	
Methylene Chloride	ND	mg/L	0.20	200		07/20/21 18:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/L	2.0	200		07/20/21 18:47	108-10-1	
Methyl-tert-butyl ether	ND	mg/L	0.20	200		07/20/21 18:47	1634-04-4	
Naphthalene	ND	mg/L	2.0	200		07/20/21 18:47	91-20-3	
n-Propylbenzene	1.0	mg/L	0.20	200		07/20/21 18:47	103-65-1	
Styrene	ND	mg/L	0.20	200		07/20/21 18:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/L	0.20	200		07/20/21 18:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/L	0.20	200		07/20/21 18:47	79-34-5	
Tetrachloroethene	ND	mg/L	0.20	200		07/20/21 18:47	127-18-4	
Toluene	ND	mg/L	0.20	200		07/20/21 18:47	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/L	0.20	200		07/20/21 18:47	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/L	0.20	200		07/20/21 18:47	120-82-1	
1,1,1-Trichloroethane	ND	mg/L	0.20	200		07/20/21 18:47	71-55-6	
1,1,2-Trichloroethane	ND	mg/L	0.20	200		07/20/21 18:47	79-00-5	
Trichloroethene	ND	mg/L	0.20	200		07/20/21 18:47	79-01-6	
Trichlorofluoromethane	ND	mg/L	0.20	200		07/20/21 18:47	75-69-4	
1,2,3-Trichloropropane	ND	mg/L	0.50	200		07/20/21 18:47	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/L	0.20	200		07/20/21 18:47	95-63-6	
1,3,5-Trimethylbenzene	0.24	mg/L	0.20	200		07/20/21 18:47	108-67-8	
Vinyl chloride	ND	mg/L	0.20	200		07/20/21 18:47	75-01-4	
Xylene (Total)	ND	mg/L	0.60	200		07/20/21 18:47	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	200		07/20/21 18:47	460-00-4	D3
Toluene-d8 (S)	101	%	80-120	200		07/20/21 18:47	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120	200		07/20/21 18:47	2199-69-1	
Preservation pH	1.0		0.10	200		07/20/21 18:47		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: B-2 10-12.5' **Lab ID: 60375151003** Collected: 07/16/21 11:15 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
KS MRH/HRH								
Analytical Method: KS MRH/HRH Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
HRH (C19-C35)	15.3	mg/kg	9.4	1	07/19/21 09:23	07/20/21 14:19		
MRH (C9-C18)	ND	mg/kg	7.1	1	07/19/21 09:23	07/20/21 14:19		
Surrogates								
1-Chloro-octadecane (S)	99	%	40-140	1	07/19/21 09:23	07/20/21 14:19	3386-33-2	
LRH (C5 - C8) Soil								
Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
Pace Analytical Services - Kansas City								
LRH (C5-C8)	ND	mg/kg	6.3	1	07/20/21 11:43	07/21/21 11:07		
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1	07/20/21 11:43	07/21/21 11:07	460-00-4	
Dibromofluoromethane (S)	101	%	70-130	1	07/20/21 11:43	07/21/21 11:07	1868-53-7	
6010 MET ICP Red. Interference								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Kansas City								
Lead	22.0	mg/kg	1.2	1	07/19/21 15:31	07/20/21 12:55	7439-92-1	
8260 MSV 5035A VOA								
Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030								
Pace Analytical Services - Kansas City								
Acetone	ND	mg/kg	0.020	1	07/19/21 08:29	07/19/21 13:51	67-64-1	
Benzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	71-43-2	
Bromobenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	108-86-1	
Bromochloromethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-27-4	
Bromoform	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-25-2	
Bromomethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.0099	1	07/19/21 08:29	07/19/21 13:51	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.025	1	07/19/21 08:29	07/19/21 13:51	98-06-6	
Carbon disulfide	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	56-23-5	
Chlorobenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	108-90-7	
Chloroethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-00-3	
Chloroform	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	67-66-3	
Chloromethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0099	1	07/19/21 08:29	07/19/21 13:51	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	106-93-4	
Dibromomethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-71-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: B-2 10-12.5' Lab ID: 60375151003 Collected: 07/16/21 11:15 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,1-Dichloroethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	107-06-2	
1,2-Dichloroethene (Total)	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	540-59-0	
1,1-Dichloroethene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	87-68-3	
2-Hexanone	ND	mg/kg	0.020	1	07/19/21 08:29	07/19/21 13:51	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	99-87-6	
Methylene Chloride	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.0099	1	07/19/21 08:29	07/19/21 13:51	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	1634-04-4	
Naphthalene	ND	mg/kg	0.0099	1	07/19/21 08:29	07/19/21 13:51	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	103-65-1	
Styrene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	127-18-4	
Toluene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	79-00-5	
Trichloroethene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	108-67-8	
Vinyl chloride	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	75-01-4	
Xylene (Total)	ND	mg/kg	0.0050	1	07/19/21 08:29	07/19/21 13:51	1330-20-7	
Surrogates								
Toluene-d8 (S)	97	%	80-120	1	07/19/21 08:29	07/19/21 13:51	2037-26-5	
4-Bromofluorobenzene (S)	104	%	80-120	1	07/19/21 08:29	07/19/21 13:51	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	80-120	1	07/19/21 08:29	07/19/21 13:51	2199-69-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS
Pace Project No.: 60375151

Sample: B-2 10-12.5' **Lab ID: 60375151003** Collected: 07/16/21 11:15 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture								
Analytical Method: ASTM D2974								
Pace Analytical Services - Kansas City								
Percent Moisture	21.3	%	0.50	1		07/19/21 11:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample:	Lab ID:	Collected:	Received:	Matrix:				
TW-2	60375151004	07/16/21 11:30	07/16/21 15:10	Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 MOD KS TPH								
Analytical Method: EPA 8015C Preparation Method: EPA 3511								
Pace Analytical Services - Kansas City								
HRH (C19-C35)	ND	mg/L	0.21	1	07/19/21 18:56	07/21/21 10:07		
MRH (C9-C18)	ND	mg/L	0.062	1	07/19/21 18:56	07/21/21 10:07		
Surrogates								
1-Chloro-octadecane (S)	34	%	40-140	1	07/19/21 18:56	07/21/21 10:07	3386-33-2	S1
LRH (C5 - C8) Water								
Analytical Method: KS LRH: EPA 5030B/8015C								
Pace Analytical Services - Kansas City								
LRH (C5-C8)	0.058	mg/L	0.050	1		07/20/21 16:41		
Surrogates								
4-Bromofluorobenzene (S)	108	%	70-130	1		07/20/21 16:41	460-00-4	
Preservation pH	3.0			1		07/20/21 16:41		pH
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Kansas City								
Lead	0.72	mg/L	0.030	3	07/19/21 09:57	07/19/21 15:46	7439-92-1	
8260 MSV								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Kansas City								
Acetone	ND	mg/L	0.010	1		07/20/21 18:33	67-64-1	
Benzene	ND	mg/L	0.0010	1		07/20/21 18:33	71-43-2	
Bromobenzene	ND	mg/L	0.0010	1		07/20/21 18:33	108-86-1	
Bromochloromethane	ND	mg/L	0.0010	1		07/20/21 18:33	74-97-5	
Bromodichloromethane	ND	mg/L	0.0010	1		07/20/21 18:33	75-27-4	
Bromoform	ND	mg/L	0.0010	1		07/20/21 18:33	75-25-2	
Bromomethane	ND	mg/L	0.0050	1		07/20/21 18:33	74-83-9	
2-Butanone (MEK)	ND	mg/L	0.010	1		07/20/21 18:33	78-93-3	
n-Butylbenzene	ND	mg/L	0.0010	1		07/20/21 18:33	104-51-8	
sec-Butylbenzene	ND	mg/L	0.0010	1		07/20/21 18:33	135-98-8	
tert-Butylbenzene	ND	mg/L	0.0010	1		07/20/21 18:33	98-06-6	
Carbon disulfide	ND	mg/L	0.0050	1		07/20/21 18:33	75-15-0	
Carbon tetrachloride	ND	mg/L	0.0010	1		07/20/21 18:33	56-23-5	
Chlorobenzene	ND	mg/L	0.0010	1		07/20/21 18:33	108-90-7	
Chloroethane	ND	mg/L	0.0010	1		07/20/21 18:33	75-00-3	
Chloroform	ND	mg/L	0.0010	1		07/20/21 18:33	67-66-3	
Chloromethane	ND	mg/L	0.0010	1		07/20/21 18:33	74-87-3	
2-Chlorotoluene	ND	mg/L	0.0010	1		07/20/21 18:33	95-49-8	
4-Chlorotoluene	ND	mg/L	0.0010	1		07/20/21 18:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/L	0.0025	1		07/20/21 18:33	96-12-8	
Dibromochloromethane	ND	mg/L	0.0010	1		07/20/21 18:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/L	0.0010	1		07/20/21 18:33	106-93-4	
Dibromomethane	ND	mg/L	0.0010	1		07/20/21 18:33	74-95-3	
1,2-Dichlorobenzene	ND	mg/L	0.0010	1		07/20/21 18:33	95-50-1	
1,3-Dichlorobenzene	ND	mg/L	0.0010	1		07/20/21 18:33	541-73-1	
1,4-Dichlorobenzene	ND	mg/L	0.0010	1		07/20/21 18:33	106-46-7	
Dichlorodifluoromethane	ND	mg/L	0.0010	1		07/20/21 18:33	75-71-8	
1,1-Dichloroethane	ND	mg/L	0.0010	1		07/20/21 18:33	75-34-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: TW-2	Lab ID: 60375151004	Collected: 07/16/21 11:30	Received: 07/16/21 15:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Kansas City								
1,2-Dichloroethane	ND	mg/L	0.0010	1		07/20/21 18:33	107-06-2	
1,2-Dichloroethene (Total)	ND	mg/L	0.0010	1		07/20/21 18:33	540-59-0	
1,1-Dichloroethene	ND	mg/L	0.0010	1		07/20/21 18:33	75-35-4	
cis-1,2-Dichloroethene	ND	mg/L	0.0010	1		07/20/21 18:33	156-59-2	
trans-1,2-Dichloroethene	ND	mg/L	0.0010	1		07/20/21 18:33	156-60-5	
1,2-Dichloropropane	ND	mg/L	0.0010	1		07/20/21 18:33	78-87-5	
1,3-Dichloropropane	ND	mg/L	0.0010	1		07/20/21 18:33	142-28-9	
2,2-Dichloropropane	ND	mg/L	0.0010	1		07/20/21 18:33	594-20-7	
1,1-Dichloropropene	ND	mg/L	0.0010	1		07/20/21 18:33	563-58-6	
cis-1,3-Dichloropropene	ND	mg/L	0.0010	1		07/20/21 18:33	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/L	0.0010	1		07/20/21 18:33	10061-02-6	
Ethylbenzene	0.0016	mg/L	0.0010	1		07/20/21 18:33	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/L	0.0010	1		07/20/21 18:33	87-68-3	
2-Hexanone	ND	mg/L	0.010	1		07/20/21 18:33	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/L	0.0010	1		07/20/21 18:33	98-82-8	
p-Isopropyltoluene	ND	mg/L	0.0010	1		07/20/21 18:33	99-87-6	
Methylene Chloride	ND	mg/L	0.0010	1		07/20/21 18:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/L	0.010	1		07/20/21 18:33	108-10-1	
Methyl-tert-butyl ether	0.012	mg/L	0.0010	1		07/20/21 18:33	1634-04-4	
Naphthalene	ND	mg/L	0.010	1		07/20/21 18:33	91-20-3	
n-Propylbenzene	ND	mg/L	0.0010	1		07/20/21 18:33	103-65-1	
Styrene	ND	mg/L	0.0010	1		07/20/21 18:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/L	0.0010	1		07/20/21 18:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/L	0.0010	1		07/20/21 18:33	79-34-5	
Tetrachloroethene	ND	mg/L	0.0010	1		07/20/21 18:33	127-18-4	
Toluene	ND	mg/L	0.0010	1		07/20/21 18:33	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/L	0.0010	1		07/20/21 18:33	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/L	0.0010	1		07/20/21 18:33	120-82-1	
1,1,1-Trichloroethane	ND	mg/L	0.0010	1		07/20/21 18:33	71-55-6	
1,1,2-Trichloroethane	ND	mg/L	0.0010	1		07/20/21 18:33	79-00-5	
Trichloroethene	ND	mg/L	0.0010	1		07/20/21 18:33	79-01-6	
Trichlorofluoromethane	ND	mg/L	0.0010	1		07/20/21 18:33	75-69-4	
1,2,3-Trichloropropane	ND	mg/L	0.0025	1		07/20/21 18:33	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/L	0.0010	1		07/20/21 18:33	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/L	0.0010	1		07/20/21 18:33	108-67-8	
Vinyl chloride	ND	mg/L	0.0010	1		07/20/21 18:33	75-01-4	
Xylene (Total)	ND	mg/L	0.0030	1		07/20/21 18:33	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%	80-120	1		07/20/21 18:33	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		07/20/21 18:33	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1		07/20/21 18:33	2199-69-1	
Preservation pH	1.0		0.10	1		07/20/21 18:33		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: B-3 3-5' **Lab ID: 60375151005** Collected: 07/16/21 11:50 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Pesticides (GC) 8081B								
Analytical Method: EPA 8081B Preparation Method: 3546/3665A								
Pace National - Mt. Juliet								
Aldrin	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	309-00-2	
alpha-BHC	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	319-84-6	
beta-BHC	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	319-85-7	
delta-BHC	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	319-86-8	
gamma-BHC (Lindane)	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	58-89-9	
Chlordane (Technical)	ND	mg/kg	0.383	1	07/23/21 09:18	07/23/21 19:08	57-74-9	
4,4'-DDD	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	72-54-8	
4,4'-DDE	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	72-55-9	
4,4'-DDT	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	50-29-3	
Dieldrin	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	60-57-1	
Endosulfan I	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	959-98-8	
Endosulfan II	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	33213-65-9	
Endosulfan sulfate	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	1031-07-8	
Endrin	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	72-20-8	
Endrin aldehyde	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	7421-93-4	
Endrin ketone	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	53494-70-5	
Hexachlorobenzene	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	118-74-1	
Heptachlor	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	76-44-8	
Heptachlor epoxide	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	1024-57-3	
Methoxychlor	ND	mg/kg	0.0255	1	07/23/21 09:18	07/23/21 19:08	72-43-5	
Toxaphene	ND	mg/kg	0.511	1	07/23/21 09:18	07/23/21 19:08	8001-35-2	
Surrogates								
Decachlorobiphenyl (S)	62.4	%	10.0-135	1	07/23/21 09:18	07/23/21 19:08	2051-24-3	
Tetrachloro-m-xylene (S)	64.4	%	10.0-139	1	07/23/21 09:18	07/23/21 19:08	877-09-8	
OP Pesticides 8141B								
Analytical Method: EPA 8141B Preparation Method: 3546								
Pace National - Mt. Juliet								
Azinphos, methyl (Guthion)	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	86-50-0	
Bolstar	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	35400-43-2	
Chlorpyrifos	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	2921-88-2	
Coumaphos	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	56-72-4	
Total Demeton	ND	mg/kg	0.0893	1	07/20/21 08:55	07/25/21 23:13	8065-48-3	
Diazinon	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	333-41-5	
Dichlorvos	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	62-73-7	
Dimethoate	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	60-51-5	
Disulfoton	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	298-04-4	
EPN (ENT)	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	2104-64-5	
Ethoprop	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	13194-48-4	
Parathion (Ethyl parathion)	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	56-38-2	
Fensulfothion	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	115-90-2	
Fenthion	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	55-38-9	
Malathion	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	121-75-5	
Merphos	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	150-50-5	
Methyl parathion	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	298-00-0	
Mevinphos	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	7786-34-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS
Pace Project No.: 60375151

Sample: B-3 3-5' **Lab ID: 60375151005** Collected: 07/16/21 11:50 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OP Pesticides 8141B								
Analytical Method: EPA 8141B Preparation Method: 3546								
Pace National - Mt. Juliet								
Naled	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	300-76-5	
Phorate	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	298-02-2	
Ronnel	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	299-84-3	
Stirophos (Tetrachlorvinphos)	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	22248-79-9	
Sulfotepp (Thiodiphosphoric Ac	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	3689-24-5	
TEPP	ND	mg/kg	1.28	1	07/20/21 08:55	07/25/21 23:13	107-49-3	
Tokuthion (Prothiofos)	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	34643-46-4	
Trichloronate	ND	mg/kg	0.128	1	07/20/21 08:55	07/25/21 23:13	327-98-0	
Surrogates								
Triphenylphosphate (S)	84.5	%	36.0-121	1	07/20/21 08:55	07/25/21 23:13	115-86-6	
Chlorinated Herb. (GC) 8151A								
Analytical Method: EPA 8151A Preparation Method: 8151A								
Pace National - Mt. Juliet								
2,4-D	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	94-75-7	
Dalapon	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	127-20-8	
2,4-DB	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	94-82-6	
Dicamba	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	1918-00-9	
Dichloroprop	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	15165-67-0	
Dinoseb	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	88-85-7	
MCPA	ND	mg/kg	8.30	1	07/21/21 08:36	07/23/21 02:35	94-74-6	
MCPP	ND	mg/kg	8.30	1	07/21/21 08:36	07/23/21 02:35	7085-19-0	
2,4,5-T	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	93-76-5	
2,4,5-TP (Silvex)	ND	mg/kg	0.0893	1	07/21/21 08:36	07/23/21 02:35	93-72-1	
Surrogates								
2,4-DCAA (S)	46.0	%	22.0-132	1	07/21/21 08:36	07/23/21 02:35	19719-28-9	
Percent Moisture								
Analytical Method: ASTM D2974								
Pace Analytical Services - Kansas City								
Percent Moisture	20.7	%	0.50	1		07/19/21 11:20		
Total Solids 2540 G-2011								
Analytical Method: SM 2540G Preparation Method: SM 2540 G								
Pace National - Mt. Juliet								
Total Solids	78.4	%		1	07/22/21 08:01	07/22/21 08:08		
350.1 Ammonia								
Analytical Method: EPA 350.1 Preparation Method: EPA 350.1								
Pace Analytical Services - Kansas City								
Nitrogen, Ammonia	1.7	mg/kg	1.3	1	07/20/21 09:37	07/20/21 12:15	7664-41-7	
353.2 Nitrogen, NO2/NO3								
Analytical Method: EPA 353.2 Preparation Method: EPA 353.2								
Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/kg	1.2	1	07/19/21 09:56	07/19/21 11:56		
Nitrogen, Nitrate	ND	mg/kg	1.2	1	07/19/21 09:56	07/19/21 11:56	14797-55-8	
Nitrogen, Nitrite	ND	mg/kg	1.2	1	07/19/21 09:56	07/19/21 11:56	14797-65-0	

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: B-4 3-5' Lab ID: 60375151006 Collected: 07/16/21 12:30 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Pesticides (GC) 8081B								
Analytical Method: EPA 8081B Preparation Method: 3546/3665A								
Pace National - Mt. Juliet								
Aldrin	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	309-00-2	
alpha-BHC	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	319-84-6	
beta-BHC	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	319-85-7	
delta-BHC	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	319-86-8	
gamma-BHC (Lindane)	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	58-89-9	
Chlordane (Technical)	ND	mg/kg	0.389	1	07/23/21 09:18	07/23/21 19:15	57-74-9	
4,4'-DDD	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	72-54-8	
4,4'-DDE	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	72-55-9	
4,4'-DDT	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	50-29-3	
Dieldrin	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	60-57-1	
Endosulfan I	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	959-98-8	
Endosulfan II	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	33213-65-9	
Endosulfan sulfate	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	1031-07-8	
Endrin	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	72-20-8	
Endrin aldehyde	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	7421-93-4	
Endrin ketone	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	53494-70-5	
Hexachlorobenzene	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	118-74-1	
Heptachlor	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	76-44-8	
Heptachlor epoxide	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	1024-57-3	
Methoxychlor	ND	mg/kg	0.0259	1	07/23/21 09:18	07/23/21 19:15	72-43-5	
Toxaphene	ND	mg/kg	0.518	1	07/23/21 09:18	07/23/21 19:15	8001-35-2	
Surrogates								
Decachlorobiphenyl (S)	67.6	%	10.0-135	1	07/23/21 09:18	07/23/21 19:15	2051-24-3	
Tetrachloro-m-xylene (S)	70.4	%	10.0-139	1	07/23/21 09:18	07/23/21 19:15	877-09-8	
OP Pesticides 8141B								
Analytical Method: EPA 8141B Preparation Method: 3546								
Pace National - Mt. Juliet								
Azinphos, methyl (Guthion)	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	86-50-0	
Bolstar	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	35400-43-2	
Chlorpyrifos	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	2921-88-2	
Coumaphos	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	56-72-4	
Total Demeton	ND	mg/kg	0.0907	1	07/20/21 08:55	07/25/21 23:47	8065-48-3	
Diazinon	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	333-41-5	
Dichlorvos	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	62-73-7	
Dimethoate	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	60-51-5	
Disulfoton	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	298-04-4	
EPN (ENT)	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	2104-64-5	
Ethoprop	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	13194-48-4	
Parathion (Ethyl parathion)	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	56-38-2	
Fensulfothion	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	115-90-2	
Fenthion	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	55-38-9	
Malathion	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	121-75-5	
Merphos	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	150-50-5	
Methyl parathion	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	298-00-0	
Mevinphos	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	7786-34-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS
Pace Project No.: 60375151

Sample: B-4 3-5' **Lab ID: 60375151006** Collected: 07/16/21 12:30 Received: 07/16/21 15:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OP Pesticides 8141B								
Analytical Method: EPA 8141B Preparation Method: 3546								
Pace National - Mt. Juliet								
Naled	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	300-76-5	
Phorate	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	298-02-2	
Ronnel	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	299-84-3	
Stirophos (Tetrachlorvinphos)	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	22248-79-9	
Sulfotepp (Thiodiphosphoric Ac	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	3689-24-5	
TEPP	ND	mg/kg	1.30	1	07/20/21 08:55	07/25/21 23:47	107-49-3	
Tokuthion (Prothiofos)	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	34643-46-4	
Trichloronate	ND	mg/kg	0.130	1	07/20/21 08:55	07/25/21 23:47	327-98-0	
Surrogates								
Triphenylphosphate (S)	77.5	%	36.0-121	1	07/20/21 08:55	07/25/21 23:47	115-86-6	
Chlorinated Herb. (GC) 8151A								
Analytical Method: EPA 8151A Preparation Method: 8151A								
Pace National - Mt. Juliet								
2,4-D	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	94-75-7	
Dalapon	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	127-20-8	
2,4-DB	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	94-82-6	
Dicamba	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	1918-00-9	
Dichloroprop	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	15165-67-0	
Dinoseb	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	88-85-7	
MCPA	ND	mg/kg	8.43	1	07/21/21 08:36	07/23/21 02:51	94-74-6	
MCPP	ND	mg/kg	8.43	1	07/21/21 08:36	07/23/21 02:51	7085-19-0	
2,4,5-T	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	93-76-5	
2,4,5-TP (Silvex)	ND	mg/kg	0.0907	1	07/21/21 08:36	07/23/21 02:51	93-72-1	
Surrogates								
2,4-DCAA (S)	45.7	%	22.0-132	1	07/21/21 08:36	07/23/21 02:51	19719-28-9	
Percent Moisture								
Analytical Method: ASTM D2974								
Pace Analytical Services - Kansas City								
Percent Moisture	24.9	%	0.50	1		07/19/21 11:20		
Total Solids 2540 G-2011								
Analytical Method: SM 2540G Preparation Method: SM 2540 G								
Pace National - Mt. Juliet								
Total Solids	77.1	%		1	07/22/21 08:01	07/22/21 08:08		
350.1 Ammonia								
Analytical Method: EPA 350.1 Preparation Method: EPA 350.1								
Pace Analytical Services - Kansas City								
Nitrogen, Ammonia	ND	mg/kg	1.3	1	07/20/21 09:37	07/20/21 12:17	7664-41-7	
353.2 Nitrogen, NO2/NO3								
Analytical Method: EPA 353.2 Preparation Method: EPA 353.2								
Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	1.8	mg/kg	1.3	1	07/19/21 09:56	07/19/21 11:57		
Nitrogen, Nitrate	1.8	mg/kg	1.3	1	07/19/21 09:56	07/19/21 11:57	14797-55-8	
Nitrogen, Nitrite	ND	mg/kg	1.3	1	07/19/21 09:56	07/19/21 11:57	14797-65-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: TW-4	Lab ID: 60375151007	Collected: 07/16/21 12:45	Received: 07/16/21 15:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Pesticides (GC) 8081B		Analytical Method: EPA 8081B Preparation Method: 3510C Pace National - Mt. Juliet						
Aldrin	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	309-00-2	
alpha-BHC	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	319-84-6	
beta-BHC	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	319-85-7	
delta-BHC	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	58-89-9	
Chlordane (Technical)	ND	ug/L	250	50	07/20/21 07:57	07/23/21 16:55	57-74-9	
4,4'-DDD	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	72-54-8	
4,4'-DDE	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	72-55-9	
4,4'-DDT	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	50-29-3	
Dieldrin	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	60-57-1	
Endosulfan I	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	959-98-8	
Endosulfan II	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	33213-65-9	
Endosulfan sulfate	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	1031-07-8	
Endrin	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	72-20-8	
Endrin aldehyde	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	7421-93-4	
Endrin ketone	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	53494-70-5	
Hexachlorobenzene	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	118-74-1	
Heptachlor	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	76-44-8	
Heptachlor epoxide	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	1024-57-3	
Methoxychlor	ND	ug/L	2.50	50	07/20/21 07:57	07/23/21 16:55	72-43-5	
Toxaphene	ND	ug/L	25.0	50	07/20/21 07:57	07/23/21 16:55	8001-35-2	
Surrogates								
Decachlorobiphenyl (S)	12.3	%	10.0-128	50	07/20/21 07:57	07/23/21 16:55	2051-24-3	S4
Tetrachloro-m-xylene (S)	57.0	%	10.0-127	50	07/20/21 07:57	07/23/21 16:55	877-09-8	S4
OP Pesticides 8141B		Analytical Method: EPA 8141B Preparation Method: 3510C Pace National - Mt. Juliet						
Azinphos, methyl (Guthion)	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	86-50-0	
Bolstar	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	35400-43-2	
Chlorpyrifos	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	2921-88-2	
Coumaphos	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	56-72-4	
Total Demeton	ND	ug/L	2.00	1	07/18/21 22:20	07/20/21 14:52	8065-48-3	
Diazinon	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	333-41-5	
Dichlorvos	ND	ug/L	2.00	1	07/18/21 22:20	07/20/21 14:52	62-73-7	
Dimethoate	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	60-51-5	
Disulfoton	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	298-04-4	
EPN (ENT)	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	2104-64-5	
Ethoprop	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	13194-48-4	
Parathion (Ethyl parathion)	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	56-38-2	
Fensulfothion	ND	ug/L	2.00	1	07/18/21 22:20	07/20/21 14:52	115-90-2	
Fenthion	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	55-38-9	
Malathion	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	121-75-5	
Merphos	ND	ug/L	2.00	1	07/18/21 22:20	07/20/21 14:52	150-50-5	
Methyl parathion	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	298-00-0	
Mevinphos	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	7786-34-7	
Naled	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	300-76-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lawrence, KS

Pace Project No.: 60375151

Sample: TW-4	Lab ID: 60375151007	Collected: 07/16/21 12:45	Received: 07/16/21 15:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
OP Pesticides 8141B								
Analytical Method: EPA 8141B Preparation Method: 3510C								
Pace National - Mt. Juliet								
Phorate	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	298-02-2	
Ronnel	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	299-84-3	
Stirophos (Tetrachlorvinphos)	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	22248-79-9	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	3689-24-5	
TEPP	ND	ug/L	10.0	1	07/18/21 22:20	07/20/21 14:52	107-49-3	
Tokuthion (Prothiofos)	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	34643-46-4	
Trichloronate	ND	ug/L	1.00	1	07/18/21 22:20	07/20/21 14:52	327-98-0	
Surrogates								
Triphenylphosphate (S)	52.7	%	42.0-129	1	07/18/21 22:20	07/20/21 14:52	115-86-6	
Chlorinated Herb. (GC) 8151A								
Analytical Method: EPA 8151A Preparation Method: 8151A								
Pace National - Mt. Juliet								
2,4-D	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	94-75-7	
Dalapon	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	127-20-8	
2,4-DB	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	94-82-6	
Dicamba	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	1918-00-9	
Dichloroprop	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	15165-67-0	
Dinoseb	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	88-85-7	
MCPA	ND	ug/L	118	1.18	07/19/21 08:44	07/20/21 22:17	94-74-6	L0
MCPP	ND	ug/L	118	1.18	07/19/21 08:44	07/20/21 22:17	7085-19-0	R1
2,4,5-T	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	2.36	1.18	07/19/21 08:44	07/20/21 22:17	93-72-1	
Surrogates								
2,4-DCAA (S)	83.2	%	14.0-158	1.18	07/19/21 08:44	07/20/21 22:17	19719-28-9	
350.1 Ammonia								
Analytical Method: EPA 350.1								
Pace Analytical Services - Kansas City								
Nitrogen, Ammonia	ND	mg/L	0.10	1		07/21/21 09:51	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	1.8	mg/L	0.10	1		07/17/21 12:06		
Nitrogen, Nitrate	1.8	mg/L	0.10	1		07/17/21 12:06	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	1		07/17/21 12:06	14797-65-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 1708069

Analysis Method: EPA 8081B

QC Batch Method: 3510C

Analysis Description: Pesticides (GC) 8081B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60375151007

METHOD BLANK: R3682049-1

Matrix: Water

Associated Lab Samples: 60375151007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aldrin	ug/L	ND	0.0500	07/21/21 11:06	
alpha-BHC	ug/L	ND	0.0500	07/21/21 11:06	
beta-BHC	ug/L	ND	0.0500	07/21/21 11:06	
delta-BHC	ug/L	ND	0.0500	07/21/21 11:06	
gamma-BHC (Lindane)	ug/L	ND	0.0500	07/21/21 11:06	
4,4'-DDD	ug/L	ND	0.0500	07/21/21 11:06	
4,4'-DDE	ug/L	ND	0.0500	07/21/21 11:06	
4,4'-DDT	ug/L	ND	0.0500	07/21/21 11:06	
Dieldrin	ug/L	ND	0.0500	07/21/21 11:06	
Endosulfan I	ug/L	ND	0.0500	07/21/21 11:06	
Endosulfan II	ug/L	ND	0.0500	07/21/21 11:06	
Endosulfan sulfate	ug/L	ND	0.0500	07/21/21 11:06	
Endrin	ug/L	ND	0.0500	07/21/21 11:06	
Endrin aldehyde	ug/L	ND	0.0500	07/21/21 11:06	
Endrin ketone	ug/L	ND	0.0500	07/21/21 11:06	
Heptachlor	ug/L	ND	0.0500	07/21/21 11:06	
Heptachlor epoxide	ug/L	ND	0.0500	07/21/21 11:06	
Hexachlorobenzene	ug/L	ND	0.0500	07/21/21 11:06	
Methoxychlor	ug/L	ND	0.0500	07/21/21 11:06	
Chlordane (Technical)	ug/L	ND	5.00	07/21/21 11:06	
Toxaphene	ug/L	ND	0.500	07/21/21 11:06	
Decachlorobiphenyl (S)	%	37	10.0-128	07/21/21 11:06	
Tetrachloro-m-xylene (S)	%	72.3	10.0-127	07/21/21 11:06	

LABORATORY CONTROL SAMPLE: R3682049-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aldrin	ug/L	1.00	0.697	69.7	22.0-124	
alpha-BHC	ug/L	1.00	0.874	87.4	54.0-130	
beta-BHC	ug/L	1.00	0.865	86.5	53.0-136	
delta-BHC	ug/L	1.00	0.885	88.5	54.0-133	
gamma-BHC (Lindane)	ug/L	1.00	0.925	92.5	55.0-129	
4,4'-DDD	ug/L	1.00	0.807	80.7	56.0-140	
4,4'-DDE	ug/L	1.00	0.708	70.8	52.0-128	
4,4'-DDT	ug/L	1.00	0.802	80.2	50.0-141	
Dieldrin	ug/L	1.00	0.852	85.2	59.0-133	
Endosulfan I	ug/L	1.00	0.866	86.6	57.0-131	
Endosulfan II	ug/L	1.00	0.878	87.8	58.0-133	
Endosulfan sulfate	ug/L	1.00	0.833	83.3	58.0-133	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: R3682049-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin	ug/L	1.00	0.890	89.0	57.0-134	
Endrin aldehyde	ug/L	1.00	0.909	90.9	53.0-129	
Endrin ketone	ug/L	1.00	0.877	87.7	60.0-145	
Heptachlor	ug/L	1.00	0.891	89.1	27.0-132	
Heptachlor epoxide	ug/L	1.00	0.870	87.0	57.0-130	
Hexachlorobenzene	ug/L	1.00	0.740	74.0	30.0-114	
Methoxychlor	ug/L	1.00	0.914	91.4	54.0-155	
Decachlorobiphenyl (S)	%			42.7	10.0-128	
Tetrachloro-m-xylene (S)	%			76.2	10.0-127	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 1707401

Analysis Method: EPA 8141B

QC Batch Method: 3510C

Analysis Description: OP Pesticides 8141B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60375151007

METHOD BLANK: R3681359-1

Matrix: Water

Associated Lab Samples: 60375151007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Azinphos, methyl (Guthion)	ug/L	ND	1.00	07/19/21 12:02	
Bolstar	ug/L	ND	1.00	07/19/21 12:02	
Chlorpyrifos	ug/L	ND	1.00	07/19/21 12:02	
Coumaphos	ug/L	ND	1.00	07/19/21 12:02	
Total Demeton	ug/L	ND	2.00	07/19/21 12:02	
Diazinon	ug/L	ND	1.00	07/19/21 12:02	
Dichlorvos	ug/L	ND	2.00	07/19/21 12:02	
Dimethoate	ug/L	ND	1.00	07/19/21 12:02	
Disulfoton	ug/L	ND	1.00	07/19/21 12:02	
EPN (ENT)	ug/L	ND	1.00	07/19/21 12:02	
Ethoprop	ug/L	ND	1.00	07/19/21 12:02	
Parathion (Ethyl parathion)	ug/L	ND	1.00	07/19/21 12:02	
Fensulfothion	ug/L	ND	2.00	07/19/21 12:02	
Fenthion	ug/L	ND	1.00	07/19/21 12:02	
Malathion	ug/L	ND	1.00	07/19/21 12:02	
Merphos	ug/L	ND	2.00	07/19/21 12:02	
Methyl parathion	ug/L	ND	1.00	07/19/21 12:02	
Mevinphos	ug/L	ND	1.00	07/19/21 12:02	
Naled	ug/L	ND	1.00	07/19/21 12:02	
Phorate	ug/L	ND	1.00	07/19/21 12:02	
Ronnel	ug/L	ND	1.00	07/19/21 12:02	
Stirophos (Tetrachlorvinphos)	ug/L	ND	1.00	07/19/21 12:02	
Sulfotepp (Thiodiphosphoric Ac	ug/L	ND	1.00	07/19/21 12:02	
TEPP	ug/L	ND	10.0	07/19/21 12:02	
Tokuthion (Prothiofos)	ug/L	ND	1.00	07/19/21 12:02	
Trichloronate	ug/L	ND	1.00	07/19/21 12:02	
Triphenylphosphate (S)	%	89	42.0-129	07/19/21 12:02	

LABORATORY CONTROL SAMPLE: R3681359-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Azinphos, methyl (Guthion)	ug/L	5.00	4.55	91.0	43.0-142	
Bolstar	ug/L	5.00	4.31	86.2	47.0-128	
Chlorpyrifos	ug/L	5.00	4.72	94.4	50.0-126	
Coumaphos	ug/L	5.00	4.65	93.0	37.0-137	
Total Demeton	ug/L	2.50	2.21	88.4	22.0-150	
Diazinon	ug/L	5.00	4.59	91.8	54.0-130	
Dichlorvos	ug/L	5.00	3.62	72.4	43.0-135	
Dimethoate	ug/L	5.00	3.19	63.8	27.0-120	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: R3681359-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Disulfoton	ug/L	5.00	4.19	83.8	44.0-136	
EPN (ENT)	ug/L	5.00	4.86	97.2	31.0-143	
Ethoprop	ug/L	5.00	4.69	93.8	52.0-130	
Parathion (Ethyl parathion)	ug/L	5.00	5.03	101	42.0-134	
Fensulfothion	ug/L	5.00	4.71	94.2	42.0-137	
Fenthion	ug/L	5.00	4.55	91.0	53.0-133	
Malathion	ug/L	5.00	4.65	93.0	47.0-121	
Merphos	ug/L	5.00	3.76	75.2	14.0-123	
Methyl parathion	ug/L	5.00	4.79	95.8	43.0-135	
Mevinphos	ug/L	5.00	4.10	82.0	49.0-123	
Naled	ug/L	5.00	4.20	84.0	25.0-126	
Phorate	ug/L	5.00	4.19	83.8	44.0-129	
Ronnel	ug/L	5.00	4.43	88.6	51.0-125	
Stirophos (Tetrachlorvinphos)	ug/L	5.00	4.93	98.6	53.0-125	
Sulfotepp (Thiodiphosphoric Ac	ug/L	5.00	4.66	93.2	40.0-140	
TEPP	ug/L	50.0	34.5	69.0	18.0-122	
Tokuthion (Prothiofos)	ug/L	5.00	4.62	92.4	50.0-128	
Trichloronate	ug/L	5.00	4.58	91.6	47.0-130	
Triphenylphosphate (S)	%			90.6	42.0-129	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3682629-1 R3682629-2

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		L1378887-01 Result	Spike Conc.	Spike Conc.	Conc.							
Azinphos, methyl (Guthion)	ug/L	ND	4.76	5.00	4.65	4.76	97.7	95.2	29.0-157	2.34	20	
Bolstar	ug/L	ND	4.76	5.00	4.28	4.29	89.9	85.8	37.0-138	0.233	20	
Chlorpyrifos	ug/L	ND	4.76	5.00	4.69	4.92	98.5	98.4	42.0-131	4.79	20	
Coumaphos	ug/L	ND	4.76	5.00	4.72	4.83	99.2	96.6	31.0-150	2.30	20	
Total Demeton	ug/L	ND	2.38	2.50	2.23	2.27	93.7	90.8	30.0-152	1.78	20	
Diazinon	ug/L	ND	4.76	5.00	4.54	4.76	95.4	95.2	47.0-134	4.73	20	
Dichlorvos	ug/L	ND	4.76	5.00	3.77	3.98	79.2	79.6	39.0-140	5.42	22	
Dimethoate	ug/L	ND	4.76	5.00	3.17	3.55	66.6	71.0	17.0-129	11.3	20	
Disulfoton	ug/L	ND	4.76	5.00	4.19	4.35	88.0	87.0	42.0-131	3.75	21	
EPN (ENT)	ug/L	ND	4.76	5.00	4.72	4.96	99.2	99.2	17.0-155	4.96	20	
Ethoprop	ug/L	ND	4.76	5.00	4.90	5.07	103	101	46.0-133	3.41	20	
Parathion (Ethyl parathion)	ug/L	ND	4.76	5.00	4.82	5.03	101	101	30.0-138	4.26	20	
Fensulfothion	ug/L	ND	4.76	5.00	4.77	4.92	100	98.4	36.0-145	3.10	20	
Fenthion	ug/L	ND	4.76	5.00	4.44	4.51	93.3	90.2	46.0-140	1.56	20	
Malathion	ug/L	ND	4.76	5.00	4.51	4.67	94.7	93.4	39.0-126	3.49	20	
Merphos	ug/L	ND	4.76	5.00	3.67	3.84	77.1	76.8	10.0-120	4.53	27	
Methyl parathion	ug/L	ND	4.76	5.00	4.65	4.80	97.7	96.0	28.0-142	3.17	20	
Mevinphos	ug/L	ND	4.76	5.00	4.22	4.50	88.7	90.0	38.0-134	6.42	20	
Naled	ug/L	ND	4.76	5.00	4.38	4.53	92.0	90.6	14.0-130	3.37	20	
Phorate	ug/L	ND	4.76	5.00	4.33	4.52	91.0	90.4	38.0-134	4.29	20	
Ronnel	ug/L	ND	4.76	5.00	4.10	4.21	86.1	84.2	42.0-131	2.65	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3682629-1			R3682629-2			% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		L1378887-01 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Stirophos (Tetrachlorvinphos)	ug/L	ND	4.76	5.00	4.83	4.86	101	97.2	33.0-143	0.619	20			
Sulfotepp (Thiodiphosphoric Ac TEPP)	ug/L	ND	4.76	5.00	4.72	4.88	99.2	97.6	34.0-143	3.33	20			
Tokuthion (Prothiofos)	ug/L	ND	4.76	5.00	4.47	4.66	93.9	93.2	35.0-140	4.16	24			
Trichloronate	ug/L	ND	4.76	5.00	4.73	4.83	99.4	96.6	41.0-133	2.09	20			
Triphenylphosphate (S)	%						92.6	90.4	42.0-129					

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 1707506

Analysis Method: EPA 8151A

QC Batch Method: 8151A

Analysis Description: Chlorinated Herb. (GC) 8151A

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60375151007

METHOD BLANK: R3681690-1

Matrix: Water

Associated Lab Samples: 60375151007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	ug/L	ND	2.00	07/20/21 10:47	
Dalapon	ug/L	ND	2.00	07/20/21 10:47	
2,4-DB	ug/L	ND	2.00	07/20/21 10:47	
Dicamba	ug/L	ND	2.00	07/20/21 10:47	
Dichloroprop	ug/L	ND	2.00	07/20/21 10:47	
Dinoseb	ug/L	ND	2.00	07/20/21 10:47	
MCPA	ug/L	ND	100	07/20/21 10:47	
MCPP	ug/L	ND	100	07/20/21 10:47	
2,4,5-T	ug/L	ND	2.00	07/20/21 10:47	
2,4,5-TP (Silvex)	ug/L	ND	2.00	07/20/21 10:47	
2,4-DCAA (S)	%	76	14.0-158	07/20/21 10:47	

LABORATORY CONTROL SAMPLE & LCSD: R3681690-2

R3681690-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-D	ug/L	5.00	4.67	4.40	93.4	88.0	50.0-120	5.95	20	
Dalapon	ug/L	5.00	4.53	4.22	90.6	84.4	32.0-120	7.09	20	
2,4-DB	ug/L	5.00	5.43	5.10	109	102	53.0-140	6.27	20	
Dicamba	ug/L	5.00	4.94	4.67	98.8	93.4	51.0-120	5.62	20	
Dichloroprop	ug/L	5.00	5.19	4.86	104	97.2	55.0-127	6.57	20	
Dinoseb	ug/L	5.00	5.30	4.94	106	98.8	36.0-134	7.03	20	
MCPA	ug/L	50.0	256	179	512	358	10.0-160	35.4	40	L0,P9
MCPP	ug/L	50.0	56.0	33.4	112	66.8	10.0-160	50.6	23	R1
2,4,5-T	ug/L	5.00	5.60	5.21	112	104	54.0-120	7.22	20	P9
2,4,5-TP (Silvex)	ug/L	5.00	5.28	5.00	106	100	50.0-125	5.45	20	P9
2,4-DCAA (S)	%				109	102	14.0-158			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 1710487

Analysis Method: EPA 8081B

QC Batch Method: 3546/3665A

Analysis Description: Pesticides (GC) 8081B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60375151005, 60375151006

METHOD BLANK: R3683889-1

Matrix: Solid

Associated Lab Samples: 60375151005, 60375151006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aldrin	mg/kg	ND	0.0200	07/23/21 18:18	
alpha-BHC	mg/kg	ND	0.0200	07/23/21 18:18	
beta-BHC	mg/kg	ND	0.0200	07/23/21 18:18	
delta-BHC	mg/kg	ND	0.0200	07/23/21 18:18	
gamma-BHC (Lindane)	mg/kg	ND	0.0200	07/23/21 18:18	
4,4'-DDD	mg/kg	ND	0.0200	07/23/21 18:18	
4,4'-DDE	mg/kg	ND	0.0200	07/23/21 18:18	
4,4'-DDT	mg/kg	ND	0.0200	07/23/21 18:18	
Dieldrin	mg/kg	ND	0.0200	07/23/21 18:18	
Endosulfan I	mg/kg	ND	0.0200	07/23/21 18:18	
Endosulfan II	mg/kg	ND	0.0200	07/23/21 18:18	
Endosulfan sulfate	mg/kg	ND	0.0200	07/23/21 18:18	
Endrin	mg/kg	ND	0.0200	07/23/21 18:18	
Endrin aldehyde	mg/kg	ND	0.0200	07/23/21 18:18	
Endrin ketone	mg/kg	ND	0.0200	07/23/21 18:18	
Heptachlor	mg/kg	ND	0.0200	07/23/21 18:18	
Heptachlor epoxide	mg/kg	ND	0.0200	07/23/21 18:18	
Hexachlorobenzene	mg/kg	ND	0.0200	07/23/21 18:18	
Methoxychlor	mg/kg	ND	0.0200	07/23/21 18:18	
Chlordane (Technical)	mg/kg	ND	0.300	07/23/21 18:18	
Toxaphene	mg/kg	ND	0.400	07/23/21 18:18	
Decachlorobiphenyl (S)	%	73.4	10.0-135	07/23/21 18:18	
Tetrachloro-m-xylene (S)	%	71.2	10.0-139	07/23/21 18:18	

LABORATORY CONTROL SAMPLE: R3683889-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aldrin	mg/kg	0.0666	0.0476	71.5	34.0-136	
alpha-BHC	mg/kg	0.0666	0.0500	75.1	34.0-139	
beta-BHC	mg/kg	0.0666	0.0509	76.4	34.0-133	
delta-BHC	mg/kg	0.0666	0.0523	78.5	34.0-135	
gamma-BHC (Lindane)	mg/kg	0.0666	0.0542	81.4	34.0-136	
4,4'-DDD	mg/kg	0.0666	0.0583	87.5	33.0-141	
4,4'-DDE	mg/kg	0.0666	0.0516	77.5	34.0-134	
4,4'-DDT	mg/kg	0.0666	0.0603	90.5	30.0-143	
Dieldrin	mg/kg	0.0666	0.0550	82.6	35.0-137	
Endosulfan I	mg/kg	0.0666	0.0525	78.8	34.0-134	
Endosulfan II	mg/kg	0.0666	0.0527	79.1	35.0-132	
Endosulfan sulfate	mg/kg	0.0666	0.0526	79.0	35.0-132	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: R3683889-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin	mg/kg	0.0666	0.0573	86.0	34.0-137	
Endrin aldehyde	mg/kg	0.0666	0.0539	80.9	23.0-121	
Endrin ketone	mg/kg	0.0666	0.0567	85.1	35.0-144	
Heptachlor	mg/kg	0.0666	0.0551	82.7	36.0-141	
Heptachlor epoxide	mg/kg	0.0666	0.0567	85.1	36.0-134	
Hexachlorobenzene	mg/kg	0.0666	0.0485	72.8	33.0-129	
Methoxychlor	mg/kg	0.0666	0.0658	98.8	28.0-150	
Decachlorobiphenyl (S)	%			79.0	10.0-135	
Tetrachloro-m-xylene (S)	%			75.2	10.0-139	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3683889-3 R3683889-4

Parameter	Units	R3683889-3		R3683889-4		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		L1379744-01 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Aldrin	mg/kg	ND	0.0666	0.0666	0.0699	0.0768	105	115	20.0-135	9.41	37	
alpha-BHC	mg/kg	ND	0.0666	0.0666	0.0353	0.0400	53.0	60.1	27.0-140	12.5	35	
beta-BHC	mg/kg	ND	0.0666	0.0666	0.0593	0.0640	89.0	96.1	23.0-141	7.62	37	
delta-BHC	mg/kg	ND	0.0666	0.0666	0.0435	0.0497	65.3	74.6	21.0-138	13.3	35	
gamma-BHC (Lindane)	mg/kg	ND	0.0666	0.0666	0.0404	0.0451	60.7	67.7	27.0-137	11.0	36	
Endosulfan I	mg/kg	ND	0.0666	0.0666	0.106	0.222	159	333	20.0-137	70.7	36	MH,R1
Endosulfan II	mg/kg	ND	0.0666	0.0666	0.318	0.361	477	542	15.0-141	12.7	37	MH
Endosulfan sulfate	mg/kg	ND	0.0666	0.0666	0.146	0.183	219	275	15.0-143	22.5	38	MH,P9
Endrin	mg/kg	ND	0.0666	0.0666	0.337	0.388	506	583	19.0-143	14.1	37	MH,P9
Endrin ketone	mg/kg	ND	0.0666	0.0666	0.239	0.275	359	413	17.0-149	14.0	38	MH,P9
Heptachlor	mg/kg	ND	0.0666	0.0666	0.0505	0.0559	75.8	83.9	22.0-138	10.2	37	
Hexachlorobenzene	mg/kg	ND	0.0666	0.0666	0.0366	0.0409	55.0	61.4	25.0-126	11.1	35	
Decachlorobiphenyl (S)	%						63.2	68.8	10.0-135			
Tetrachloro-m-xylene (S)	%						70.3	75.7	10.0-139			

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 1708068

Analysis Method: EPA 8141B

QC Batch Method: 3546

Analysis Description: OP Pesticides 8141B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60375151005, 60375151006

METHOD BLANK: R3682990-1

Matrix: Solid

Associated Lab Samples: 60375151005, 60375151006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Azinphos, methyl (Guthion)	mg/kg	ND	0.100	07/22/21 16:00	
Bolstar	mg/kg	ND	0.100	07/22/21 16:00	
Chlorpyrifos	mg/kg	ND	0.100	07/22/21 16:00	
Coumaphos	mg/kg	ND	0.100	07/22/21 16:00	
Total Demeton	mg/kg	ND	0.0700	07/22/21 16:00	
Diazinon	mg/kg	ND	0.100	07/22/21 16:00	
Dichlorvos	mg/kg	ND	0.100	07/22/21 16:00	
Dimethoate	mg/kg	ND	0.100	07/22/21 16:00	
Disulfoton	mg/kg	ND	0.100	07/22/21 16:00	
EPN (ENT)	mg/kg	ND	0.100	07/22/21 16:00	
Ethoprop	mg/kg	ND	0.100	07/22/21 16:00	
Parathion (Ethyl parathion)	mg/kg	ND	0.100	07/22/21 16:00	
Fensulfothion	mg/kg	ND	0.100	07/22/21 16:00	
Fenthion	mg/kg	ND	0.100	07/22/21 16:00	
Malathion	mg/kg	ND	0.100	07/22/21 16:00	
Merphos	mg/kg	ND	0.100	07/22/21 16:00	
Methyl parathion	mg/kg	ND	0.100	07/22/21 16:00	
Mevinphos	mg/kg	ND	0.100	07/22/21 16:00	
Naled	mg/kg	ND	0.100	07/22/21 16:00	
Phorate	mg/kg	ND	0.100	07/22/21 16:00	
Ronnel	mg/kg	ND	0.100	07/22/21 16:00	
Stiropfos (Tetrachlorvinphos)	mg/kg	ND	0.100	07/22/21 16:00	
Sulfotepp (Thiodiphosphoric Ac	mg/kg	ND	0.100	07/22/21 16:00	
TEPP	mg/kg	ND	1.00	07/22/21 16:00	
Tokuthion (Prothiofos)	mg/kg	ND	0.100	07/22/21 16:00	
Trichloronate	mg/kg	ND	0.100	07/22/21 16:00	
Triphenylphosphate (S)	%	92.8	36.0-121	07/22/21 16:00	

LABORATORY CONTROL SAMPLE: R3682990-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Azinphos, methyl (Guthion)	mg/kg	0.333	0.325	97.6	58.0-125	
Bolstar	mg/kg	0.333	0.292	87.7	64.0-120	
Chlorpyrifos	mg/kg	0.333	0.283	85.0	62.0-120	
Coumaphos	mg/kg	0.333	0.314	94.3	60.0-120	
Total Demeton	mg/kg	0.167	0.152	91.0	59.0-120	
Diazinon	mg/kg	0.333	0.293	88.0	49.0-120	
Dichlorvos	mg/kg	0.333	0.245	73.6	37.0-120	
Dimethoate	mg/kg	0.333	0.279	83.8	46.0-127	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: R3682990-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Disulfoton	mg/kg	0.333	0.286	85.9	60.0-121	
EPN (ENT)	mg/kg	0.333	0.313	94.0	60.0-121	
Ethoprop	mg/kg	0.333	0.292	87.7	59.0-120	
Parathion (Ethyl parathion)	mg/kg	0.333	0.309	92.8	62.0-120	
Fensulfothion	mg/kg	0.333	0.300	90.1	58.0-123	
Fenthion	mg/kg	0.333	0.299	89.8	61.0-121	
Malathion	mg/kg	0.333	0.287	86.2	59.0-120	
Merphos	mg/kg	0.333	0.257	77.2	59.0-120	
Methyl parathion	mg/kg	0.333	0.312	93.7	63.0-120	
Mevinphos	mg/kg	0.333	0.287	86.2	50.0-120	
Naled	mg/kg	0.333	0.234	70.3	10.0-125	
Phorate	mg/kg	0.333	0.291	87.4	60.0-120	
Ronnel	mg/kg	0.333	0.298	89.5	62.0-120	
Stirophos (Tetrachlorvinphos)	mg/kg	0.333	0.327	98.2	62.0-120	
Sulfotepp (Thiodiphosphoric Ac	mg/kg	0.333	0.325	97.6	62.0-122	
TEPP	mg/kg	3.33	0.409	12.3	10.0-135	
Tokuthion (Prothiofos)	mg/kg	0.333	0.298	89.5	63.0-120	
Trichloronate	mg/kg	0.333	0.289	86.8	62.0-120	
Triphenylphosphate (S)	%			87.1	36.0-121	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3683129-1 R3683129-2

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		L1379094-01 Result	Spike Conc.	Spike Conc.	MS Result								
Azinphos, methyl (Guthion)	mg/kg	ND	0.328	0.325	0.310	0.298	94.5	91.7	10.0-160	3.95	22		
Bolstar	mg/kg	ND	0.328	0.325	0.298	0.285	90.9	87.7	10.0-151	4.46	20		
Chlorpyrifos	mg/kg	ND	0.328	0.325	0.291	0.299	88.7	92.0	12.0-149	2.71	20		
Coumaphos	mg/kg	ND	0.328	0.325	0.310	0.296	94.5	91.1	10.0-160	4.62	22		
Total Demeton	mg/kg	ND	0.164	0.163	0.156	0.149	95.1	91.4	10.0-160	4.59	23		
Diazinon	mg/kg	ND	0.328	0.325	0.305	0.289	93.0	88.9	11.0-157	5.39	20		
Dichlorvos	mg/kg	ND	0.328	0.325	0.317	0.323	96.6	99.4	10.0-160	1.88	24		
Dimethoate	mg/kg	ND	0.328	0.325	0.305	0.306	93.0	94.2	10.0-150	0.327	27		
Disulfoton	mg/kg	ND	0.328	0.325	0.301	0.286	91.8	88.0	12.0-155	5.11	20		
EPN (ENT)	mg/kg	ND	0.328	0.325	0.325	0.320	99.1	98.5	10.0-159	1.55	20		
Ethoprop	mg/kg	ND	0.328	0.325	0.329	0.323	100	99.4	11.0-156	1.84	20		
Parathion (Ethyl parathion)	mg/kg	ND	0.328	0.325	0.328	0.322	100	99.1	10.0-147	1.85	20		
Fensulfothion	mg/kg	ND	0.328	0.325	0.313	0.305	95.4	93.8	10.0-157	2.59	27		
Fenthion	mg/kg	ND	0.328	0.325	0.302	0.288	92.1	88.6	13.0-155	4.75	20		
Malathion	mg/kg	ND	0.328	0.325	0.301	0.299	91.8	92.0	13.0-137	0.667	21		
Merphos	mg/kg	ND	0.328	0.325	0.265	0.257	80.8	79.1	10.0-147	3.07	26		
Methyl parathion	mg/kg	ND	0.328	0.325	0.316	0.306	96.3	94.2	10.0-150	3.22	21		
Mevinphos	mg/kg	ND	0.328	0.325	0.321	0.315	97.9	96.9	10.0-158	1.89	24		
Naled	mg/kg	ND	0.328	0.325	0.212	0.157	64.6	48.3	10.0-137	29.8	40		
Phorate	mg/kg	ND	0.328	0.325	0.309	0.292	94.2	89.8	13.0-154	5.66	20		
Ronnel	mg/kg	ND	0.328	0.325	0.285	0.273	86.9	84.0	14.0-149	4.30	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

Parameter	Units	R3683129-1			R3683129-2			% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		L1379094-01 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Stirophos (Tetrachlorvinphos)	mg/kg	ND	0.328	0.325	0.320	0.306	97.6	94.2	10.0-150	4.47	20			
Sulfotepp (Thiodiphosphoric Ac TEPP)	mg/kg	ND	0.328	0.325	0.318	0.310	97.0	95.4	10.0-160	2.55	20			
Tokuthion (Prothiofos)	mg/kg	ND	3.28	3.25	1.51	1.93	46.0	59.4	10.0-142	24.4	28			
Trichloronate	mg/kg	ND	0.328	0.325	0.304	0.296	92.7	91.1	12.0-153	2.67	20			
Triphenylphosphate (S)	%	ND	0.328	0.325	0.311	0.304	94.8	93.5	12.0-152	2.28	20			
							87.5	87.4	36.0-121					

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 1708908

Analysis Method: EPA 8151A

QC Batch Method: 8151A

Analysis Description: Chlorinated Herb. (GC) 8151A

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60375151005, 60375151006

METHOD BLANK: R3683196-1

Matrix: Solid

Associated Lab Samples: 60375151005, 60375151006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	mg/kg	ND	0.0700	07/22/21 12:04	
Dalapon	mg/kg	ND	0.0700	07/22/21 12:04	
2,4-DB	mg/kg	ND	0.0700	07/22/21 12:04	
Dicamba	mg/kg	ND	0.0700	07/22/21 12:04	
Dichloroprop	mg/kg	ND	0.0700	07/22/21 12:04	
Dinoseb	mg/kg	ND	0.0700	07/22/21 12:04	
MCPA	mg/kg	ND	6.50	07/22/21 12:04	
MCPP	mg/kg	ND	6.50	07/22/21 12:04	
2,4,5-T	mg/kg	ND	0.0700	07/22/21 12:04	
2,4,5-TP (Silvex)	mg/kg	ND	0.0700	07/22/21 12:04	
2,4-DCAA (S)	%	36.5	22.0-132	07/22/21 12:04	

LABORATORY CONTROL SAMPLE: R3683196-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-D	mg/kg	0.167	0.0721	43.2	40.0-120	
Dalapon	mg/kg	0.167	0.0609	36.5	15.0-120	
2,4-DB	mg/kg	0.167	0.0780	46.7	25.0-143	
Dicamba	mg/kg	0.167	0.0805	48.2	43.0-120	
Dichloroprop	mg/kg	0.167	0.0817	48.9	32.0-129	
Dinoseb	mg/kg	0.167	0.0596	35.7	10.0-120	
MCPA	mg/kg	1.67	0.698	41.8	31.0-121	
MCPP	mg/kg	1.67	2.08	125	28.0-133	
2,4,5-T	mg/kg	0.167	0.0720	43.1	41.0-120	
2,4,5-TP (Silvex)	mg/kg	0.167	0.0803	48.1	42.0-120	
2,4-DCAA (S)	%			43.5	22.0-132	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3683196-3

R3683196-4

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		L1379127-06 Result	Spike Conc.	Spike Conc.	MS Result							
2,4-D	mg/kg	ND	0.165	0.165	0.0509	0.0802	30.8	48.6	10.0-160	44.7	24	R1
Dalapon	mg/kg	ND	0.165	0.165	0.0428	0.0742	25.9	45.0	10.0-121	53.7	27	R1
2,4-DB	mg/kg	ND	0.165	0.165	0.0561	0.0911	34.0	55.2	10.0-160	47.6	22	R1
Dicamba	mg/kg	ND	0.165	0.165	0.0503	0.0874	30.5	53.0	10.0-154	53.9	21	R1
Dichloroprop	mg/kg	ND	0.165	0.165	0.0603	0.0754	36.5	45.7	10.0-158	22.3	20	R1
Dinoseb	mg/kg	ND	0.165	0.165	0.0400	0.0604	24.2	36.6	10.0-120	40.6	40	R1

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QUALITY CONTROL DATA

Project: Lawrence, KS
Pace Project No.: 60375151

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3683196-3			R3683196-4			% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		L1379127-06 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
MCPA	mg/kg	ND	1.65	1.65	0.530	0.904	32.1	54.8	10.0-160	52.2	40	R1		
MCPP	mg/kg	ND	1.65	1.65	1.18	1.53	71.5	92.7	10.0-160	25.8	40			
2,4,5-T	mg/kg	ND	0.165	0.165	0.0443	0.0687	26.8	41.6	10.0-157	43.2	20	R1		
2,4,5-TP (Silvex)	mg/kg	ND	0.165	0.165	0.0495	0.0782	30.0	47.4	10.0-156	44.9	20	R1		
2,4-DCAA (S)	%						29.3	46.5	22.0-132					

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 733075

Analysis Method: EPA 8015B

QC Batch Method: EPA 5035A/5030B

Analysis Description: LRH (C5 - C8) Soil

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151001, 60375151003

METHOD BLANK: 2941785

Matrix: Solid

Associated Lab Samples: 60375151001, 60375151003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
LRH (C5-C8)	mg/kg	ND	5.0	07/20/21 23:57	
4-Bromofluorobenzene (S)	%	102	70-130	07/20/21 23:57	
Dibromofluoromethane (S)	%	92	70-130	07/20/21 23:57	

LABORATORY CONTROL SAMPLE & LCSD: 2941786

2941787

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
LRH (C5-C8)	mg/kg	20	15.3	15.8	77	79	70-130	3	25	
4-Bromofluorobenzene (S)	%				102	101	70-130			
Dibromofluoromethane (S)	%				90	91	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941788

2941789

Parameter	Units	60375189011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
LRH (C5-C8)	mg/kg	ND	26.8	26.8	18.3	19.6	68	73	70-130	7	25	M1
4-Bromofluorobenzene (S)	%						99	100	70-130			
Dibromofluoromethane (S)	%						98	100	70-130			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732760

Analysis Method: KS LRH: EPA 5030B/8015C

QC Batch Method: KS LRH: EPA 5030B/8015C

Analysis Description: LRH (C5 - C8) Water

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151002, 60375151004

METHOD BLANK: 2941021

Matrix: Water

Associated Lab Samples: 60375151002, 60375151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
LRH (C5-C8)	mg/L	ND	0.050	07/20/21 15:32	
4-Bromofluorobenzene (S)	%	107	70-130	07/20/21 15:32	

LABORATORY CONTROL SAMPLE & LCSD: 2941022

2941023

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
LRH (C5-C8)	mg/L	0.4	0.31	0.31	78	78	70-130	1	25	
4-Bromofluorobenzene (S)	%				107	107	70-130			

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732993

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151001, 60375151003

METHOD BLANK: 2941593

Matrix: Solid

Associated Lab Samples: 60375151001, 60375151003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	1.0	07/20/21 12:01	

LABORATORY CONTROL SAMPLE: 2941594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	100	93.2	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941595 2941596

Parameter	Units	60373776001		2941595		2941596		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.				
Lead	mg/kg	94.2	74.8	79.4	147	164	70	88	75-125	11	20 M1

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QUALITY CONTROL DATA

Project: Lawrence, KS
Pace Project No.: 60375151

QC Batch: 732803 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60375151002, 60375151004

METHOD BLANK: 2941070 Matrix: Water
Associated Lab Samples: 60375151002, 60375151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	ND	0.010	07/19/21 15:27	

LABORATORY CONTROL SAMPLE: 2941071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	1	0.99	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941072 2941073

Parameter	Units	60375067001		2941073		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Lead	mg/L	ND	1	1	0.97	0.97	97	97	75-125	0	20

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732882

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035A/5030

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151003

METHOD BLANK: 2941355

Matrix: Solid

Associated Lab Samples: 60375151003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	07/19/21 09:44	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	07/19/21 09:44	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	07/19/21 09:44	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	07/19/21 09:44	
1,1-Dichloroethane	mg/kg	ND	0.0050	07/19/21 09:44	
1,1-Dichloroethene	mg/kg	ND	0.0050	07/19/21 09:44	
1,1-Dichloropropene	mg/kg	ND	0.0050	07/19/21 09:44	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	07/19/21 09:44	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	07/19/21 09:44	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	07/19/21 09:44	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	07/19/21 09:44	
1,2-Dibromo-3-chloropropane	mg/kg	ND	0.010	07/19/21 09:44	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	07/19/21 09:44	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	07/19/21 09:44	
1,2-Dichloroethane	mg/kg	ND	0.0050	07/19/21 09:44	
1,2-Dichloroethene (Total)	mg/kg	ND	0.0050	07/19/21 09:44	
1,2-Dichloropropane	mg/kg	ND	0.0050	07/19/21 09:44	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	07/19/21 09:44	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	07/19/21 09:44	
1,3-Dichloropropane	mg/kg	ND	0.0050	07/19/21 09:44	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	07/19/21 09:44	
2,2-Dichloropropane	mg/kg	ND	0.0050	07/19/21 09:44	
2-Butanone (MEK)	mg/kg	ND	0.010	07/19/21 09:44	
2-Chlorotoluene	mg/kg	ND	0.0050	07/19/21 09:44	
2-Hexanone	mg/kg	ND	0.020	07/19/21 09:44	
4-Chlorotoluene	mg/kg	ND	0.0050	07/19/21 09:44	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.010	07/19/21 09:44	
Acetone	mg/kg	ND	0.020	07/19/21 09:44	
Benzene	mg/kg	ND	0.0050	07/19/21 09:44	
Bromobenzene	mg/kg	ND	0.0050	07/19/21 09:44	
Bromochloromethane	mg/kg	ND	0.0050	07/19/21 09:44	
Bromodichloromethane	mg/kg	ND	0.0050	07/19/21 09:44	
Bromoform	mg/kg	ND	0.0050	07/19/21 09:44	
Bromomethane	mg/kg	ND	0.0050	07/19/21 09:44	
Carbon disulfide	mg/kg	ND	0.0050	07/19/21 09:44	
Carbon tetrachloride	mg/kg	ND	0.0050	07/19/21 09:44	
Chlorobenzene	mg/kg	ND	0.0050	07/19/21 09:44	
Chloroethane	mg/kg	ND	0.0050	07/19/21 09:44	
Chloroform	mg/kg	ND	0.0050	07/19/21 09:44	
Chloromethane	mg/kg	ND	0.0050	07/19/21 09:44	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

METHOD BLANK: 2941355

Matrix: Solid

Associated Lab Samples: 60375151003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	07/19/21 09:44	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	07/19/21 09:44	
Dibromochloromethane	mg/kg	ND	0.0050	07/19/21 09:44	
Dibromomethane	mg/kg	ND	0.0050	07/19/21 09:44	
Dichlorodifluoromethane	mg/kg	ND	0.0050	07/19/21 09:44	
Ethylbenzene	mg/kg	ND	0.0050	07/19/21 09:44	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	07/19/21 09:44	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	07/19/21 09:44	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	07/19/21 09:44	
Methylene Chloride	mg/kg	ND	0.0050	07/19/21 09:44	
n-Butylbenzene	mg/kg	ND	0.0050	07/19/21 09:44	
n-Propylbenzene	mg/kg	ND	0.0050	07/19/21 09:44	
Naphthalene	mg/kg	ND	0.010	07/19/21 09:44	
p-Isopropyltoluene	mg/kg	ND	0.0050	07/19/21 09:44	
sec-Butylbenzene	mg/kg	ND	0.0050	07/19/21 09:44	
Styrene	mg/kg	ND	0.0050	07/19/21 09:44	
tert-Butylbenzene	mg/kg	ND	0.025	07/19/21 09:44	
Tetrachloroethene	mg/kg	ND	0.0050	07/19/21 09:44	
Toluene	mg/kg	ND	0.0050	07/19/21 09:44	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	07/19/21 09:44	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	07/19/21 09:44	
Trichloroethene	mg/kg	ND	0.0050	07/19/21 09:44	
Trichlorofluoromethane	mg/kg	ND	0.0050	07/19/21 09:44	
Vinyl chloride	mg/kg	ND	0.0050	07/19/21 09:44	
Xylene (Total)	mg/kg	ND	0.0050	07/19/21 09:44	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120	07/19/21 09:44	
4-Bromofluorobenzene (S)	%	105	80-120	07/19/21 09:44	
Toluene-d8 (S)	%	101	80-120	07/19/21 09:44	

LABORATORY CONTROL SAMPLE: 2941356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	0.1	0.10	103	80-130	
1,1,1-Trichloroethane	mg/kg	0.1	0.10	102	75-130	
1,1,2,2-Tetrachloroethane	mg/kg	0.1	0.096	96	75-120	
1,1,2-Trichloroethane	mg/kg	0.1	0.097	97	80-120	
1,1-Dichloroethane	mg/kg	0.1	0.10	102	75-125	
1,1-Dichloroethene	mg/kg	0.1	0.11	108	70-130	
1,1-Dichloropropene	mg/kg	0.1	0.10	104	60-140	
1,2,3-Trichlorobenzene	mg/kg	0.1	0.10	103	80-125	
1,2,3-Trichloropropane	mg/kg	0.1	0.093	93	80-120	
1,2,4-Trichlorobenzene	mg/kg	0.1	0.11	106	80-125	
1,2,4-Trimethylbenzene	mg/kg	0.1	0.097	97	80-125	
1,2-Dibromo-3-chloropropane	mg/kg	0.1	0.11	106	75-135	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: 2941356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	0.1	0.10	100	80-125	
1,2-Dichlorobenzene	mg/kg	0.1	0.094	94	80-120	
1,2-Dichloroethane	mg/kg	0.1	0.096	96	80-120	
1,2-Dichloroethene (Total)	mg/kg	0.2	0.20	102	80-120	
1,2-Dichloropropane	mg/kg	0.1	0.10	101	80-120	
1,3,5-Trimethylbenzene	mg/kg	0.1	0.099	99	80-125	
1,3-Dichlorobenzene	mg/kg	0.1	0.097	97	80-120	
1,3-Dichloropropane	mg/kg	0.1	0.095	95	80-120	
1,4-Dichlorobenzene	mg/kg	0.1	0.099	99	80-120	
2,2-Dichloropropane	mg/kg	0.1	0.11	109	75-130	
2-Butanone (MEK)	mg/kg	0.5	0.62	124	60-135	
2-Chlorotoluene	mg/kg	0.1	0.097	97	80-120	
2-Hexanone	mg/kg	0.5	0.64	128	70-135	
4-Chlorotoluene	mg/kg	0.1	0.099	99	80-120	
4-Methyl-2-pentanone (MIBK)	mg/kg	0.5	0.48	96	75-130	
Acetone	mg/kg	0.5	0.62	125	50-150	
Benzene	mg/kg	0.1	0.098	98	80-120	
Bromobenzene	mg/kg	0.1	0.096	96	80-120	
Bromochloromethane	mg/kg	0.1	0.098	98	75-120	
Bromodichloromethane	mg/kg	0.1	0.11	110	80-125	
Bromoform	mg/kg	0.1	0.093	93	80-135	
Bromomethane	mg/kg	0.1	0.12	115	35-135	
Carbon disulfide	mg/kg	0.1	0.11	113	65-140	
Carbon tetrachloride	mg/kg	0.1	0.11	111	75-140	
Chlorobenzene	mg/kg	0.1	0.097	97	80-120	
Chloroethane	mg/kg	0.1	0.11	111	50-135	
Chloroform	mg/kg	0.1	0.10	101	80-120	
Chloromethane	mg/kg	0.1	0.11	109	15-155	
cis-1,2-Dichloroethene	mg/kg	0.1	0.10	101	80-120	
cis-1,3-Dichloropropene	mg/kg	0.1	0.11	110	80-125	
Dibromochloromethane	mg/kg	0.1	0.11	112	80-130	
Dibromomethane	mg/kg	0.1	0.099	99	80-120	
Dichlorodifluoromethane	mg/kg	0.1	0.14	136	10-160	
Ethylbenzene	mg/kg	0.1	0.099	99	80-120	
Hexachloro-1,3-butadiene	mg/kg	0.1	0.11	107	80-135	
Isopropylbenzene (Cumene)	mg/kg	0.1	0.099	99	75-135	
Methyl-tert-butyl ether	mg/kg	0.1	0.099	99	75-130	
Methylene Chloride	mg/kg	0.1	0.090	90	65-120	
n-Butylbenzene	mg/kg	0.1	0.10	103	80-135	
n-Propylbenzene	mg/kg	0.1	0.099	99	80-125	
Naphthalene	mg/kg	0.1	0.10	102	80-120	
p-Isopropyltoluene	mg/kg	0.1	0.10	101	65-145	
sec-Butylbenzene	mg/kg	0.1	0.099	99	80-135	
Styrene	mg/kg	0.1	0.099	99	85-125	
tert-Butylbenzene	mg/kg	0.1	0.10	101	80-125	
Tetrachloroethene	mg/kg	0.1	0.10	100	80-130	
Toluene	mg/kg	0.1	0.096	96	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: 2941356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	mg/kg	0.1	0.10	104	75-125	
trans-1,3-Dichloropropene	mg/kg	0.1	0.11	109	80-130	
Trichloroethene	mg/kg	0.1	0.10	104	80-125	
Trichlorofluoromethane	mg/kg	0.1	0.11	113	65-135	
Vinyl chloride	mg/kg	0.1	0.11	114	35-145	
Xylene (Total)	mg/kg	0.3	0.29	97	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941427 2941428

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		60375233002 Result	Spike Conc.	Spike Conc.	MS Result							
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.12	0.13	0.13	0.13	100	100	25-130	1	35	
1,1,1-Trichloroethane	mg/kg	ND	0.12	0.13	0.12	0.12	95	91	45-120	4	35	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.12	0.13	0.12	0.12	94	97	10-145	4	35	
1,1,2-Trichloroethane	mg/kg	ND	0.12	0.13	0.12	0.12	95	95	25-130	2	35	
1,1-Dichloroethane	mg/kg	ND	0.12	0.13	0.12	0.12	99	96	40-120	1	35	
1,1-Dichloroethene	mg/kg	ND	0.12	0.13	0.12	0.12	96	92	35-120	3	35	
1,1-Dichloropropene	mg/kg	ND	0.12	0.13	0.12	0.12	95	91	40-125	2	35	
1,2,3-Trichlorobenzene	mg/kg	ND	0.12	0.13	0.12	0.12	96	96	10-125	2	50	
1,2,3-Trichloropropane	mg/kg	ND	0.12	0.13	0.11	0.12	91	93	25-135	3	35	
1,2,4-Trichlorobenzene	mg/kg	ND	0.12	0.13	0.12	0.12	95	94	10-125	1	50	
1,2,4-Trimethylbenzene	mg/kg	ND	0.12	0.13	0.12	0.12	94	91	35-120	2	35	
1,2-Dibromo-3-chloropropane	mg/kg	ND	0.12	0.13	0.13	0.14	106	108	10-145	4	35	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.12	0.13	0.12	0.13	99	99	30-140	2	35	
1,2-Dichlorobenzene	mg/kg	ND	0.12	0.13	0.12	0.12	92	93	10-125	2	35	
1,2-Dichloroethane	mg/kg	ND	0.12	0.13	0.12	0.12	94	92	35-120	0	35	
1,2-Dichloroethene (Total)	mg/kg	ND	0.25	0.25	0.24	0.24	98	95	40-120	2	35	
1,2-Dichloropropane	mg/kg	ND	0.12	0.13	0.12	0.12	96	96	35-120	1	35	
1,3,5-Trimethylbenzene	mg/kg	ND	0.12	0.13	0.12	0.12	92	92	15-130	0	35	
1,3-Dichlorobenzene	mg/kg	ND	0.12	0.13	0.12	0.12	94	92	10-125	0	37	
1,3-Dichloropropane	mg/kg	ND	0.12	0.13	0.12	0.12	93	94	30-120	3	35	
1,4-Dichlorobenzene	mg/kg	ND	0.12	0.13	0.12	0.12	95	93	10-125	0	35	
2,2-Dichloropropane	mg/kg	ND	0.12	0.13	0.12	0.12	99	96	40-120	2	35	
2-Butanone (MEK)	mg/kg	ND	0.62	0.64	0.51	0.49	81	78	20-145	3	35	
2-Chlorotoluene	mg/kg	ND	0.12	0.13	0.11	0.12	92	91	15-125	1	35	
2-Hexanone	mg/kg	ND	0.62	0.64	0.55	0.55	87	86	15-150	0	35	
4-Chlorotoluene	mg/kg	ND	0.12	0.13	0.12	0.12	94	93	10-125	1	35	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.62	0.64	0.58	0.58	92	91	30-140	0	35	
Acetone	mg/kg	ND	0.62	0.64	0.40	0.42	63	65	10-165	5	35	
Benzene	mg/kg	ND	0.12	0.13	0.12	0.12	95	92	35-120	2	35	
Bromobenzene	mg/kg	ND	0.12	0.13	0.12	0.12	92	93	15-125	2	35	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941427				2941428				% Rec Limits	Max RPD	Qual
		60375233002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Bromochloromethane	mg/kg	ND	0.12	0.13	0.12	0.12	97	94	35-120	2	35	
Bromodichloromethane	mg/kg	ND	0.12	0.13	0.13	0.13	107	106	30-130	0	35	
Bromoform	mg/kg	ND	0.12	0.13	0.11	0.12	90	91	15-135	2	35	
Bromomethane	mg/kg	ND	0.12	0.13	0.11	0.11	85	85	10-120	1	35	
Carbon disulfide	mg/kg	ND	0.12	0.13	0.12	0.12	98	95	20-120	3	35	
Carbon tetrachloride	mg/kg	ND	0.12	0.13	0.13	0.12	102	98	40-125	3	35	
Chlorobenzene	mg/kg	ND	0.12	0.13	0.12	0.12	95	93	20-125	1	35	
Chloroethane	mg/kg	ND	0.12	0.13	0.12	0.12	98	94	25-120	2	35	
Chloroform	mg/kg	ND	0.12	0.13	0.12	0.12	99	98	40-125	0	35	
Chloromethane	mg/kg	ND	0.12	0.13	0.10	0.11	84	83	10-120	1	35	
cis-1,2-Dichloroethene	mg/kg	ND	0.12	0.13	0.12	0.12	98	95	35-120	2	35	
cis-1,3-Dichloropropene	mg/kg	ND	0.12	0.13	0.13	0.13	105	105	20-130	1	35	
Dibromochloromethane	mg/kg	ND	0.12	0.13	0.14	0.14	108	110	25-135	3	35	
Dibromomethane	mg/kg	ND	0.12	0.13	0.12	0.12	97	96	30-125	0	35	
Dichlorodifluoromethane	mg/kg	ND	0.12	0.13	0.086	0.082	68	64	10-120	5	35	
Ethylbenzene	mg/kg	ND	0.12	0.13	0.12	0.12	93	93	35-120	2	35	
Hexachloro-1,3-butadiene	mg/kg	ND	0.12	0.13	0.12	0.12	97	97	10-125	1	45	
Isopropylbenzene (Cumene)	mg/kg	ND	0.12	0.13	0.12	0.12	94	91	20-135	3	35	
Methyl-tert-butyl ether	mg/kg	ND	0.12	0.13	0.12	0.12	92	92	35-140	1	35	
Methylene Chloride	mg/kg	ND	0.12	0.13	0.11	0.11	86	86	10-135	1	35	
n-Butylbenzene	mg/kg	ND	0.12	0.13	0.12	0.12	95	93	10-130	0	35	
n-Propylbenzene	mg/kg	ND	0.12	0.13	0.12	0.12	92	91	20-125	0	35	
Naphthalene	mg/kg	ND	0.12	0.13	0.12	0.13	97	99	10-160	3	35	
p-Isopropyltoluene	mg/kg	ND	0.12	0.13	0.12	0.12	94	92	10-135	0	35	
sec-Butylbenzene	mg/kg	ND	0.12	0.13	0.12	0.11	92	89	15-135	2	35	
Styrene	mg/kg	ND	0.12	0.13	0.12	0.12	97	96	15-130	0	35	
tert-Butylbenzene	mg/kg	ND	0.12	0.13	0.12	0.12	95	91	15-135	2	35	
Tetrachloroethene	mg/kg	ND	0.12	0.13	0.11	0.11	92	90	30-125	1	35	
Toluene	mg/kg	ND	0.12	0.13	0.12	0.11	93	90	35-120	2	35	
trans-1,2-Dichloroethene	mg/kg	ND	0.12	0.13	0.12	0.12	97	94	40-120	2	35	
trans-1,3-Dichloropropene	mg/kg	ND	0.12	0.13	0.13	0.13	105	105	20-135	1	35	
Trichloroethene	mg/kg	ND	0.12	0.13	0.12	0.12	97	95	25-140	1	35	
Trichlorofluoromethane	mg/kg	ND	0.12	0.13	0.12	0.12	96	92	35-120	3	35	
Vinyl chloride	mg/kg	ND	0.12	0.13	0.11	0.11	89	85	10-120	4	35	
Xylene (Total)	mg/kg	ND	0.38	0.38	0.35	0.35	93	91	35-120	1	35	
1,2-Dichlorobenzene-d4 (S)	%						101	101	80-120		3	
4-Bromofluorobenzene (S)	%						98	99	80-120		20	
Toluene-d8 (S)	%						99	100	80-120		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732845

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035A/5030B

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151001

METHOD BLANK: 2941234

Matrix: Solid

Associated Lab Samples: 60375151001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.25	07/19/21 16:57	
1,1,1-Trichloroethane	mg/kg	ND	0.25	07/19/21 16:57	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.25	07/19/21 16:57	
1,1,2-Trichloroethane	mg/kg	ND	0.25	07/19/21 16:57	
1,1-Dichloroethane	mg/kg	ND	0.25	07/19/21 16:57	
1,1-Dichloroethene	mg/kg	ND	0.25	07/19/21 16:57	
1,1-Dichloropropene	mg/kg	ND	0.25	07/19/21 16:57	
1,2,3-Trichlorobenzene	mg/kg	ND	0.25	07/19/21 16:57	
1,2,3-Trichloropropane	mg/kg	ND	0.25	07/19/21 16:57	
1,2,4-Trichlorobenzene	mg/kg	ND	0.25	07/19/21 16:57	
1,2,4-Trimethylbenzene	mg/kg	ND	0.25	07/19/21 16:57	
1,2-Dibromo-3-chloropropane	mg/kg	ND	0.50	07/19/21 16:57	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.25	07/19/21 16:57	
1,2-Dichlorobenzene	mg/kg	ND	0.25	07/19/21 16:57	
1,2-Dichloroethane	mg/kg	ND	0.25	07/19/21 16:57	
1,2-Dichloroethene (Total)	mg/kg	ND	0.25	07/19/21 16:57	
1,2-Dichloropropane	mg/kg	ND	0.25	07/19/21 16:57	
1,3,5-Trimethylbenzene	mg/kg	ND	0.25	07/19/21 16:57	
1,3-Dichlorobenzene	mg/kg	ND	0.25	07/19/21 16:57	
1,3-Dichloropropane	mg/kg	ND	0.25	07/19/21 16:57	
1,4-Dichlorobenzene	mg/kg	ND	0.25	07/19/21 16:57	
2,2-Dichloropropane	mg/kg	ND	0.25	07/19/21 16:57	
2-Butanone (MEK)	mg/kg	ND	0.50	07/19/21 16:57	
2-Chlorotoluene	mg/kg	ND	0.25	07/19/21 16:57	
2-Hexanone	mg/kg	ND	1.0	07/19/21 16:57	
4-Chlorotoluene	mg/kg	ND	0.25	07/19/21 16:57	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.50	07/19/21 16:57	
Acetone	mg/kg	ND	1.0	07/19/21 16:57	
Benzene	mg/kg	ND	0.25	07/19/21 16:57	
Bromobenzene	mg/kg	ND	0.25	07/19/21 16:57	
Bromochloromethane	mg/kg	ND	0.25	07/19/21 16:57	
Bromodichloromethane	mg/kg	ND	0.25	07/19/21 16:57	
Bromoform	mg/kg	ND	0.25	07/19/21 16:57	
Bromomethane	mg/kg	ND	0.25	07/19/21 16:57	
Carbon disulfide	mg/kg	ND	0.25	07/19/21 16:57	
Carbon tetrachloride	mg/kg	ND	0.25	07/19/21 16:57	
Chlorobenzene	mg/kg	ND	0.25	07/19/21 16:57	
Chloroethane	mg/kg	ND	0.25	07/19/21 16:57	
Chloroform	mg/kg	ND	0.25	07/19/21 16:57	
Chloromethane	mg/kg	ND	0.25	07/19/21 16:57	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

METHOD BLANK: 2941234

Matrix: Solid

Associated Lab Samples: 60375151001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	mg/kg	ND	0.25	07/19/21 16:57	
cis-1,3-Dichloropropene	mg/kg	ND	0.25	07/19/21 16:57	
Dibromochloromethane	mg/kg	ND	0.25	07/19/21 16:57	
Dibromomethane	mg/kg	ND	0.25	07/19/21 16:57	
Dichlorodifluoromethane	mg/kg	ND	0.25	07/19/21 16:57	
Ethylbenzene	mg/kg	ND	0.25	07/19/21 16:57	
Hexachloro-1,3-butadiene	mg/kg	ND	0.25	07/19/21 16:57	
Isopropylbenzene (Cumene)	mg/kg	ND	0.25	07/19/21 16:57	
Methyl-tert-butyl ether	mg/kg	ND	0.25	07/19/21 16:57	
Methylene Chloride	mg/kg	ND	0.25	07/19/21 16:57	
n-Butylbenzene	mg/kg	ND	0.25	07/19/21 16:57	
n-Propylbenzene	mg/kg	ND	0.25	07/19/21 16:57	
Naphthalene	mg/kg	ND	0.50	07/19/21 16:57	
p-Isopropyltoluene	mg/kg	ND	0.25	07/19/21 16:57	
sec-Butylbenzene	mg/kg	ND	0.25	07/19/21 16:57	
Styrene	mg/kg	ND	0.25	07/19/21 16:57	
tert-Butylbenzene	mg/kg	ND	1.2	07/19/21 16:57	
Tetrachloroethene	mg/kg	ND	0.25	07/19/21 16:57	
Toluene	mg/kg	ND	0.25	07/19/21 16:57	
trans-1,2-Dichloroethene	mg/kg	ND	0.25	07/19/21 16:57	
trans-1,3-Dichloropropene	mg/kg	ND	0.25	07/19/21 16:57	
Trichloroethene	mg/kg	ND	0.25	07/19/21 16:57	
Trichlorofluoromethane	mg/kg	ND	0.25	07/19/21 16:57	
Vinyl chloride	mg/kg	ND	0.25	07/19/21 16:57	
Xylene (Total)	mg/kg	ND	0.25	07/19/21 16:57	
1,2-Dichlorobenzene-d4 (S)	%	101		07/19/21 16:57	
4-Bromofluorobenzene (S)	%	107	83-119	07/19/21 16:57	
Toluene-d8 (S)	%	100	80-120	07/19/21 16:57	

METHOD BLANK: 2941891

Matrix: Solid

Associated Lab Samples: 60375151001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.25	07/20/21 08:53	
1,1,1-Trichloroethane	mg/kg	ND	0.25	07/20/21 08:53	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.25	07/20/21 08:53	
1,1,2-Trichloroethane	mg/kg	ND	0.25	07/20/21 08:53	
1,1-Dichloroethane	mg/kg	ND	0.25	07/20/21 08:53	
1,1-Dichloroethene	mg/kg	ND	0.25	07/20/21 08:53	
1,1-Dichloropropene	mg/kg	ND	0.25	07/20/21 08:53	
1,2,3-Trichlorobenzene	mg/kg	ND	0.25	07/20/21 08:53	
1,2,3-Trichloropropane	mg/kg	ND	0.25	07/20/21 08:53	
1,2,4-Trichlorobenzene	mg/kg	ND	0.25	07/20/21 08:53	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

METHOD BLANK: 2941891

Matrix: Solid

Associated Lab Samples: 60375151001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	ND	0.25	07/20/21 08:53	
1,2-Dibromo-3-chloropropane	mg/kg	ND	0.50	07/20/21 08:53	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.25	07/20/21 08:53	
1,2-Dichlorobenzene	mg/kg	ND	0.25	07/20/21 08:53	
1,2-Dichloroethane	mg/kg	ND	0.25	07/20/21 08:53	
1,2-Dichloroethene (Total)	mg/kg	ND	0.25	07/20/21 08:53	
1,2-Dichloropropane	mg/kg	ND	0.25	07/20/21 08:53	
1,3,5-Trimethylbenzene	mg/kg	ND	0.25	07/20/21 08:53	
1,3-Dichlorobenzene	mg/kg	ND	0.25	07/20/21 08:53	
1,3-Dichloropropane	mg/kg	ND	0.25	07/20/21 08:53	
1,4-Dichlorobenzene	mg/kg	ND	0.25	07/20/21 08:53	
2,2-Dichloropropane	mg/kg	ND	0.25	07/20/21 08:53	
2-Butanone (MEK)	mg/kg	ND	0.50	07/20/21 08:53	
2-Chlorotoluene	mg/kg	ND	0.25	07/20/21 08:53	
2-Hexanone	mg/kg	ND	1.0	07/20/21 08:53	
4-Chlorotoluene	mg/kg	ND	0.25	07/20/21 08:53	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.50	07/20/21 08:53	
Acetone	mg/kg	ND	1.0	07/20/21 08:53	
Benzene	mg/kg	ND	0.25	07/20/21 08:53	
Bromobenzene	mg/kg	ND	0.25	07/20/21 08:53	
Bromochloromethane	mg/kg	ND	0.25	07/20/21 08:53	
Bromodichloromethane	mg/kg	ND	0.25	07/20/21 08:53	
Bromoform	mg/kg	ND	0.25	07/20/21 08:53	
Bromomethane	mg/kg	ND	0.25	07/20/21 08:53	
Carbon disulfide	mg/kg	ND	0.25	07/20/21 08:53	
Carbon tetrachloride	mg/kg	ND	0.25	07/20/21 08:53	
Chlorobenzene	mg/kg	ND	0.25	07/20/21 08:53	
Chloroethane	mg/kg	ND	0.25	07/20/21 08:53	
Chloroform	mg/kg	ND	0.25	07/20/21 08:53	
Chloromethane	mg/kg	ND	0.25	07/20/21 08:53	
cis-1,2-Dichloroethene	mg/kg	ND	0.25	07/20/21 08:53	
cis-1,3-Dichloropropene	mg/kg	ND	0.25	07/20/21 08:53	
Dibromochloromethane	mg/kg	ND	0.25	07/20/21 08:53	
Dibromomethane	mg/kg	ND	0.25	07/20/21 08:53	
Dichlorodifluoromethane	mg/kg	ND	0.25	07/20/21 08:53	
Ethylbenzene	mg/kg	ND	0.25	07/20/21 08:53	
Hexachloro-1,3-butadiene	mg/kg	ND	0.25	07/20/21 08:53	
Isopropylbenzene (Cumene)	mg/kg	ND	0.25	07/20/21 08:53	
Methyl-tert-butyl ether	mg/kg	ND	0.25	07/20/21 08:53	
Methylene Chloride	mg/kg	ND	0.25	07/20/21 08:53	
n-Butylbenzene	mg/kg	ND	0.25	07/20/21 08:53	
n-Propylbenzene	mg/kg	ND	0.25	07/20/21 08:53	
Naphthalene	mg/kg	ND	0.50	07/20/21 08:53	
p-Isopropyltoluene	mg/kg	ND	0.25	07/20/21 08:53	
sec-Butylbenzene	mg/kg	ND	0.25	07/20/21 08:53	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

METHOD BLANK: 2941891

Matrix: Solid

Associated Lab Samples: 60375151001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Styrene	mg/kg	ND	0.25	07/20/21 08:53	
tert-Butylbenzene	mg/kg	ND	1.2	07/20/21 08:53	
Tetrachloroethene	mg/kg	ND	0.25	07/20/21 08:53	
Toluene	mg/kg	ND	0.25	07/20/21 08:53	
trans-1,2-Dichloroethene	mg/kg	ND	0.25	07/20/21 08:53	
trans-1,3-Dichloropropene	mg/kg	ND	0.25	07/20/21 08:53	
Trichloroethene	mg/kg	ND	0.25	07/20/21 08:53	
Trichlorofluoromethane	mg/kg	ND	0.25	07/20/21 08:53	
Vinyl chloride	mg/kg	ND	0.25	07/20/21 08:53	
Xylene (Total)	mg/kg	ND	0.25	07/20/21 08:53	
1,2-Dichlorobenzene-d4 (S)	%	102		07/20/21 08:53	
4-Bromofluorobenzene (S)	%	103	83-119	07/20/21 08:53	
Toluene-d8 (S)	%	98	80-120	07/20/21 08:53	

LABORATORY CONTROL SAMPLE: 2941235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	5	5.2	104	80-119	
1,1,1-Trichloroethane	mg/kg	5	4.8	97	77-121	
1,1,2,2-Tetrachloroethane	mg/kg	5	4.8	96	74-116	
1,1,2-Trichloroethane	mg/kg	5	4.9	98	76-115	
1,1-Dichloroethane	mg/kg	5	5.0	101	77-120	
1,1-Dichloroethene	mg/kg	5	5.3	105	66-129	
1,1-Dichloropropene	mg/kg	5	5.0	100	79-121	
1,2,3-Trichlorobenzene	mg/kg	5	5.2	103	80-120	
1,2,3-Trichloropropane	mg/kg	5	4.7	94	74-118	
1,2,4-Trichlorobenzene	mg/kg	5	5.2	104	75-120	
1,2,4-Trimethylbenzene	mg/kg	5	4.8	95	77-116	
1,2-Dibromo-3-chloropropane	mg/kg	5	5.4	108	74-121	
1,2-Dibromoethane (EDB)	mg/kg	5	5.1	102	80-117	
1,2-Dichlorobenzene	mg/kg	5	4.7	94	48-146	
1,2-Dichloroethane	mg/kg	5	4.9	97	74-110	
1,2-Dichloroethene (Total)	mg/kg	10	10.1	101	79-120	
1,2-Dichloropropane	mg/kg	5	4.9	99	79-115	
1,3,5-Trimethylbenzene	mg/kg	5	4.8	97	76-115	
1,3-Dichlorobenzene	mg/kg	5	4.8	97	76-115	
1,3-Dichloropropane	mg/kg	5	4.8	96	75-111	
1,4-Dichlorobenzene	mg/kg	5	4.9	99	73-119	
2,2-Dichloropropane	mg/kg	5	5.2	104	76-121	
2-Butanone (MEK)	mg/kg	25	32.6	130	70-116	L1
2-Chlorotoluene	mg/kg	5	4.7	94	78-117	
2-Hexanone	mg/kg	25	31.2	125	71-117	L1
4-Chlorotoluene	mg/kg	5	4.9	97	77-115	
4-Methyl-2-pentanone (MIBK)	mg/kg	25	24.2	97	73-116	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: 2941235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetone	mg/kg	25	33.3	133	60-125	L1
Benzene	mg/kg	5	4.9	97	73-117	
Bromobenzene	mg/kg	5	4.8	96	79-115	
Bromochloromethane	mg/kg	5	5.0	99	76-116	
Bromodichloromethane	mg/kg	5	5.4	108	80-120	
Bromoform	mg/kg	5	4.8	96	77-127	
Bromomethane	mg/kg	5	4.8	95	29-165	
Carbon disulfide	mg/kg	5	5.5	109	54-133	
Carbon tetrachloride	mg/kg	5	5.3	107	78-126	
Chlorobenzene	mg/kg	5	4.8	96	63-130	
Chloroethane	mg/kg	5	5.3	106	31-170	
Chloroform	mg/kg	5	4.9	99	80-118	
Chloromethane	mg/kg	5	5.4	107	10-168	
cis-1,2-Dichloroethene	mg/kg	5	5.0	100	80-117	
cis-1,3-Dichloropropene	mg/kg	5	5.4	108	80-120	
Dibromochloromethane	mg/kg	5	5.5	111	78-122	
Dibromomethane	mg/kg	5	4.9	99	78-119	
Dichlorodifluoromethane	mg/kg	5	6.3	126	10-206	
Ethylbenzene	mg/kg	5	4.9	99	73-121	
Hexachloro-1,3-butadiene	mg/kg	5	5.1	102	75-129	
Isopropylbenzene (Cumene)	mg/kg	5	5.0	99	74-115	
Methyl-tert-butyl ether	mg/kg	5	4.9	99	73-129	
Methylene Chloride	mg/kg	5	4.4	88	70-128	
n-Butylbenzene	mg/kg	5	4.9	99	78-123	
n-Propylbenzene	mg/kg	5	4.8	96	77-120	
Naphthalene	mg/kg	5	5.1	101	76-120	
p-Isopropyltoluene	mg/kg	5	4.9	97	78-117	
sec-Butylbenzene	mg/kg	5	4.8	96	83-126	
Styrene	mg/kg	5	5.1	102	80-117	
tert-Butylbenzene	mg/kg	5	4.8	95	79-117	
Tetrachloroethene	mg/kg	5	4.9	97	72-122	
Toluene	mg/kg	5	4.7	95	77-119	
trans-1,2-Dichloroethene	mg/kg	5	5.1	102	75-123	
trans-1,3-Dichloropropene	mg/kg	5	5.4	108	79-124	
Trichloroethene	mg/kg	5	5.0	101	82-128	
Trichlorofluoromethane	mg/kg	5	5.5	110	56-129	
Vinyl chloride	mg/kg	5	5.5	110	36-176	
Xylene (Total)	mg/kg	15	14.7	98	76-119	
1,2-Dichlorobenzene-d4 (S)	%			99		
4-Bromofluorobenzene (S)	%			101	83-119	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: 2941892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	5	5.1	102	80-119	
1,1,1-Trichloroethane	mg/kg	5	5.1	102	77-121	
1,1,2,2-Tetrachloroethane	mg/kg	5	4.4	89	74-116	
1,1,2-Trichloroethane	mg/kg	5	4.7	94	76-115	
1,1-Dichloroethane	mg/kg	5	5.2	103	77-120	
1,1-Dichloroethene	mg/kg	5	5.4	107	66-129	
1,1-Dichloropropene	mg/kg	5	5.3	106	79-121	
1,2,3-Trichlorobenzene	mg/kg	5	4.9	99	80-120	
1,2,3-Trichloropropane	mg/kg	5	4.3	85	74-118	
1,2,4-Trichlorobenzene	mg/kg	5	5.0	101	75-120	
1,2,4-Trimethylbenzene	mg/kg	5	4.7	94	77-116	
1,2-Dibromo-3-chloropropane	mg/kg	5	5.0	100	74-121	
1,2-Dibromoethane (EDB)	mg/kg	5	4.9	99	80-117	
1,2-Dichlorobenzene	mg/kg	5	4.7	93	48-146	
1,2-Dichloroethane	mg/kg	5	4.8	95	74-110	
1,2-Dichloroethene (Total)	mg/kg	10	10.3	103	79-120	
1,2-Dichloropropane	mg/kg	5	5.0	100	79-115	
1,3,5-Trimethylbenzene	mg/kg	5	4.8	96	76-115	
1,3-Dichlorobenzene	mg/kg	5	4.8	96	76-115	
1,3-Dichloropropane	mg/kg	5	4.6	92	75-111	
1,4-Dichlorobenzene	mg/kg	5	4.9	97	73-119	
2,2-Dichloropropane	mg/kg	5	5.4	108	76-121	
2-Butanone (MEK)	mg/kg	25	23.0	92	70-116	
2-Chlorotoluene	mg/kg	5	4.6	93	78-117	
2-Hexanone	mg/kg	25	23.7	95	71-117	
4-Chlorotoluene	mg/kg	5	4.8	96	77-115	
4-Methyl-2-pentanone (MIBK)	mg/kg	25	22.0	88	73-116	
Acetone	mg/kg	25	21.9	88	60-125	
Benzene	mg/kg	5	5.0	99	73-117	
Bromobenzene	mg/kg	5	4.5	91	79-115	
Bromochloromethane	mg/kg	5	5.0	99	76-116	
Bromodichloromethane	mg/kg	5	5.4	109	80-120	
Bromoform	mg/kg	5	4.4	89	77-127	
Bromomethane	mg/kg	5	5.6	111	29-165	
Carbon disulfide	mg/kg	5	5.7	113	54-133	
Carbon tetrachloride	mg/kg	5	5.6	113	78-126	
Chlorobenzene	mg/kg	5	4.9	99	63-130	
Chloroethane	mg/kg	5	5.7	114	31-170	
Chloroform	mg/kg	5	5.1	102	80-118	
Chloromethane	mg/kg	5	5.4	109	10-168	
cis-1,2-Dichloroethene	mg/kg	5	5.0	101	80-117	
cis-1,3-Dichloropropene	mg/kg	5	5.4	108	80-120	
Dibromochloromethane	mg/kg	5	5.5	110	78-122	
Dibromomethane	mg/kg	5	4.9	98	78-119	
Dichlorodifluoromethane	mg/kg	5	6.6	133	10-206	
Ethylbenzene	mg/kg	5	5.0	99	73-121	
Hexachloro-1,3-butadiene	mg/kg	5	5.2	105	75-129	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: 2941892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isopropylbenzene (Cumene)	mg/kg	5	5.0	99	74-115	
Methyl-tert-butyl ether	mg/kg	5	4.8	96	73-129	
Methylene Chloride	mg/kg	5	4.5	89	70-128	
n-Butylbenzene	mg/kg	5	5.1	103	78-123	
n-Propylbenzene	mg/kg	5	4.8	97	77-120	
Naphthalene	mg/kg	5	4.7	94	76-120	
p-Isopropyltoluene	mg/kg	5	5.1	101	78-117	
sec-Butylbenzene	mg/kg	5	4.7	95	83-126	
Styrene	mg/kg	5	5.0	99	80-117	
tert-Butylbenzene	mg/kg	5	4.8	96	79-117	
Tetrachloroethene	mg/kg	5	5.1	102	72-122	
Toluene	mg/kg	5	4.9	98	77-119	
trans-1,2-Dichloroethene	mg/kg	5	5.3	105	75-123	
trans-1,3-Dichloropropene	mg/kg	5	5.3	105	79-124	
Trichloroethene	mg/kg	5	5.3	105	82-128	
Trichlorofluoromethane	mg/kg	5	5.8	115	56-129	
Vinyl chloride	mg/kg	5	5.6	112	36-176	
Xylene (Total)	mg/kg	15	14.8	98	76-119	
1,2-Dichlorobenzene-d4 (S)	%			98		
4-Bromofluorobenzene (S)	%			94	83-119	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941236 2941237

Parameter	Units	60375034001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.							
1,1,1,2-Tetrachloroethane	mg/kg	ND	6.5	6.5	6.5	6.9	7.1	106	109	10-128	3	59
1,1,1-Trichloroethane	mg/kg	ND	6.5	6.5	6.5	6.4	6.4	99	98	15-131	1	75
1,1,2,2-Tetrachloroethane	mg/kg	ND	6.5	6.5	6.5	6.6	6.7	102	103	10-132	1	65
1,1,2-Trichloroethane	mg/kg	ND	6.5	6.5	6.5	6.6	6.8	103	105	14-132	2	54
1,1-Dichloroethane	mg/kg	ND	6.5	6.5	6.5	6.6	6.7	102	103	23-126	1	64
1,1-Dichloroethene	mg/kg	ND	6.5	6.5	6.5	6.7	6.1	104	95	20-129	9	80
1,1-Dichloropropene	mg/kg	ND	6.5	6.5	6.5	6.6	6.6	102	101	15-127	1	78
1,2,3-Trichlorobenzene	mg/kg	ND	6.5	6.5	6.5	7.1	7.2	109	110	10-124	1	67
1,2,3-Trichloropropane	mg/kg	ND	6.5	6.5	6.5	6.6	6.6	102	103	19-125	0	51
1,2,4-Trichlorobenzene	mg/kg	ND	6.5	6.5	6.5	7.4	7.3	114	112	10-129	2	73
1,2,4-Trimethylbenzene	mg/kg	1970 ug/kg	6.5	6.5	6.5	9.7	9.6	120	119	10-124	1	68
1,2-Dibromo-3-chloropropane	mg/kg	ND	6.5	6.5	6.5	8.7	8.0	135	123	10-135	9	56
1,2-Dibromoethane (EDB)	mg/kg	ND	6.5	6.5	6.5	7.0	7.1	109	110	23-123	1	50
1,2-Dichlorobenzene	mg/kg	ND	6.5	6.5	6.5	6.5	6.6	101	102	10-126	1	60
1,2-Dichloroethane	mg/kg	ND	6.5	6.5	6.5	6.5	6.6	101	103	27-116	2	45
1,2-Dichloroethene (Total)	mg/kg	ND	13	13	13	13.2	13.4	102	103	20-127	1	64
1,2-Dichloropropane	mg/kg	ND	6.5	6.5	6.5	6.6	6.7	103	104	21-125	1	57
1,3,5-Trimethylbenzene	mg/kg	601 ug/kg	6.5	6.5	6.5	7.6	7.5	108	107	10-125	0	65

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941236				2941237				% Rec Limits	RPD	Max RPD	Qual
		60375034001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1,3-Dichlorobenzene	mg/kg	ND	6.5	6.5	6.7	6.6	104	102	10-126	1	63		
1,3-Dichloropropane	mg/kg	ND	6.5	6.5	6.6	6.7	101	104	24-114	2	51		
1,4-Dichlorobenzene	mg/kg	ND	6.5	6.5	6.7	6.7	103	104	10-126	0	62		
2,2-Dichloropropane	mg/kg	ND	6.5	6.5	6.6	6.7	103	103	17-124	1	70		
2-Butanone (MEK)	mg/kg	ND	32.3	32.3	37.8	33.2	117	103	29-120	13	50		
2-Chlorotoluene	mg/kg	ND	6.5	6.5	7.1	7.1	110	110	10-138	0	70		
2-Hexanone	mg/kg	ND	32.3	32.3	37.5	37.8	116	117	25-121	1	51		
4-Chlorotoluene	mg/kg	ND	6.5	6.5	6.7	6.6	104	103	10-112	1	62		
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	32.3	32.3	32.5	33.1	100	103	23-131	2	50		
Acetone	mg/kg	ND	32.3	32.3	38.8	31.1	120	96	15-129	22	49		
Benzene	mg/kg	ND	6.5	6.5	6.3	6.5	98	101	17-134	3	53		
Bromobenzene	mg/kg	ND	6.5	6.5	6.5	6.6	101	102	10-129	1	63		
Bromochloromethane	mg/kg	ND	6.5	6.5	6.7	6.8	104	105	28-118	2	53		
Bromodichloromethane	mg/kg	ND	6.5	6.5	7.1	7.4	110	114	21-126	3	59		
Bromoform	mg/kg	ND	6.5	6.5	6.4	6.3	98	97	14-127	1	60		
Bromomethane	mg/kg	ND	6.5	6.5	3.3	5.3	51	82	10-121	45	67		
Carbon disulfide	mg/kg	ND	6.5	6.5	6.3	5.9	98	91	10-122	8	78		
Carbon tetrachloride	mg/kg	ND	6.5	6.5	6.8	6.9	106	107	10-134	1	82		
Chlorobenzene	mg/kg	ND	6.5	6.5	6.6	6.7	102	104	10-126	2	60		
Chloroethane	mg/kg	ND	6.5	6.5	2.0	3.5	31	54	10-133	55	79		
Chloroform	mg/kg	ND	6.5	6.5	6.7	6.8	104	105	24-126	1	60		
Chloromethane	mg/kg	ND	6.5	6.5	6.0	5.8	94	90	10-125	4	78		
cis-1,2-Dichloroethene	mg/kg	ND	6.5	6.5	6.6	6.7	103	104	18-131	1	62		
cis-1,3-Dichloropropene	mg/kg	ND	6.5	6.5	7.3	7.4	113	115	24-117	2	60		
Dibromochloromethane	mg/kg	ND	6.5	6.5	7.4	7.7	115	118	22-117	3	59 M1		
Dibromomethane	mg/kg	ND	6.5	6.5	6.8	6.9	105	107	29-118	2	52		
Dichlorodifluoromethane	mg/kg	ND	6.5	6.5	5.0	2.9	77	46	10-161	51	84		
Ethylbenzene	mg/kg	2290 ug/kg	6.5	6.5	10.8	10.9	132	133	10-137	1	60		
Hexachloro-1,3-butadiene	mg/kg	ND	6.5	6.5	7.2	7.4	112	115	10-124	3	76		
Isopropylbenzene (Cumene)	mg/kg	ND	6.5	6.5	7.0	6.8	108	105	10-123	3	72		
Methyl-tert-butyl ether	mg/kg	ND	6.5	6.5	6.5	6.7	101	104	31-126	3	42		
Methylene Chloride	mg/kg	ND	6.5	6.5	6.0	5.8	93	90	23-117	4	59		
n-Butylbenzene	mg/kg	ND	6.5	6.5	7.0	7.0	108	108	10-130	0	78		
n-Propylbenzene	mg/kg	ND	6.5	6.5	6.7	6.7	102	102	10-121	0	70		
Naphthalene	mg/kg	58200 ug/kg	6.5	6.5	60.4	60.6	192	194	10-131	0	63 E,M1		
p-Isopropyltoluene	mg/kg	ND	6.5	6.5	6.9	6.8	105	103	10-127	1	76		
sec-Butylbenzene	mg/kg	ND	6.5	6.5	6.3	6.4	98	99	10-137	2	81		
Styrene	mg/kg	ND	6.5	6.5	7.0	7.1	108	109	10-119	1	56		
tert-Butylbenzene	mg/kg	ND	6.5	6.5	6.5	6.5	101	100	10-121	1	80		
Tetrachloroethene	mg/kg	ND	6.5	6.5	6.6	6.6	102	103	10-131	0	78		
Toluene	mg/kg	ND	6.5	6.5	6.7	6.7	100	101	13-131	1	60		
trans-1,2-Dichloroethene	mg/kg	ND	6.5	6.5	6.5	6.6	101	102	22-125	1	70		
trans-1,3-Dichloropropene	mg/kg	ND	6.5	6.5	7.3	7.5	113	117	20-122	3	54		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS
Pace Project No.: 60375151

Parameter	Units	2941236		2941237		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		60375034001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Trichloroethene	mg/kg	ND	6.5	6.5	6.8	6.9	105	107	14-144	2	69		
Trichlorofluoromethane	mg/kg	ND	6.5	6.5	6.5	5.9	101	91	10-134	10	86		
Vinyl chloride	mg/kg	ND	6.5	6.5	4.5	4.1	70	63	10-141	11	81		
Xylene (Total)	mg/kg	2940 ug/kg	19.3	19.3	24.7	25.0	112	114	10-137	1	58		
1,2-Dichlorobenzene-d4 (S)	%						101	101					
4-Bromofluorobenzene (S)	%						99	99	83-119				
Toluene-d8 (S)	%						100	100	80-120				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 733136

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151002, 60375151004

METHOD BLANK: 2942170

Matrix: Water

Associated Lab Samples: 60375151002, 60375151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/L	ND	0.0010	07/20/21 15:15	
1,1,1-Trichloroethane	mg/L	ND	0.0010	07/20/21 15:15	
1,1,2,2-Tetrachloroethane	mg/L	ND	0.0010	07/20/21 15:15	
1,1,2-Trichloroethane	mg/L	ND	0.0010	07/20/21 15:15	
1,1-Dichloroethane	mg/L	ND	0.0010	07/20/21 15:15	
1,1-Dichloroethene	mg/L	ND	0.0010	07/20/21 15:15	
1,1-Dichloropropene	mg/L	ND	0.0010	07/20/21 15:15	
1,2,3-Trichlorobenzene	mg/L	ND	0.0010	07/20/21 15:15	
1,2,3-Trichloropropane	mg/L	ND	0.0025	07/20/21 15:15	
1,2,4-Trichlorobenzene	mg/L	ND	0.0010	07/20/21 15:15	
1,2,4-Trimethylbenzene	mg/L	ND	0.0010	07/20/21 15:15	
1,2-Dibromo-3-chloropropane	mg/L	ND	0.0025	07/20/21 15:15	
1,2-Dibromoethane (EDB)	mg/L	ND	0.0010	07/20/21 15:15	
1,2-Dichlorobenzene	mg/L	ND	0.0010	07/20/21 15:15	
1,2-Dichloroethane	mg/L	ND	0.0010	07/20/21 15:15	
1,2-Dichloroethene (Total)	mg/L	ND	0.0010	07/20/21 15:15	
1,2-Dichloropropane	mg/L	ND	0.0010	07/20/21 15:15	
1,3,5-Trimethylbenzene	mg/L	ND	0.0010	07/20/21 15:15	
1,3-Dichlorobenzene	mg/L	ND	0.0010	07/20/21 15:15	
1,3-Dichloropropane	mg/L	ND	0.0010	07/20/21 15:15	
1,4-Dichlorobenzene	mg/L	ND	0.0010	07/20/21 15:15	
2,2-Dichloropropane	mg/L	ND	0.0010	07/20/21 15:15	
2-Butanone (MEK)	mg/L	ND	0.010	07/20/21 15:15	
2-Chlorotoluene	mg/L	ND	0.0010	07/20/21 15:15	
2-Hexanone	mg/L	ND	0.010	07/20/21 15:15	
4-Chlorotoluene	mg/L	ND	0.0010	07/20/21 15:15	
4-Methyl-2-pentanone (MIBK)	mg/L	ND	0.010	07/20/21 15:15	
Acetone	mg/L	ND	0.010	07/20/21 15:15	
Benzene	mg/L	ND	0.0010	07/20/21 15:15	
Bromobenzene	mg/L	ND	0.0010	07/20/21 15:15	
Bromochloromethane	mg/L	ND	0.0010	07/20/21 15:15	
Bromodichloromethane	mg/L	ND	0.0010	07/20/21 15:15	
Bromoform	mg/L	ND	0.0010	07/20/21 15:15	
Bromomethane	mg/L	ND	0.0050	07/20/21 15:15	
Carbon disulfide	mg/L	ND	0.0050	07/20/21 15:15	
Carbon tetrachloride	mg/L	ND	0.0010	07/20/21 15:15	
Chlorobenzene	mg/L	ND	0.0010	07/20/21 15:15	
Chloroethane	mg/L	ND	0.0010	07/20/21 15:15	
Chloroform	mg/L	ND	0.0010	07/20/21 15:15	
Chloromethane	mg/L	ND	0.0010	07/20/21 15:15	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

METHOD BLANK: 2942170

Matrix: Water

Associated Lab Samples: 60375151002, 60375151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	mg/L	ND	0.0010	07/20/21 15:15	
cis-1,3-Dichloropropene	mg/L	ND	0.0010	07/20/21 15:15	
Dibromochloromethane	mg/L	ND	0.0010	07/20/21 15:15	
Dibromomethane	mg/L	ND	0.0010	07/20/21 15:15	
Dichlorodifluoromethane	mg/L	ND	0.0010	07/20/21 15:15	
Ethylbenzene	mg/L	ND	0.0010	07/20/21 15:15	
Hexachloro-1,3-butadiene	mg/L	ND	0.0010	07/20/21 15:15	
Isopropylbenzene (Cumene)	mg/L	ND	0.0010	07/20/21 15:15	
Methyl-tert-butyl ether	mg/L	ND	0.0010	07/20/21 15:15	
Methylene Chloride	mg/L	ND	0.0010	07/20/21 15:15	
n-Butylbenzene	mg/L	ND	0.0010	07/20/21 15:15	
n-Propylbenzene	mg/L	ND	0.0010	07/20/21 15:15	
Naphthalene	mg/L	ND	0.010	07/20/21 15:15	
p-Isopropyltoluene	mg/L	ND	0.0010	07/20/21 15:15	
sec-Butylbenzene	mg/L	ND	0.0010	07/20/21 15:15	
Styrene	mg/L	ND	0.0010	07/20/21 15:15	
tert-Butylbenzene	mg/L	ND	0.0010	07/20/21 15:15	
Tetrachloroethene	mg/L	ND	0.0010	07/20/21 15:15	
Toluene	mg/L	ND	0.0010	07/20/21 15:15	
trans-1,2-Dichloroethene	mg/L	ND	0.0010	07/20/21 15:15	
trans-1,3-Dichloropropene	mg/L	ND	0.0010	07/20/21 15:15	
Trichloroethene	mg/L	ND	0.0010	07/20/21 15:15	
Trichlorofluoromethane	mg/L	ND	0.0010	07/20/21 15:15	
Vinyl chloride	mg/L	ND	0.0010	07/20/21 15:15	
Xylene (Total)	mg/L	ND	0.0030	07/20/21 15:15	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120	07/20/21 15:15	
4-Bromofluorobenzene (S)	%	98	80-120	07/20/21 15:15	
Toluene-d8 (S)	%	102	80-120	07/20/21 15:15	

LABORATORY CONTROL SAMPLE: 2942171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/L	0.02	0.021	104	80-120	
1,1,1-Trichloroethane	mg/L	0.02	0.019	97	80-120	
1,1,2,2-Tetrachloroethane	mg/L	0.02	0.018	90	75-125	
1,1,2-Trichloroethane	mg/L	0.02	0.022	110	80-120	
1,1-Dichloroethane	mg/L	0.02	0.021	104	75-125	
1,1-Dichloroethene	mg/L	0.02	0.021	105	80-120	
1,1-Dichloropropene	mg/L	0.02	0.020	100	80-125	
1,2,3-Trichlorobenzene	mg/L	0.02	0.019	95	75-125	
1,2,3-Trichloropropane	mg/L	0.02	0.021	105	80-125	
1,2,4-Trichlorobenzene	mg/L	0.02	0.020	100	75-120	
1,2,4-Trimethylbenzene	mg/L	0.02	0.021	104	80-125	
1,2-Dibromo-3-chloropropane	mg/L	0.02	0.018	91	70-120	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: 2942171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	mg/L	0.02	0.022	109	80-120	
1,2-Dichlorobenzene	mg/L	0.02	0.020	101	80-120	
1,2-Dichloroethane	mg/L	0.02	0.020	101	75-120	
1,2-Dichloroethene (Total)	mg/L	0.04	0.040	100	80-120	
1,2-Dichloropropane	mg/L	0.02	0.020	101	80-125	
1,3,5-Trimethylbenzene	mg/L	0.02	0.021	104	80-125	
1,3-Dichlorobenzene	mg/L	0.02	0.020	102	80-120	
1,3-Dichloropropane	mg/L	0.02	0.021	106	80-120	
1,4-Dichlorobenzene	mg/L	0.02	0.020	101	80-120	
2,2-Dichloropropane	mg/L	0.02	0.018	88	60-130	
2-Butanone (MEK)	mg/L	0.1	0.11	113	40-150	
2-Chlorotoluene	mg/L	0.02	0.020	101	80-120	
2-Hexanone	mg/L	0.1	0.11	108	45-150	
4-Chlorotoluene	mg/L	0.02	0.020	101	80-120	
4-Methyl-2-pentanone (MIBK)	mg/L	0.1	0.10	100	65-140	
Acetone	mg/L	0.1	0.095	95	20-175	
Benzene	mg/L	0.02	0.020	102	80-120	
Bromobenzene	mg/L	0.02	0.020	101	80-120	
Bromochloromethane	mg/L	0.02	0.021	106	80-125	
Bromodichloromethane	mg/L	0.02	0.021	104	80-125	
Bromoform	mg/L	0.02	0.019	97	60-135	
Bromomethane	mg/L	0.02	0.012	59	10-165	
Carbon disulfide	mg/L	0.02	0.020	100	75-135	
Carbon tetrachloride	mg/L	0.02	0.021	103	80-125	
Chlorobenzene	mg/L	0.02	0.021	106	80-120	
Chloroethane	mg/L	0.02	0.021	105	70-130	
Chloroform	mg/L	0.02	0.020	99	80-120	
Chloromethane	mg/L	0.02	0.013	67	35-155	
cis-1,2-Dichloroethene	mg/L	0.02	0.020	101	80-120	
cis-1,3-Dichloropropene	mg/L	0.02	0.020	100	80-125	
Dibromochloromethane	mg/L	0.02	0.023	113	70-120	
Dibromomethane	mg/L	0.02	0.021	103	80-120	
Dichlorodifluoromethane	mg/L	0.02	0.020	100	50-150	
Ethylbenzene	mg/L	0.02	0.020	102	80-120	
Hexachloro-1,3-butadiene	mg/L	0.02	0.018	92	65-135	
Isopropylbenzene (Cumene)	mg/L	0.02	0.022	108	80-125	
Methyl-tert-butyl ether	mg/L	0.02	0.021	103	65-130	
Methylene Chloride	mg/L	0.02	0.018	92	75-120	
n-Butylbenzene	mg/L	0.02	0.020	99	80-125	
n-Propylbenzene	mg/L	0.02	0.020	101	80-120	
Naphthalene	mg/L	0.02	0.020	100	70-120	
p-Isopropyltoluene	mg/L	0.02	0.021	105	80-135	
sec-Butylbenzene	mg/L	0.02	0.021	103	80-120	
Styrene	mg/L	0.02	0.021	107	80-120	
tert-Butylbenzene	mg/L	0.02	0.020	101	80-120	
Tetrachloroethene	mg/L	0.02	0.021	105	80-120	
Toluene	mg/L	0.02	0.021	103	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS
Pace Project No.: 60375151

LABORATORY CONTROL SAMPLE: 2942171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	mg/L	0.02	0.020	100	80-120	
trans-1,3-Dichloropropene	mg/L	0.02	0.021	103	75-120	
Trichloroethene	mg/L	0.02	0.022	110	80-120	
Trichlorofluoromethane	mg/L	0.02	0.023	113	80-130	
Vinyl chloride	mg/L	0.02	0.020	101	65-130	
Xylene (Total)	mg/L	0.06	0.063	105	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			102	80-120	

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732747

Analysis Method: KS MRH/HRH

QC Batch Method: EPA 3546

Analysis Description: EPA 8015 KS TPH

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151001, 60375151003

METHOD BLANK: 2940985

Matrix: Solid

Associated Lab Samples: 60375151001, 60375151003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
HRH (C19-C35)	mg/kg	ND	7.8	07/20/21 13:47	
MRH (C9-C18)	mg/kg	ND	5.9	07/20/21 13:47	
1-Chloro-octadecane (S)	%	96	40-140	07/20/21 13:47	

LABORATORY CONTROL SAMPLE & LCSD: 2940986

2940987

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
HRH (C19-C35)	mg/kg	8	8.8	7.8	110	104	40-140	12	25	
MRH (C9-C18)	mg/kg	6	5.8J	5.7	97	101	40-140		25	
1-Chloro-octadecane (S)	%				99	102	40-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2940988

2940989

Parameter	Units	60375189001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
HRH (C19-C35)	mg/kg	12.6	9.3	9	26.1	25.7	146	145	40-140	1	50	M1
MRH (C9-C18)	mg/kg	ND	6.9	6.8	7.8	7.8	76	77	40-140	0	50	
1-Chloro-octadecane (S)	%						103	97	40-140			

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732753

Analysis Method: EPA 8015C

QC Batch Method: EPA 3511

Analysis Description: EPA 8015C

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151002, 60375151004

METHOD BLANK: 2941006

Matrix: Water

Associated Lab Samples: 60375151002, 60375151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
HRH (C19-C35)	mg/L	ND	0.21	07/21/21 11:48	
MRH (C9-C18)	mg/L	ND	0.063	07/21/21 11:48	
1-Chloro-octadecane (S)	%	105	40-140	07/21/21 11:48	

LABORATORY CONTROL SAMPLE & LCSD: 2941007

2941008

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
HRH (C19-C35)	mg/L	0.23	0.24	0.33	104	140	40-140	31	25	R1
MRH (C9-C18)	mg/L	0.17	0.21	0.21	122	121	40-140	0	25	
1-Chloro-octadecane (S)	%				95	94	40-140			

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QUALITY CONTROL DATA

Project: Lawrence, KS
Pace Project No.: 60375151

QC Batch: 732838	Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151001, 60375151003, 60375151005, 60375151006

METHOD BLANK: 2941197 Matrix: Solid
Associated Lab Samples: 60375151001, 60375151003, 60375151005, 60375151006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	07/19/21 11:20	

SAMPLE DUPLICATE: 2941198

Parameter	Units	60375151001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.4	20.6	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 1709202

Analysis Method: SM 2540G

QC Batch Method: SM 2540 G

Analysis Description: Total Solids 2540 G-2011

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60375151005, 60375151006

METHOD BLANK: R3683019-1

Matrix: Solid

Associated Lab Samples: 60375151005, 60375151006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Solids	%	0.00100		07/22/21 08:08	

LABORATORY CONTROL SAMPLE: R3683019-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.0	100	85.0-115	

SAMPLE DUPLICATE: R3683019-3

Parameter	Units	L1379847-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	88.3	87.9	0.471	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732503

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Analysis Description: 350.1 Ammonia

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151005, 60375151006

METHOD BLANK: 2939935

Matrix: Solid

Associated Lab Samples: 60375151005, 60375151006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/kg	ND	1.0	07/20/21 11:43	

LABORATORY CONTROL SAMPLE: 2939936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/kg	50	51.1	102	90-110	

MATRIX SPIKE SAMPLE: 2939937

Parameter	Units	60374060001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/kg	2230	113	2930	616	80-120	M1

MATRIX SPIKE SAMPLE: 2939939

Parameter	Units	60374624009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/kg	1060	50.1	1100	74	80-120	M1

SAMPLE DUPLICATE: 2939938

Parameter	Units	60374061001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/kg	15500	15400	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 733080

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Analysis Description: 350.1 Ammonia

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151007

METHOD BLANK: 2941801

Matrix: Water

Associated Lab Samples: 60375151007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/21/21 09:05	

LABORATORY CONTROL SAMPLE: 2941802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.4	109	90-110	

MATRIX SPIKE SAMPLE: 2941803

Parameter	Units	60374837001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	5	5.5	110	90-110	

MATRIX SPIKE SAMPLE: 2941805

Parameter	Units	60373738001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.12	5	5.7	111	90-110	M1

SAMPLE DUPLICATE: 2941804

Parameter	Units	60374870001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.13	0.13	2	18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732828

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate + Nitrite

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151005, 60375151006

METHOD BLANK: 2941155

Matrix: Solid

Associated Lab Samples: 60375151005, 60375151006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/kg	ND	1.0	07/19/21 11:48	
Nitrogen, Nitrite	mg/kg	ND	1.0	07/19/21 11:48	
Nitrogen, NO2 plus NO3	mg/kg	ND	1.0	07/19/21 11:48	

LABORATORY CONTROL SAMPLE: 2941156

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/kg	10	9.5	95	85-115	
Nitrogen, Nitrite	mg/kg	10	10.2	102	90-110	
Nitrogen, NO2 plus NO3	mg/kg	20	19.7	98	90-110	

MATRIX SPIKE SAMPLE: 2941157

Parameter	Units	60374624009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/kg	ND	9.9	10.3	101	85-115	
Nitrogen, Nitrite	mg/kg	1.3	9.9	10.6	95	90-110	
Nitrogen, NO2 plus NO3	mg/kg	1.6	19.7	21.0	98	90-110	

SAMPLE DUPLICATE: 2941158

Parameter	Units	60374624012 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/kg	1.1	1.1	1	20	
Nitrogen, Nitrite	mg/kg	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/kg	1.1	1.1	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lawrence, KS

Pace Project No.: 60375151

QC Batch: 732729

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate + Nitrite, Unpres.

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60375151007

METHOD BLANK: 2940814

Matrix: Water

Associated Lab Samples: 60375151007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	07/17/21 11:53	
Nitrogen, Nitrite	mg/L	ND	0.10	07/17/21 11:53	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	07/17/21 11:53	

LABORATORY CONTROL SAMPLE: 2940815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.94	94	70-130	
Nitrogen, Nitrite	mg/L	1	1.1	106	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 2940816

Parameter	Units	60375036002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	3.5	1	4.5	93	70-130	
Nitrogen, Nitrite	mg/L	0.50	1	1.5	102	90-110	H1
Nitrogen, NO2 plus NO3	mg/L	3.8	2	6.0	98	90-110	E,H1

SAMPLE DUPLICATE: 2940817

Parameter	Units	60375089003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.15	0.21	31	20	D6
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	0.15	0.21	31	20	D6

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Lawrence, KS

Pace Project No.: 60375151

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 60375151007

[1] Chlorinated Acid Herbicides (GC) by Method 8151A - Dilution due to sample volume.

[1] Pesticides (GC) by Method 8081B - IS/SURR failed on lower dilution.

BATCH QUALIFIERS

Batch: 733136

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

H1 Analysis conducted outside the EPA method holding time.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

MH Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

P9 RPD between the primary and confirmatory analysis exceeded 40%.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Lawrence, KS
Pace Project No.: 60375151

ANALYTE QUALIFIERS

R1	RPD value was outside control limits.
S1	Surrogate recovery outside laboratory control limits (confirmed by re-analysis).
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Lawrence, KS
Pace Project No.: 60375151

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60375151007	TW-4	3510C	1708069	EPA 8081B	1708069
60375151007	TW-4	3510C	1707401	EPA 8141B	1707401
60375151007	TW-4	8151A	1707506	EPA 8151A	1707506
60375151005	B-3 3-5'	3546/3665A	1710487	EPA 8081B	1710487
60375151006	B-4 3-5'	3546/3665A	1710487	EPA 8081B	1710487
60375151005	B-3 3-5'	3546	1708068	EPA 8141B	1708068
60375151006	B-4 3-5'	3546	1708068	EPA 8141B	1708068
60375151005	B-3 3-5'	8151A	1708908	EPA 8151A	1708908
60375151006	B-4 3-5'	8151A	1708908	EPA 8151A	1708908
60375151001	B-1 17.5-20'	EPA 3546	732747	KS MRH/HRH	732953
60375151003	B-2 10-12.5'	EPA 3546	732747	KS MRH/HRH	732953
60375151002	TW-1	EPA 3511	732753	EPA 8015C	733286
60375151004	TW-2	EPA 3511	732753	EPA 8015C	733286
60375151001	B-1 17.5-20'	EPA 5035A/5030B	733075	EPA 8015B	733186
60375151003	B-2 10-12.5'	EPA 5035A/5030B	733075	EPA 8015B	733186
60375151002	TW-1	KS LRH: EPA 5030B/8015C	732760		
60375151004	TW-2	KS LRH: EPA 5030B/8015C	732760		
60375151001	B-1 17.5-20'	EPA 3050	732993	EPA 6010	733149
60375151003	B-2 10-12.5'	EPA 3050	732993	EPA 6010	733149
60375151002	TW-1	EPA 3010	732803	EPA 6010	732866
60375151004	TW-2	EPA 3010	732803	EPA 6010	732866
60375151003	B-2 10-12.5'	EPA 5035A/5030	732882	EPA 8260B	732940
60375151001	B-1 17.5-20'	EPA 5035A/5030B	732845	EPA 8260B	733004
60375151002	TW-1	EPA 5030B/8260	733136		
60375151004	TW-2	EPA 5030B/8260	733136		
60375151001	B-1 17.5-20'	ASTM D2974	732838		
60375151003	B-2 10-12.5'	ASTM D2974	732838		
60375151005	B-3 3-5'	ASTM D2974	732838		
60375151006	B-4 3-5'	ASTM D2974	732838		
60375151005	B-3 3-5'	SM 2540 G	1709202	SM 2540G	1709202
60375151006	B-4 3-5'	SM 2540 G	1709202	SM 2540G	1709202
60375151005	B-3 3-5'	EPA 350.1	732503	EPA 350.1	733133
60375151006	B-4 3-5'	EPA 350.1	732503	EPA 350.1	733133
60375151007	TW-4	EPA 350.1	733080		
60375151005	B-3 3-5'	EPA 353.2	732828	EPA 353.2	732932
60375151006	B-4 3-5'	EPA 353.2	732828	EPA 353.2	732932
60375151007	TW-4	EPA 353.2	732729		

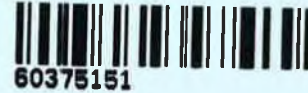
REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60375151



Client Name: Terracon Consultants

Courier: FedEx [] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: Pace Shipping Label Used? Yes [] No []

Custody Seal on Cooler/Box Present: Yes [] No [x] Seals intact: Yes [] No [x]

Packing Material: Bubble Wrap [] Bubble Bags [x] Foam [x] None [] Other [x] Zalc

Thermometer Used: T-296 Type of Ice: Wet [x] Blue [] None []

Cooler Temperature (°C): As-read 7.1 Corr. Factor -0.3 Corrected 6.8

Date and initials of person examining contents: 7-16-21kd

Temperature should be above freezing to 6°C

Table with 3 columns: Description, Yes/No/N/A checkboxes, and handwritten notes. Rows include Chain of Custody, Samples arrived, Short Hold Time, Rush Turn Around Time, Sufficient volume, Containers used, Containers intact, Unpreserved soils, Filtered volume, Sample labels, Samples contain multiple phases, Containers requiring pH preservation, Trip Blank present, Headspace, and Samples from USDA Regulated Area.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Jeffrey Shopper

Date:

**APPENDIX E – PRIVATE LOCATE /
GROUND PENETRATING RADAR (GPR)**



Project # _____

DATE 7/14/2021

PO # _____

811 Response **Yes**

811 utilities not marked

Address 1401 N 1941 Diagonal Rd Lawrence KS

Scope of Work:

Locate private utilities for soil boring and run GPR to look for any UST's

Client: Terracon

Client Contact Name: Becki Davis

Client Contact Phone #: 417-766-8536 email: Becki.Davis@terracon.com

Building Access: **No** Contact With Maint Dept **No** Name: _____

Access Notes:

Building was locked and vacant.

Utilities Located By Baker Utility Partners:			Utilities Located By 811 Service:		
Utility	Owner	Located	Utility	Owner	Located
Communications	Private		Communications	Public	Yes
Electric	Private	Yes	Electric	Public	
Gas	Private		Gas	Public	
Water	Private	Yes	Water	Public	
Sewer	Private	Yes	Sewer	Public	
OTHER	Private	List Below	OTHER	Public	List Below

Baker Utility Partners wants to thank you for placing your trust in us and utilizing our private utility locating service. It has been a pleasure to serve your utility locating needs. If you should have any questions regarding our work, please do not hesitate to contact the Utility Consultant listed below or our area manager.

Caution Notes:

None

GPR Notes:

Ran GPR scans to look for any UST's. Found no evidence of UST.

General Notes

None

Utility Consultant	Jordan Liberty
Phone #	816-890-2454
Email:	jliberty@bakerutilitypartners.com
Area Manager	Rick Jacobs
Phone #	815-503-3189
Email	diag

Private Locate Agreement and Limits of Liability Baker Utility Partners (BUP) is a quality-based organization that believes in customer service and satisfaction. It is our goal to ensure your organization completes its work safely and in a timely manner. Although Electromagnetic and GPR locating devices can be extremely accurate, BUP cannot assume liability for any utilities that cannot be directly connected to (GPR) or that the access points cannot be seen from the excavation area. When utilities can be accessed and marked, BUP will adhere to state one-call tolerance zones. In the event something is damaged, BUP must be notified immediately and given the opportunity to investigate that damage, and if negligent, will arrange for repairs to facility.



Baker Utility Partner Sketch Legend

Dashed	Public Utilities
Solid	Private Utilities

Baker Utility Partner Field Legend

Dashed	Marked facilities public and private
Dots	*See notes section
Labels	Common Labels by BUP – “PH” Phone, “TV” Cable Television, “FO” Fiber Optic

APWA Uniform Color Code for marking underground utility lines

RED	Electric Power Lines, Cables, Conduit, and Lighting Cables
YELLOW	Gas, Oil, Steam, Petroleum, or Gaseous Material
ORANGE	Communication, Alarm or Signal Lines, Cables, or Conduit
BLUE	Potable Water
GREEN	Sewers and Drain Lines
WHITE	Proposed Excavation Limits or Route
PINK	Temporary Survey Markings, Unknown / Unidentified Facilities
PURPLE	Reclaimed Water, Irrigation, and Slurry Lines

While all states allow for digging within their defined tolerance zones, guidelines do exist to help protect underground facilities; anyone looking to excavate within a tolerance zone should familiarize themselves with their state’s particular rules and regulations. In general, it should always be assumed that the exact location of the underground facility is anywhere inside of the tolerance zone, and following certain best practices can help you steer clear of an avoidable disaster.

Tolerance Zones for each state:

Illinois	18 Inches	<p>When excavation is to take place within the specified tolerance zone, the excavator exercises such reasonable care as may be necessary for the protection of any underground facility in or near the excavation area. Methods to consider, based on certain climate or geographical conditions, include hand digging when practical (pot holing), soft digging, vacuum excavation methods, pneumatic hand tools, other mechanical methods with the approval of the facility owner/operator, or other technical methods that may be developed.</p>
Indiana	24 Inches	
Iowa	18 Inches	
Kansas	24 Inches	
Kentucky	18 Inches	
Minnesota	24 Inches	
Missouri	24 Inches	
Nebraska	18 Inches	
Oklahoma	24 Inches	
Texas	18 Inches	
Wisconsin	18 Inches	



Insight into what's underground

APWA UNIFORM COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES

- WHITE - Proposed Excavation
- PINK - Temporary Survey Markings
- RED - Electric Power Lines, Cables, Conduit And Lighting Cables
- YELLOW - Gas, Oil, Steam, Petroleum or Gaseous Materials
- ORANGE - Communication, Alarm Or Signal Lines, Cables Or Conduit
- BLUE - Potable Water
- PURPLE - Reclaimed Water, Irrigation And Slurry Lines
- GREEN - Sewers And Drain Lines



Date: 7-14-21

Customer/Contact:
Terracon
Becki Davis

Address of Work:
1401 n 1941 Diagnol
Rd
Lawrence KS

Technician Notes:



Legend
1401 N 1941 Diag Rd

1401 N 1941 Diagnol Rd
Lawrence KS



Insight into what's underground

APWA UNIFORM COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES

- WHITE - Proposed Excavation
- PIKE - Temporary Survey Markings
- RED - Electric Power Lines, Cables, Conduit And Lighting Cables
- YELLOW - Gas, Oil, Steam, Petroleum or Gaseous Materials
- ORANGE - Communication, Alarm Or Signal Lines, Cables Or Conduit
- BLUE - Potable Water
- PURPLE - Reclaimed Water, Irrigation And Slurry Lines
- GREEN - Sewers And Drain Lines



Date: 7-14-21

Customer/Contact:
Terracon
Becki Davis

Address of Work:
1401 N 1941 Diagnol
Rd
Lawrence KS

Technician Notes:

1401 N 1941 Diagnol Rd
Lawrence KS

Legend
1401 N 1941 Diag Rd



The area inside the pink square was where GPR was ran to look for any UST's. There was no evidence found to suggest there was any UST's.



General Marking Standards:

While marking standards may vary from state to state and from each utility company, below are the general marking standards you may find while in the field. If you are ever unaware of what a marking may mean please don't hesitate to contact your local Baker Utility Partner consultant.

Communications Cable TV / Phone
Single buried line



Communications Cable TV / Phone
Duct or Conduit Package



Communications Cable TV / Phone
Fiber Optic cable

Electric
Single Buried Line



Electric
Electric Duct or direct buried
3-Phase Primary

GAS
Single buried line



GAS
Large Diameter or High Pressure Main

Water
Single buried line



Water
Large diameter or high pressure main

Sewer - Sanitary / Storm
Single buried line




Sewer - Sanitary / Storm
Large diameter or forced (pressurized) main

1401 N 1941 Diag



7/2/2021, 2:51:15 PM

 Tax Parcel

1:1,000

0 0.01 0.01 0.03 0.03 mi

0 0.01 0.01 0.03 0.05 km

Douglas County KS GIS; Surdex, Douglas County KS GIS., Douglas County, KS GIS; City of Lawrence, KS GIS

DISCLAIMER: This is not a legal survey. This map is to be used for reference purposes only, and no other use or reliance on the same is authorized.
Douglas County, Kansas

BER REDEVELOPMENT
RECIEVED
MAR 7, 2022

C4-023-73812, 8.1

Phase I Environmental Site Assessment

Midland Feed Store

1401 N 1941 Diagonal Road

Lawrence, Douglas County, Kansas

July 28, 2021

Terracon Project No. 02217262

Accepted into
administrative file



Prepared for:

First Management, Inc.
Lawrence, Kansas

Prepared by:

Terracon Consultants, Inc.
Springfield, Missouri

terracon.com

Terracon

Environmental



Facilities



Geotechnical



Materials

July 28, 2021



First Management Inc.
PO Box 1797
Lawrence, KS 6604

Attn: Ms. Brandy Sutton
P: (785) 371
E: bsutton@firstmanagementinc.com

Re: Phase I Environmental Site Assessment
Midland Feed Store
1401 N 1941 Diagonal Road
Lawrence, Douglas County, Kansas 66044
Terracon Project No. 02217262

Dear Ms. Sutton:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Phase I Environmental Site Assessment (ESA) report for the above-referenced site. This assessment was performed in accordance with Terracon Proposal No. P02217262 dated July 06, 2021

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

Sincerely,
Terracon Consultants, Inc.

A handwritten signature in black ink, appearing to read 'Tom A. Marzec'.

Tom A. Marzec
Project Scientist

A handwritten signature in black ink, appearing to read 'Karen T. Rieken'.

Karen T. Rieken, PE
Senior Engineer

Attachments

Terracon Consultants Inc. 3113 SW Van Buren St Topeka, KS 66611
P 785-267-3310 F 785-267-338 terracon.com

Environmental

Facilities

Geotechnical

Materials

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EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was performed in accordance with Terracon Proposal No. P02217262 dated July 6, 2021 and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The ESA was conducted under the supervision or responsible charge of Tom A. Marzec, Environmental Professional. Kameron L. Long performed the site reconnaissance on July 16, 2021

Findings and Opinions

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

Site Description and Use

The site is located at 1401 N 1941 Diagonal Road in Lawrence, Douglas County, Kansas, and is comprised of approximately 0.4 acres of land developed with a two story commercial building that has a footprint of 2,250 square-feet (ft²). Currently the site building is vacant but it was formerly occupied by the Midland Feed Store, a retail store that sold farm supplies including bagged feed, tools and hardware, and vehicle tires. The building was constructed sometime in the 1920s or 1930s. A filling station historically operated associated with the store and five ASTs and six associated fuel dispensers are still present on the site. The remainder of the site is gravel covered and was used for semi-trailer parking, vehicle tire storage, and vehicle parking. A small portion of the outdoor area, directly south of the ASTs, is fenced and used as a storage area for 55-gallon drums, wood pallets, and miscellaneous items.

Historical Information

Based on review of the historical information, the site was previously occupied by the Midland Feed Store and associated vehicle filling station, as stated above. The ASTs associated with the filling station were installed by 1967 at the latest. Limited historical information about the site is available but the building was constructed in the 1920s or 1930s and occupied by the farm supply store since that time. The building also was utilized as a rural community center that hosted social events, particularly in the 1940s and 1950s. Prior to the 1920s/1930s the site was likely undeveloped or utilized for agricultural land.

Records Review

The EDR regulatory report identified the site as being listed in Facility Index System (FINDS) and as having a Risk Management Plan (RMP). Further review of the database information indicates the site was misidentified due to a lack of street address specificity and the property identified in the database results actually neighbors the site to the east. Therefore, the site was not listed in

any of the reviewed databases, but rather the east adjacent property occupied by the Ottawa Cooperative Association was identified. However, review of the database results does not indicate the presence of any RECs to the site at this time based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Site Reconnaissance

During the site reconnaissance Terracon observed the interior of the Midland Farm Store building and also inspected the outdoor area of the property. The interior of the building was vacant and mostly empty except for some furniture and office equipment/supplies. The building was observed to be serviced by a septic system, but the leach field for the system is located on the east adjacent property. The ASTs were observed to be situated within secondary containment and six fuel dispensers were observed north of the ASTs. The majority of the outdoor area was vacant and gravel or grass covered. The small fenced area south of the ASTs was observed to be used for storage of 55-gallon drums, wood pallets, and miscellaneous items. One of the drums was labeled as motor oil, and the rest were unlabeled. The presence of the drums and septic systems are considered *de minimis* concerns and are further discussed in Section 5.4.

Adjoining Properties

The following current-day adjoining properties were observed:

- To the north: N 1941 Diagonal Road beyond which are agricultural fields.
- To the east: Undeveloped grassy lot, septic system leach field owned by Ottawa Cooperative Association.
- To the south: Gravel parking area beyond which is the Pines International, Inc. research facility. This facility is associated with Cerophyl Laboratories, a maker of nutritional vitamins, including wheatgrass products.
- To the west: East 1400 Road beyond which is a vacant building. This building was formerly occupied by a school but the property is owned by Pines International, Inc.

RECs were not observed with the present-day use of the adjoining properties.

Significant Data Gaps

The building on the site was constructed sometime during the 1920s or 1930s but definitive information about the use or disposal of hazardous substances such as fuels, motor oils, and lubricants or fertilizers and/or pesticides at the site prior to the 1980s was not available. The lack of this information for such a long time period prevents us from determining the potential for RECs related to the historical uses of the site and therefore represents a significant data gap.

Conclusions

We have performed a Phase I ESA consistent with the procedures included in ASTM Practice E 1527-13 of the 0.42 acres located at 14 N 1941 Diagonal Road in Lawrence, Douglas County, Kansas, the site. The following Recognized Environmental Conditions (REC) was identified in connection with the site:

- **Historical use of Site as a vehicle filling station** – Review of the User Questionnaire, aerial photographs, information obtained during interviews, and observations made during site reconnaissance indicate a filling station historically operated on the site. Fuel dispensers and five ASTs that historically contained gasoline, diesel fuel, and kerosene are still present on the property. Although the ASTs are situated within secondary containment it is unclear how long this containment has been in place. Also, the integrity of the underground service line(s) that supplied fuel from the ASTs to the dispensers is unknown. Therefore, it is possible that automotive fuels may have been released to the subsurface over the course of the operation of the filling station. These potential releases from the operation of the filling station represent a REC.
- **Historical agricultural chemical storage** – the long-term use of the site for the storage, repackaging, and retail sale of agricultural chemicals may have resulted in releases and subsurface impacts to the site. The potential for impacts from these agricultural chemicals at the site represent a REC.

Recommendations

Based on the scope of services, limitations, and findings of this assessment, additional investigation would be recommended to evaluate the possible presence of subsurface releases associated with the identified RECs.

1.0 INTRODUCTION

1.1 Site Description

Site Name	Midland Feed Store
Site Location/Address	1401 N 1941 Diagonal Road, Lawrence, Douglas County, Kansas
Land Area	Approximately 0.42 acres
Site Improvements	The site is improved with a two story commercial building with a basement. The building has a footprint of approximately 2,250 square-feet (ft ²) and was constructed sometime in the 1920s or 1930s. Its last known use was as a retail farm supply store, but the building is currently vacant. A filling station was historically operated on-site and the associated fuel dispensers and ASTs are still present, though no longer in use.
Purpose of the ESA	Financing and acquisition.

The location of the Site is depicted on Exhibit 1 of Appendix A, which was reproduced from portions of the Lawrence East, Kansas USGS 7.5-minute series topographic map. The Site and adjoining properties are depicted on the Site Diagram, which is included as Exhibit 2 of Appendix A. Acronyms and terms used in this report are described in Appendix F.

1.2 Scope of Services

This Phase I ESA was performed in accordance with Terracon Proposal No. P02217262 dated July 6, 2021 and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations, ASTM deviations, and significant data gaps (if identified) are noted in the applicable sections of the report.

ASTM E1527-13 contains a new definition of "migrate/migration," which refers to "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." By including this explicit reference to migration in ASTM E1527-13, the Standard clarifies that the potential for vapor migration should be addressed as part of a Phase I ESA. This Phase I ESA has considered vapor migration in evaluation of RECs associated with the site.

1.3 Standard of Care

This ESA was performed in accordance with generally accepted practices of this profession, undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care, but may be limited by conditions encountered during performance, a client-driven scope of work, or inability to review information not received by the report date. Where appropriate, these limitations are discussed in the text of the report, and an evaluation of their significance with respect to our findings has been conducted.

Phase I ESAs, such as the one performed at this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. It should be recognized that environmental concerns may be documented in public records that were not reviewed. No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site or otherwise uses the report for any other purpose. These risks may be further evaluated – but not eliminated – through additional research or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.4 Additional Scope Limitations, ASTM Deviations and Data Gaps

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e. evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other services not particularly identified and discussed herein. Credentials of the company (Statement of Qualifications) have not been included in this report but are available upon request. Pertinent documents are referred to in the text of this report, and a separate reference section has not been included. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Information obtained for this ESA was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder. This ESA was further limited by the following:

- **Historic Hazardous Material Use Data Gap:** Limited information is available about the uses of the site prior to the 1980s. All that can be said is that the building was likely constructed sometime in the 1920s or 1930s and functioned as a community center and farm supply store from that time period to the 1980s. Prior to the 1920s/1930s it may have been utilized as agricultural land. Definitive

information about the use or disposal of hazardous substances such as fuels, motor oils, and lubricants or fertilizers and/or pesticides prior to the 1980s was not available. The lack of this information for such a long time period prevents us from determining the potential for RECs related to the historical uses of the site and therefore represents a significant data gap.

It should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our conclusions, recommendations, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

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

1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of First Management, Inc. Use or reliance by any other party is prohibited without the written authorization of First Management, Inc. and Terracon Consultants, Inc. (Terracon).

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

Continued viability of this report is subject to ASTM E1527-13 Sections 4.6 and 4.8. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E1527-13.

1.6 Client Provided Information

Prior to the site visit, Mrs. Brandy L. Sutton, buyer's representative, was asked to provide the following user questionnaire information as described in ASTM E1527-13 Section 6.

Client Questionnaire Responses

Client Questionnaire Item	Client Did Not Respond	Client's Response	
		Yes	No
Specialized Knowledge or Experience that is material to a REC in connection with the site.			X
Actual Knowledge of Environmental Liens or Activity Use Limitations (AULs) that may encumber the site.			X
Actual Knowledge of a Lower Purchase Price because contamination is known or believed to be present at the site.			X
Commonly Known or Reasonably Ascertainable Information that is material to a REC in connection with the site.			X
Obvious Indicators of Contamination at the site.		X*	

*The client indicated that the site was “used as a farm/feed store that sold gasoline.”

The historical usage of site as a filling station is considered a REC. Further information regarding the ASTs and fuel dispensers associated with the filling station is provided in the remainder of this assessment. A copy of the questionnaire is included in Appendix C.

2.0 PHYSICAL SETTING

Physical Setting

Physical Setting Information		Source
Topography (Refer to Appendix A for an excerpt of the Topographic Map)		
Site Elevation	Approximately 835 feet (NGVD)	Midland, Kansas, United States Geological Survey (USGS) Topographic Map, dated 2012.
Surface Runoff/ Topographic Gradient	Generally flat, with slight slope to the south/southeast toward the Kansas River and Mud Creek.	
Closest Surface Water	Mud Creek is located approximately 2,100 feet to the northeast and the Kansas River is located approximately 9,600 feet south of the site.	
Soil Characteristics		
Soil Type	Kennebec silt loam, 0 to 2 percent slopes	

Physical Setting Information		Source
Description	Kennebec soils are moderately well drained, have a very high water capacity, and experience occasional flooding. It has a slope of 0 to 2 percent and a typical profile consists of silt loam underlain by silty clay to a depth of up to 79 inches.	Web Soil Survey; United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS); Accessed July 2021.
Geology/Hydrogeology		
Formation	Alluvial	O'Connor, Howard, Geology and Ground-water Resources of Douglas County, Kansas: Kansas Geological Survey Bulletin 148, 1960.
Description	Based on review of the Kansas Geological Survey (KGS) Bulletin 148, the underlying bedrock in the area of the subject property is glacial drift of the Quaternary System. Alternating layers of limestone and shale with an occasional sandstone layer are common in the stratigraphic section.	
Estimated Depth to First Occurrence of Groundwater	Approximately 5-1 feet below grade surface (bgs)	Kansas Geological Survey Water Well Completion (WWC5) Database.
*Hydrogeologic Gradient	Not known - may be inferred to be parallel to topographic gradient (primarily to the south).	

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

3.0 HISTORICAL USE INFORMATION

Terracon reviewed the following historical sources to develop a history of the previous uses of the site and surrounding area, to help identify RECs associated with past uses. Copies of selected historical documents are included in Appendix C.

3.1 Historical Topographic Maps, Aerial Photographs, Sanborn Maps

Readily available historical USGS topographic maps and selected historical aerial photographs (at approximately 10 to 15-year intervals) were reviewed to evaluate land development and obtain information concerning the history of development on and near the site. Reviewed historical topographic maps and aerial photographs are summarized below.

Historical fire insurance maps produced by the Sanborn Map Company were requested from EDR to evaluate past uses and relevant characteristics of the site and surrounding properties. No Sanborn Maps were available for the site.

A summary of the historical topographic maps, aerial photographs, and Sanborn maps reviewed is as follows:

- Topographic maps:
 -Midland/Williamstown/Oskaloosa Published **1886, 1888, 1894, 1949, 1950, 1951, 1967, 1978, and 2012**
- Aerial photographs:
 -EDR: **2017, 2014, 2010, 2006, 2002, 1996, 1991, 1985, 1982, 1977, 1970, 1950, and 1948**
- Sanborn fire insurance maps: **No Coverage**

Key findings from review of the topographic maps and aerial photographs is provided in the table below. Note that the aerial photographs from 1950, 1977, 1982, 1996 and 2002 are of poor quality and are of limited use for this assessment. Also, the site was part of an unmapped area in the 1949 topographic map.

Historical Topographic Map and Aerial Photograph Review

Direction	Description
Site	<p>1886-1896: The site is depicted as undeveloped land.</p> <p>1948-1967: Building present on site with orientation/configuration matching present day</p> <p>1967-Present: The ASTs (identified during site reconnaissance; see Section 5.0) appear to have been installed by 1985 to west of the building. Area to south and east around building being used for outdoor storage and semi-trailer staging by 2002.</p>
North	<p>1886-1894: N 2000 roadway present</p> <p>1948-1967: Diagonal Road now present, agricultural development (row crops) to north. Electrical substation apparent farther north by 1967.</p> <p>1967-Present: No significant changes</p>
East	<p>1886-1894: Vacant/undeveloped</p> <p>1948-1967: Diagonal Road now present, agricultural development to east.</p> <p>1967-Present: Area immediately east of property boundary used for semi-trailer staging/parking by 2002.</p>

Direction	Description
South	<p>1886-1894 Union Pacific Railroad right-of way</p> <p>1948-1967: Commercial development on Ottawa Cooperative Association property to southeast. Many buildings including grain silos appear to still exist in present day.</p> <p>1967-Present: Shed building on Grant Township property to southwest (across E 1400 Road) present by 1978. Two building constructed on Pines International Inc. property by 1991. Additional commercial development on Ottawa Cooperative Association property.</p>
West	<p>1886-1894: E 1400 Roadway present</p> <p>1948-1967: Building present on "School"/ Pines International, Inc property. with orientation/ configuration matching present.</p> <p>1967-Present: No significant changes.</p>

3.2 Historical City Directories

City directories were requested for the following addresses/streets and cross streets: 1401 N 194 Diagonal Rd, N 1941 Diag Rd, N 1941 Diagonal Rd, N1941st Diagonl, N 1941 Diagonal Rd, E 1400 Rd, E 1400th Rd, N 2000 Rd, N 2000th Rd, US Highway 24, and US Highway 59. The EDR search returned city directories from the EDR Digital Archive from **1995, 2000, 2005, 2010, 2014, and 2017.**

The EDR city directory search results indicate the site and adjacent properties were not listed in available city directories prior to 1995. Information about the occupants of the site or the adjacent/nearby properties contained in the city directories is summarized below. No RECs were identified as a result of the review of the city directories.

Historical City Directories

Direction	Description
Site	14 N 1941 Diagonal Rd: Midland Farm Store (2017, 2014, 2010, 20)
North	Adjacent/nearby properties not listed, nearest listed properties appear to be residential
East	1419 N 1941 Diagonal Rd: Midland Coop Elevator (2017, 2014, 2005; also known as Ottawa Cooperative Association property)
South	1992 E 1400 Rd: Pines International, Inc (2017, 2014, 2005)
West	Adjacent/nearby properties not listed, nearest listed properties appear to be residential

3.3 Site Ownership

Based on a review of information obtained from the Douglas County Appraiser's records, the current site owner is the Grant Township Central Protective Association Lodge 140.

3.4 Title Search

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

3.5 Environmental Liens and Activity and Use Limitations

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

While not requested by the client, the EDR regulatory database report included a review of both Federal and State Engineering Control (EC) and Institutional Control (IC) databases. Based on a review of the database report, the site was not listed on the EC or IC databases. Please note that in addition to these federal and state listings, AULs can be recorded at the county and municipal level that may not be listed in the regulatory database report. Based on its limited nature, this review does not constitute a review of AULs per ASTM E1527-13.

3.6 Interviews Regarding Current and Historical Site Uses

The following individual was interviewed regarding the current and historical use of the site.

Interviewee

Interviewer	Interviewee / Phone #	Title	Date/Time
Tom Marzec	Ron Schneider (785) 917-1086	Attorney for Seller and has lived in area and frequented Midland Feed Store for approximately 35 years.	July 13, 2021 / 3:30 P.M.

Mr. Ron Schneider was interview via telephone. Key findings from the interview are summarized below:

- He stated that the building on the site has been occupied by a rural farm store for at least 35 years. During that time the store sold bagged feed (not bulk), farm tools/hardware and supplies, and tires. Many of the tires were stored outside.
- He stated that no mechanical repair or repair of small machines was conducted on the property during the last 35 years.

- Prior to the 1980s, and particularly in the 1940s and 1950s, the building operated as a “community center” with an emphasis on social events for rural families. The building was constructed sometime in the 1920s or 1930s, according to Mr. Schneider.
- He stated that the three ASTs on the property had been there for at least 35 years and supplied the commercial fuel dispensers on the pump island. However, the pump island has been inactive for approximately five to ten years. The ASTs contained gasoline, diesel, and kerosene according to Mr. Schneider.
- To his knowledge no USTs exist, or have ever existed, on the property.
- The property is/was most likely heated with propane and Mr. Schneider was not aware of any heating oil tanks in use on the property.
- Mr. Schneider stated he was not aware of the use or storage of large quantities of hazardous chemicals on the property within the last 35 years other than those in the ASTs. Small quantities of oil and lubricants for retail sale were apparently kept in the shelves inside the building, but he was not aware of any “drums or barrels” ever having been on the property.
- Mr. Schneider stated that Capital Oil, the entity identified in the database review (see Section 4.0), was located “down the road” and was not an entity associated with the site.
- Mr. Schneider was able to confirm or help identify the uses of some of the neighboring properties. He confirmed the presence of grain elevators to the southeast on the Ottawa Cooperative Association Property and stated that the Pines International, Inc. property to the south was involved in the wheatgrass business (likely juicing or distributing). He also stated the property to the adjacent property to the west was occupied by an “old schoolhouse.”
- He stated that to his knowledge there were no water wells on the site and that the site likely received its water from “Jefferson County Rural Water District #13.

3.7 Prior Report Review

Terracon requested the client provide previous environmental reports, permits, registrations, and geotechnical reports they are aware of for the site. Previous reports were not provided by the client to Terracon for review.

4.0 RECORDS REVIEW

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

In some of the following subsections, the words up-gradient, cross-gradient and down-gradient refer to the topographic gradient in relation to the site. As stated previously, the groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

4.1 Federal and State/Tribal Databases

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

Federal Databases

Database	Description	Distance (miles)	Listings
CERCLIS	Comprehensive Environmental Response, Compensation, & Liability Information System	0.5	0
CERCLIS / NFRAP	Comprehensive Environmental Response, Compensation, & Liability Information System/No Further Remedial Action Planned	0.5	0
ERNS	Emergency Response Notification System	Site	0
IC / EC	Institutional Control/Engineering Control	0.5	0
NPL	National Priorities List	1	0
NPL (Delisted)	National Priorities Delisted List	1	0
RCRA CORRACTS/ TSD	RCRA Corrective Action Activity	1	0
RCRA Generators	Resource Conservation and Recovery Act	0.25	0
RCRA Non-CORRACTS/ TSD	RCRA Non-Corrective Action Activity	0.5	0

State/Tribal Databases

Database	Description	Distance (miles)	Listings
Brownfields	Brownfields Site	0.5	0
IC	Institutional Control Sites	0.5	0
LUST/LAST	Leaking Underground/Aboveground Storage Tanks	0.5	0
SHWS	State Hazardous Waste Sites	1	0
SWF/LF	Solid Waste Facilities/Landfills	0.5	0
AST/UST	Aboveground/Underground Storage Tank	0.25	0
VCP	Voluntary Cleanup Program	0.5	0

Review of the above table indicates that no facilities were identified in the federal and state/tribal databases within the ASTM-required search distances.

In addition to the above ASTM-required listings, Terracon reviewed other federal, state, local, and proprietary databases provided by the database firm. A list of the additional reviewed databases is included in the regulatory database report included in Appendix D. The following table summarizes the site-specific information provided by the database and/or gathered by this office for identified facilities located within 1,000 feet of the site. Facilities are listed in order of proximity to the site. Additional discussion for selected facilities follows the summary table.

Listed Facilities

Facility Name and Location	Estimated Distance / Direction/Gradient	Database Listings	Is a REC, CREC, or HREC to the Site
Midland 1941 Diagonal Road Rear	Approximately 750 feet southeast, downgradient	RMP, Tier 2	No, see below
Midland Coop 1941 Diagonal Road	Approximately 500 feet southeast, downgradient	FINDS	No, based on distance, type of facility
Capital City Oil-Midland 1941 Diagonal Road	Adjacent property, downgradient	FINDS	No, see below
Midland 1941 Diagonal Road Rear	Adjacent property, downgradient	FINDS	No, see below

A 90 gallon anhydrous ammonia spill is listed in the RMP/Tier 2 database as having occurred in 2002 in association with an above ground storage tank on the “east end of the property.” Although the EDR database results identify this spill as being associated with the site, review of the search results indicates the owner of the property where the spill occurred is the Ottawa Cooperative Association, who is the occupant of the east/south adjoining property. Moreover, the address listed in the database for the spill is 1941 Diagonal Road. However, this could apply to either the site, at 1401 N 1941 Diagonal Road, or the Ottawa Cooperative Association property, at 1419 N 1941 Diagonal Road. The apparent misidentification of the site in the database is corroborated

by information obtained from the Douglas County Emergency Management office (see Section 4.2) which indicates an anhydrous ammonia tank is present on the Ottawa Cooperative Association property. Due to the fact that the east end of the Ottawa Cooperative Association property is approximately 750 ft to the southeast of the site and since anhydrous ammonia is typically stored as a compressed liquid but rapidly vaporizes when exposed to ambient air, it is unlikely that the spill could have impacted soil and/or groundwater on the site. Therefore, the anhydrous ammonia spill on the Ottawa Cooperative Association property does not represent a REC.

The database search results also list Capital City Oil-Midland as a Heating Oil/Fuel Oil Dealer associated with the site from May 2006 to March 2012. However, the interview of Mr. Ron Schneider (see Section 3.6) indicates that the Capital City Oil entity was likely located on one of the adjacent or nearby properties. The discrepancy is likely also due a lack of street address specificity. Since there are no records or indications of any hazardous substance releases associated with the Capital Oil-Midland facility and since the facility is not listed as being currently active its presence does not represent a REC for the site.

Finally, the database search results indicate a "Storage Tank" is associated with the Midland facility at 1941 Diagonal Road Rear. This appears to be the anhydrous ammonia tank associated with the spill, or another storage tank located in the same area of the adjacent Ottawa Cooperative Association property. This is supported by the fact that the listed tank was already present in March 2000 before the spill, and the names of the individuals associated with the tank/facility are the same as for the spill. The presence of this tank on the adjacent property does not represent a REC for the site.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report did not list any facilities in the unmapped section.

4.2 Local Agency Inquiries

Agency Contacted/ Contact Method	Response
KDHE Environmental Interest Finder https://maps.kdhe.state.ks.us/keif/	Terracon accessed the KDHE Environmental Interest Finder on July 13, 2021 to identify any environmental concerns associated with the site or adjacent properties. No environmental concerns were identified onsite. Two off-site spills were identified: a 5 gallon spill of non-PCB containing transformer oil in 1986 at an electrical substation located approximately 1,000 ft to the north and a 10 gallon spill of “curve grease” on the railroad tracks located approximately 300 feet to the south in 2017. According to the incident reports both spills were remediated. Due to the small quantities of the substances involved, it is Terracon’s opinion that neither of the spills represent an environmental concern.
Douglas County Emergency Management / Via Phone (785-832-5259)	The Douglas County Emergency Management (DCEM) was contacted by phone July 14, 2021, regarding environmental records or information indicating environmental concerns for the site. Staff at DCEM provided an Emergency & Hazardous Chemical Inventory form from 2020 that identifies the presence of an anhydrous ammonia tank. However, the owner is listed as the Ottawa Cooperative Association the occupant of the neighboring property which has a shared address with the site. This information corroborates the determination of the probable location of the anhydrous ammonia spill that was made in Section 4.1. Follow up inquiry with the DCEM indicates they have no records for the site.

5.0 SITE RECONNAISSANCE

5.1 General Site Information

Information contained in this section is based on a visual reconnaissance conducted while walking through the site and the accessible interior areas of structures, if any, located on the site. Exhibit 2 in Appendix A is a Site Diagram. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix B. Credentials of the individuals planning and conducting the site visit are included in Appendix E.

General Site Information

Site Reconnaissance				
Field Personnel	Kameron L. Long			
Reconnaissance Date	July 16, 2021			
Weather Conditions	Cloudy, 80° Fahrenheit			
Site Contact/Title	Brandy Sutton / Client			
Building Description				
Building Identification	Building Use	Approx. Construction Date	Number of Stories	Approx. Size (ft ²)
Midland Feed Store Building	None / vacant	1920s or 1930s	2 stories with basement	2,250 building footprint
Site Utilities				
Drinking Water	Jefferson County Rural Water District #13			
Wastewater	Septic System			
Electric	Evergy, Inc.			
Natural Gas	n/a			

5.2 Overview of Current Site Occupants

The site is located at 1401 N 1941 Diagonal Road, Lawrence, Douglas County, Kansas and is currently developed with a two-story commercial/retail building. The building is currently unoccupied.

5.3 Overview of Current Site Operations

There are no current site operations as the site is currently unoccupied.

5.4 Site Observations

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

Site Characteristics

Category	Item or Feature	Observed or Identified
Site Operations, Processes, and Equipment	Emergency generators	
	Elevators	
	Air compressors	
	Hydraulic lifts	
	Dry cleaning	
	Photo processing	
	Ventilation hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Heating and/or cooling systems	X
	Paint Booths	
	Sub-grade mechanic pits	
	Wash-down areas or carwashes	
	Vehicle repair or maintenance	
	Pesticide/herbicide production or storage	
	Printing operations	
	Electroplating, chrome plating or galvanizing	
	Salvage operations	
	Oil, gas or mineral production	
Other processes or equipment		
Aboveground Chemical or Waste Storage	Aboveground storage tanks	X
	Drums, barrels and/or containers ≥ 5 gallons	X
	MSDS	
Underground Chemical or Waste Storage, Drainage or Collection Systems	Underground storage tanks or ancillary UST equipment	
	Sumps, cisterns, French drains, catch basins and/or dry wells	
	Grease traps	
	Septic tanks and/or leach fields	X
	Oil/water separators, clarifiers, sand traps, triple traps, interceptors	
	Pipeline markers	
	Interior floor drains	

Phase I Environmental Site Assessment

Midland Feed Store ■ Lawrence, Kansas

July 28, 2021 ■ Terracon Project No. 02



Electrical Transformers/ PCBs	Transformers and/or capacitors	
	Other equipment	
Releases or Potential Releases	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	X
	Leachate and/or waste seeps	
	Trash, debris and/or other waste materials	
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	
	Surface water discoloration, odor, sheen, and/or free-floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
Other Notable Site Features	Surface water bodies	
	Quarries or pits	
	Wastewater lagoons	
	Wells	

Site Operations, Processes, and Equipment

Heating and/or cooling systems

The building is heated by a propane-powered furnace located on the second floor of the building. The building is cooled by an air conditioning unit located on the west side of the building.

Aboveground Chemical or Waste Storage

Aboveground storage tanks

Five ASTs were observed within a concrete secondary containment area located to the west side of the building (see Exhibit 2). These ASTs appeared to be associated with the six fuel dispensers located on the site. Four of these fuel dispensers are located on the pump island on the northern portion of the property and the other two dispensers are located just outside the north wall of the secondary containment area. Three of the ASTs were of the same capacity and significantly larger than the remaining two. The three large ASTs are the same as those that are visible in the aerial photographs reviewed for this assessment. Of the remaining two ASTs, one was an unlabeled approximately 250 gallon tank and the other was an approximately 500 gallon tank labeled as “clear diesel.” All piping associated with the ASTs and pumps appeared to be underground. The ASTs and pumps did not appear to be in working order during the site

reconnaissance. In addition, one propane AST was observed in the southwest corner of the fenced area (see Exhibit 2). The propane tank was not labeled. Staining and/or releases were not observed in the vicinity of the ASTs, containment area, or fuel dispensers during site reconnaissance.

Drums, barrels, and/or containers \geq 5 gallons

One unmarked “tote” container and seven 55-gallon drums were observed situated on top of wood pallets in the fenced area located on the west side of the onsite building/south of the ASTs. One 55 gallon drum was marked as engine oil. The other 55-gallon drums were not marked, but some appeared full or partially full. Staining and/or evidence of releases was not observed in the vicinity of the drums and there were no obvious deficiencies in the integrity of the drums. Since there is no evidence of spills or releases from the drums they represent a *de minimis* concern.

Underground Chemical or Waste Storage, Drainage or Collection Systems

Septic tanks and/or leach fields

According to Ms. Sutton the site is equipped with a septic system; however, the septic system leach field and lateral lines are located on the east adjacent property (see Exhibit 2). Stressed vegetation, staining, releases, or noxious odors were not observed in the vicinity of the septic system. There is no evidence of hazardous substances having entered the septic system and no floor drains were observed during site reconnaissance. Therefore, the septic system represents a *de minimis* concern.

Releases or Potential Releases

Stained concrete and pavement

During the site reconnaissance, Terracon observed concrete and pavement staining in automobile parking areas. Based on visual observations, it is likely that the staining originated from minor oil drips from parked vehicles and as such the staining represents a *de minimis* concern.

6.0 ADJOINING PROPERTY RECONNAISSANCE

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

Adjoining Properties

Direction	Description
North	North 1941 Diagonal Road borders the site to the north beyond which is agricultural land utilized for growing row crops.
East	Undeveloped grassy lot, septic system leach field
South	Gravel parking area beyond which is the Pines International research facility. This facility is associated with Cerophyl Laboratories, a maker of nutritional vitamins, including wheatgrass products, according to Ron Schneider who was interviewed for this assessment.
West	East 1400 Road borders the site to the east beyond which is a vacant building. This building was formerly occupied by a school according to Ron Schneider who was interviewed for this assessment.

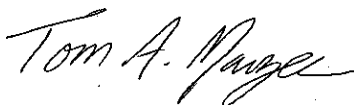
RECs were not observed with the present-day use of the adjoining properties.

7.0 ADDITIONAL SERVICES

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

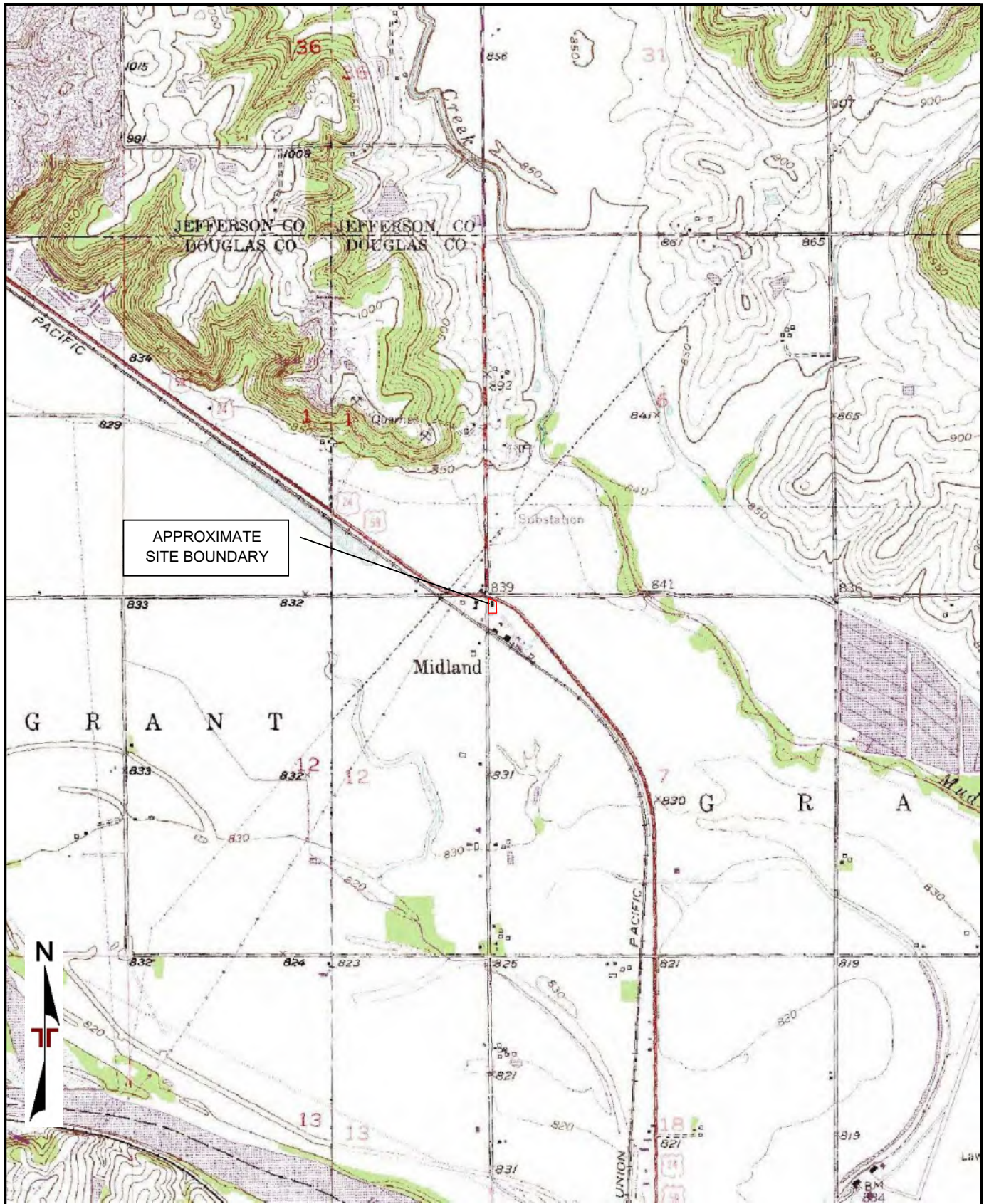
8.0 DECLARATION

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



Tom A Marzec
Project Scientist

APPENDIX A
EXHIBIT 1 – TOPOGRAPHIC MAP
EXHIBIT 2 – SITE DIAGRAM



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
 QUADRANGLES INCLUDE: WILLIAMSTOW N, KS (1/1/1978) and MIDLAND, KS (1/1/1978).


Project Manager: BD	Project No. 02217266	 15620 W 113th St Lenexa, KS 66219-5102	TOPOGRAPHIC MAP	Exhibit
Drawn by: KL	Scale: 1"=2,000'		Midland Feed Store	1
Checked by: KL	File Name:		1401 N 1941 Diagonal Road	
Approved by: BD	Date: 7/19/2021		Lawrence, KS	



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

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager:	BD	Project No.	02217266
Drawn by:	KL	Scale:	AS SHOWN
Checked by:	KL	File Name:	Click
Approved by:	BD	Date:	7/19/2021

Terracon
 15620 W 113th St
 Lenexa, KS 66219-5102

SITE DIAGRAM	Exhibit
Midland Feed Store 1401 N 1941 Diagonal Road Lawrence, KS	2

APPENDIX B
SITE PHOTOGRAPHS

Phase I Environmental Site Assessment – Photographic Log
Midland Feed Store ■ Lawrence, Kansas
Site visit date: July 16, 2021 ■ Terracon Project No. 02217266



Photo #1 View of the east adjacent Ottawa Cooperative Association property.



Photo #2 View of the north adjacent property beyond N. 1941 Diagonal Road.



Photo #3 View of the pump island located north of the Midland Feed Store building.



Photo #4 View of the AST tank farm and two dispensers located on the west side of the onsite building.



Photo #5 View of the site from the northwest.



Photo #6 View of the west adjacent "School" property beyond E. 1400 Road.



Photo #7 View of the AST containment area and associated piping.



Photo #8 View of an air conditioning unit located between the building and the AST farm.



Photo #9 View of an unmarked container located in the fenced area on the west side of the onsite building/ south of the AST farm.



Photo #10 View of an unmarked AST located in the AST containment area.



Photo #11 View of a clear diesel AST located in the AST containment area.



Photo #12 View of eight 55-gallon drums located in the western portion of the fenced area. One drum was marked as engine oil, others are unlabeled.



Photo #13 View of a propane tank located in the western fenced area located on the west side of the onsite building.



Photo #14 View of the site from the southwest corner of the property.



Photo #15 View of the southern portion of the site from the southwest corner of the property.



Photo #16 View of the south adjacent Pines International/Live Foods property.



Photo #17 View facing south along E. 1400 Road from the southwest corner of the site.



Photo #18 View to the southwest beyond E. 1400 Road from the southwest corner of the site.



Photo #19 View of the eastern portion of the site from the southeast corner of the property.



Photo #20 View of the southern portion of the site from the southeast corner of the property.



Photo #21 View of the southern side of the Midland Feed Store building.



Photo #22 View of the northern portion of the first floor of the Midland Feed Store building.



Photo #23 View of a bathroom located on the first floor of the Midland Feed Store building.



Photo #24 View of the southern portion of the first floor of the Midland Feed Store building.



Photo #25 View of the basement of the Midland Feed Store building.



Photo #26 View of the southern portion of the first floor of the Midland Feed Store building.



Photo #27 View of the southern portion of the first floor of the Midland Feed Store building.

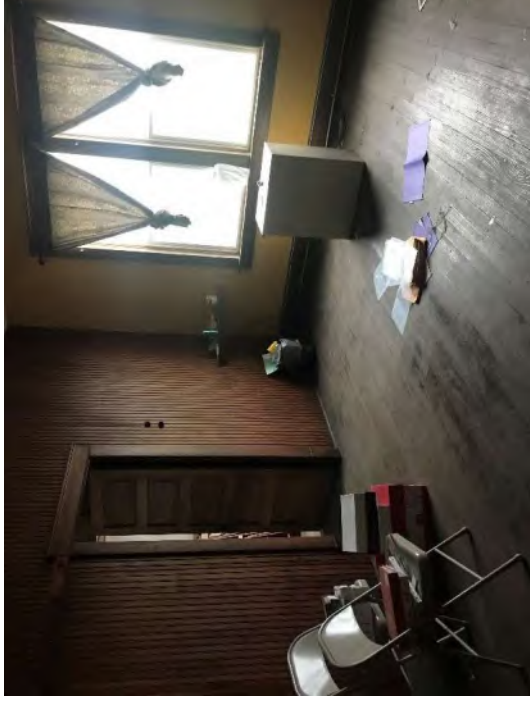


Photo #28 View of a room located in the northern portion of the second floor of the Midland Feed Store building.



Photo #29 View of an office located in the northern portion of the second floor of the Midland Feed Store building.



Photo #30 View of the furnace located on the second floor of the Midland Feed Store building.



Photo #31 View of the second floor of the Midland Feed Store building, facing north.



Photo #32 View of the second floor of the Midland Feed Store building, facing south.

APPENDIX C
HISTORICAL DOCUMENTATION AND USER QUESTIONNAIRE

Client/User Required Questionnaire

Person Completing Questionnaire	Name:	Phone:
	Company:	Email:
Site Name	Midland Feed Store	
Site Address	1401 N 1941 Diagonal, Lawrence, Douglas County, Kansas.	
Point of Contact for Access	Name:	Phone:
	Company:	Email:
Access Restrictions or Special Site Requirements?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please explain)	
Confidentiality Requirements?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please explain)	
Current Site Owner	Name: Grant Township Central Protection Assn	Phone:
	Company: Lodge 140	Email:
Current Site Operator	Name:	Phone:
	Company:	Email:
Reason for ESA (e.g., financing, acquisition, lease, etc.)	Purchase of the property	
Anticipated Future Site Use		
Relevant Documents?	Please provide Terracon copies of prior Phase I or II ESAs, Asbestos Surveys, Environmental Permits or Audit documents, Underground Storage Tank documents, Geotechnical Investigations, Site Surveys, Diagrams or Maps, or other relevant reports or documents.	
ASTM User Questionnaire		
<p>In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must respond to the following questions. Failure to provide this information to the environmental professional may result in significant data gaps, which may limit our ability to identify recognized environmental conditions resulting in a determination that "all appropriate inquiry" is not complete. This form represents a type of interview and as such, the user has an obligation to answer all questions in good faith, to the extent of their actual knowledge.</p>		
<p>1) Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.25)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below and send Terracon a copy of the title records or judicial records reviewed.)</p>		
<p>2) Did a search of recorded land title records (or judicial records where appropriate) identify any activity and use limitations (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 (40 CFR 312.26)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below and send Terracon a copy of the title records or judicial records reviewed.)</p>		
<p>3) Do you have any specialized knowledge or experience related to the site or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the site or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business (40 CFR 312-28)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below)</p>		
<p>4) Do you have actual knowledge of a lower purchase price because contamination is known or believed to be present at the site (40 CFR 312.29)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not applicable (If yes or not applicable, explain below)</p>		
<p>5) Are you aware of commonly known or reasonably ascertainable information about the site that would help the environmental professional to identify conditions indicative of releases or threatened releases (40 CFR 312.30)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below)</p>		
<p>6) Based on your knowledge and experience related to the site, are there any obvious indicators that point to the presence or likely presence of contamination at the site (40 CFR 312.31)? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (If yes, explain below)</p>		
<p><u>Comments or Explanations (Attach additional pages as necessary.):</u> Historically used a farm/feed store that sold gasoline, etc.</p>		

Midland Feed Store

1401 N 1941 Diagonal Rd

Lawrence, KS 6604

Inquiry Number: 6565864.4

July 07, 2021

EDR Historical Topo Map Report

with QuadMatch™



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

EDR Historical Topo Map Report

07/07/21

Site Name:

Midland Feed Store
1401 N 1941 Diagonal Rd
Lawrence, KS 66044
EDR Inquiry # 65658

Client Name:

Terracon
4765 W. Junction St
Springfield, MO 65802
Contact: Becki Davis



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Terracon were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:**Coordinates:**

P.O.#	02217262	Latitude:	39.02929 39° 1' 45" North
Project:	Midland Feed Store	Longitude:	-95.24186 -95° 14' 31" West
		UTM Zone:	Zone 15 North
		UTM X Meters:	305943.12
		UTM Y Meters:	4322418.34
		Elevation:	835.33 ' above sea level

Maps Provided:

201	1886
1978	
1967	
1951	
1950	
1949	
1894	
1888	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Midland
2012
7.5-minute, 24000



Williamstown
2012
7.5-minute, 24000

1978 Source Sheets



Williamstown
1978
7.5-minute, 24000
Aerial Photo Revised 1977

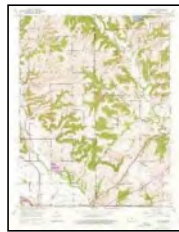


Midland
1978
7.5-minute, 24000
Aerial Photo Revised 1977

1967 Source Sheets



Williamstown
1967
7.5-minute, 24000
Aerial Photo Revised 1967



Midland
1967
7.5-minute, 24000
Aerial Photo Revised 1967

1951 Source Sheets



Midland
1951
7.5-minute, 24000
Aerial Photo Revised 1948

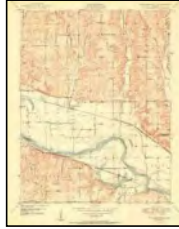
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1950 Source Sheets



Williamstown
1950
7.5-minute, 24000



Williamstown
1950
7.5-minute, 24000
Aerial Photo Revised 194



Midland
1950
7.5-minute, 24000
Aerial Photo Revised 1948

1949 Source Sheets



Williamstown
1949
7.5-minute, 24000
Aerial Photo Revised 1948

1894 Source Sheets



Oskaloosa
1894
30-minute, 125000

1888 Source Sheets



Oskaloosa
1888
30-minute, 125000

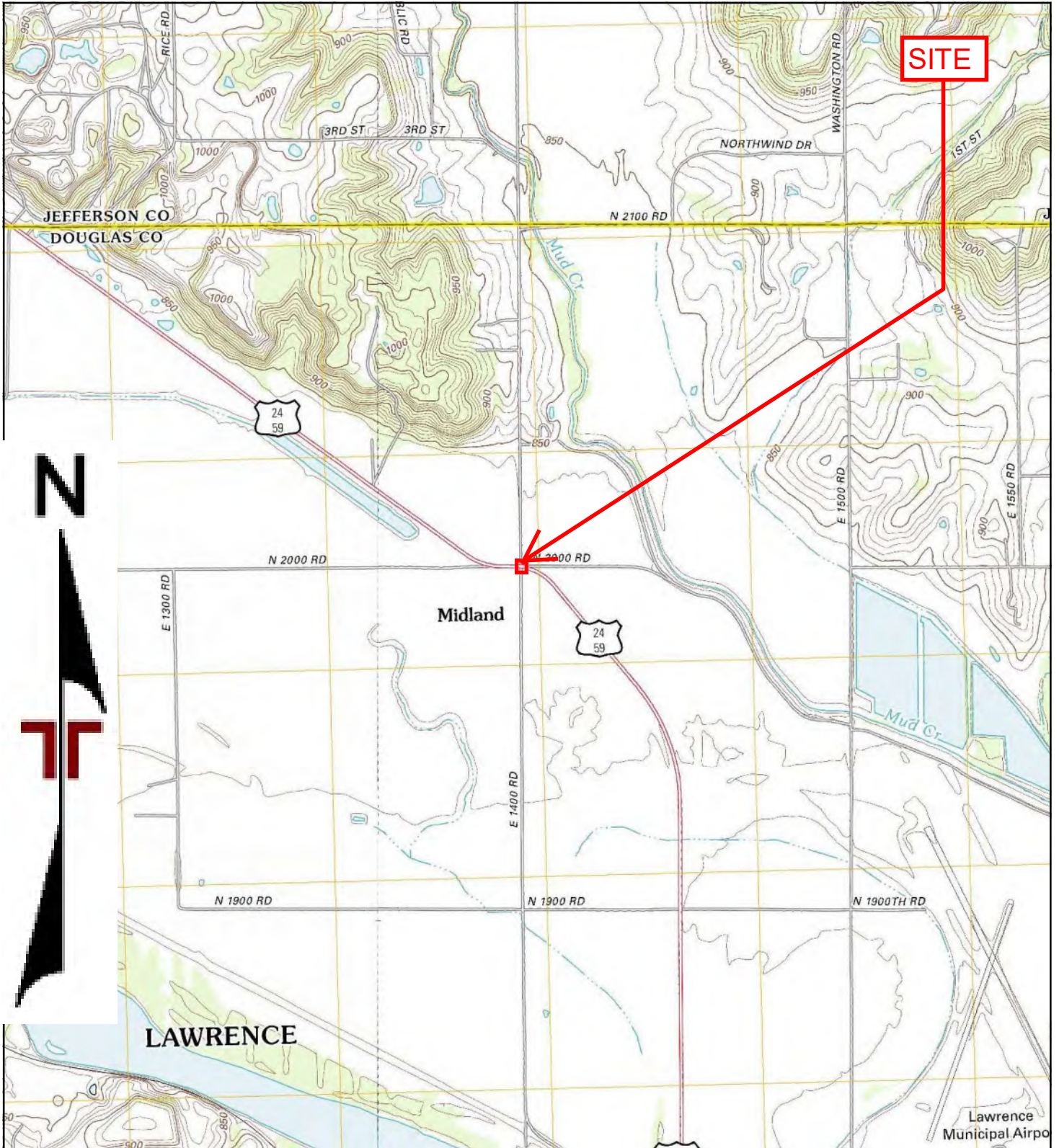
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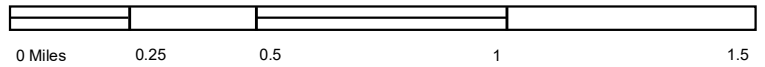
1886 Source Sheets



Oskaloosa
1886
30 minute, 125000



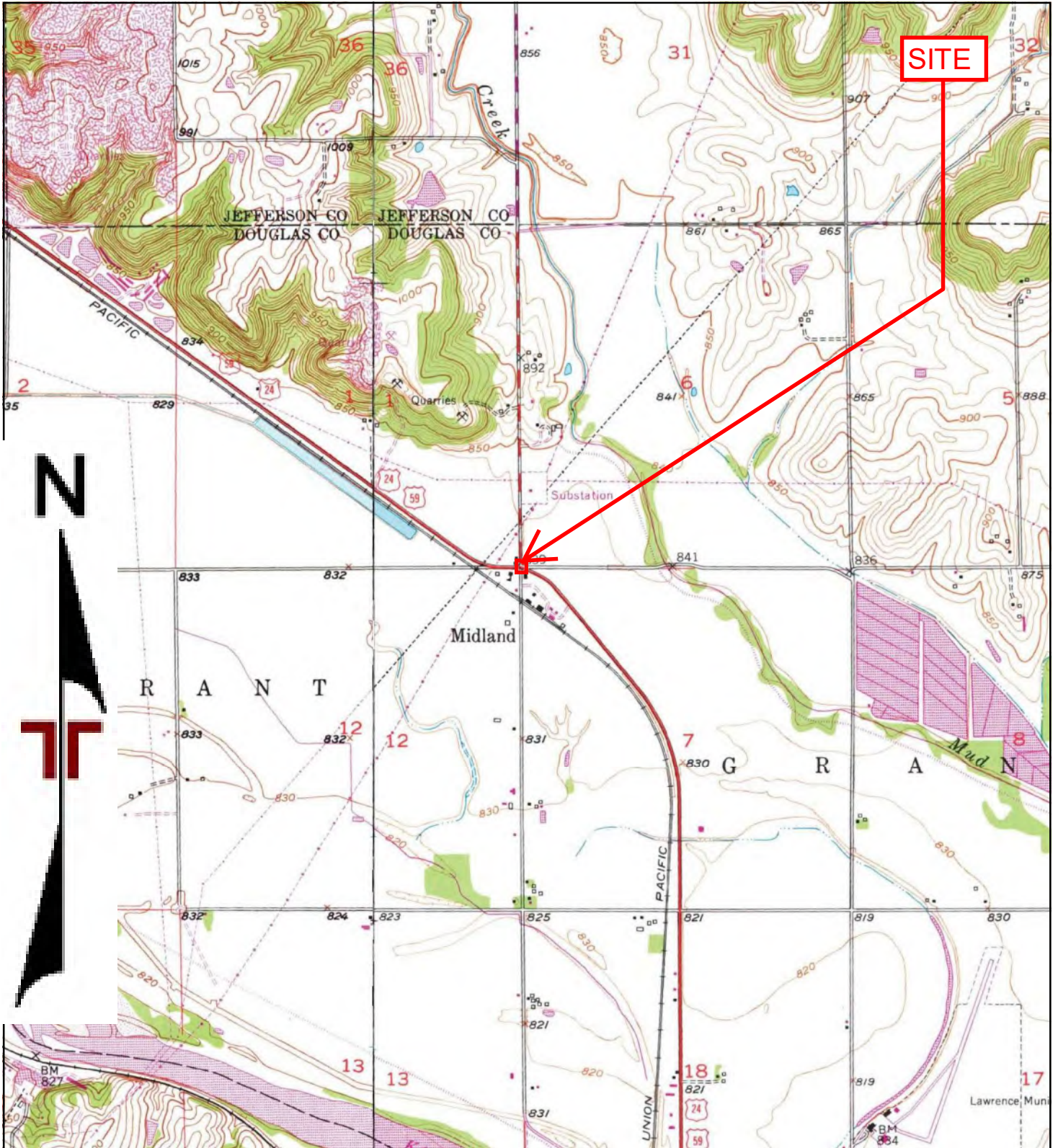
TP, Midland, 2012, 7.5 minute
 NW, Williamstown, 2012, 7.5-minute



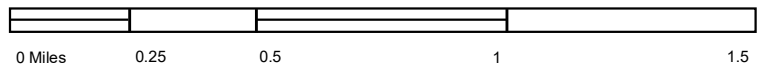
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Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 2012



2012 TOPOGRAPHIC MAP	



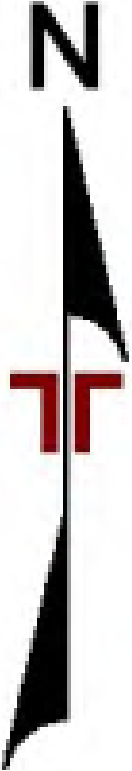
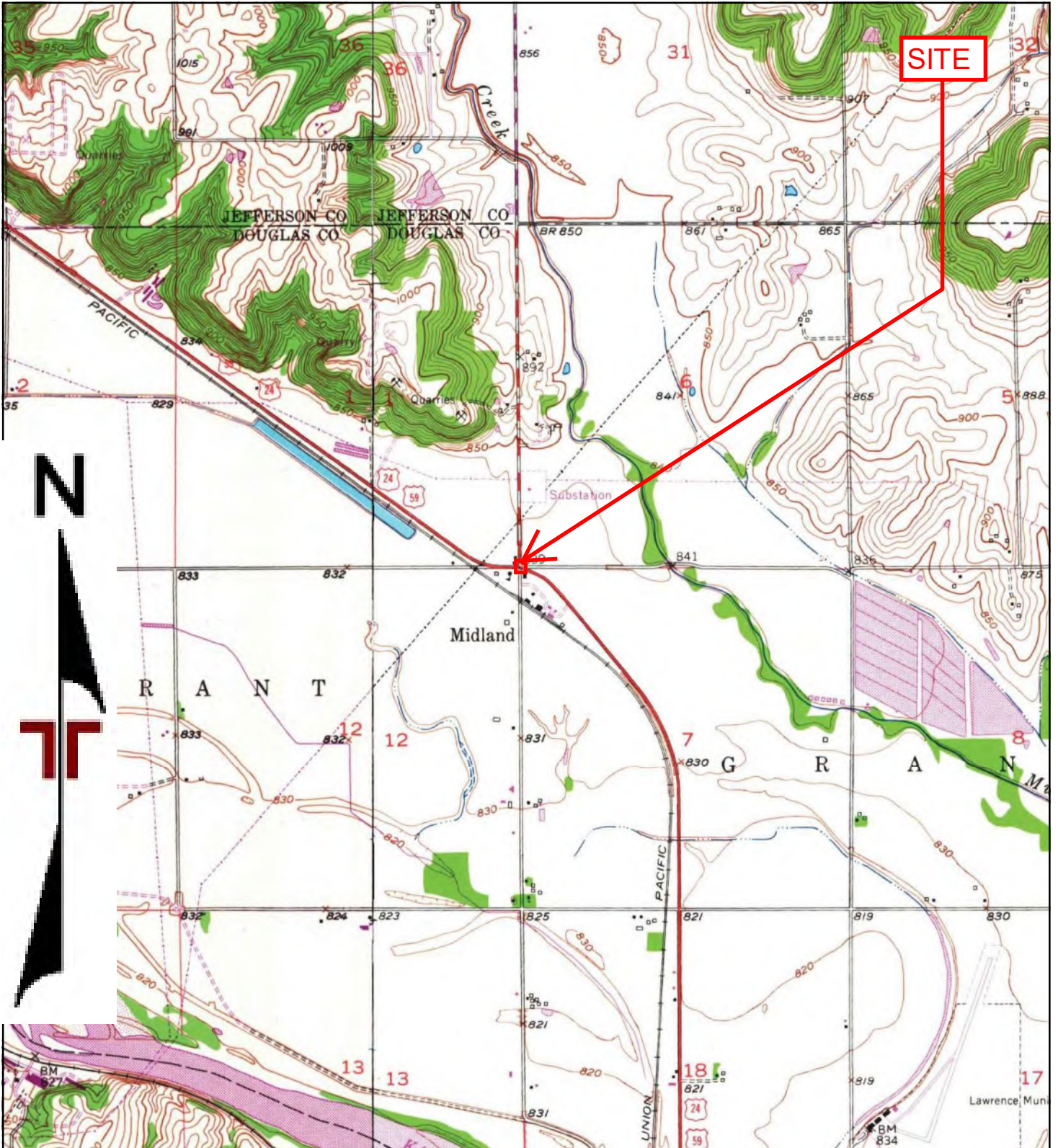
TP, Midland, 1978, 7.5 minute
 NW, Williamstown, 1978, 7 minute



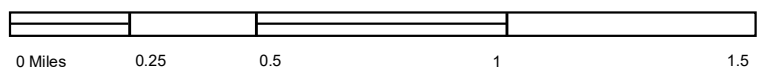
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Approved by:	Date:
	1978



1978 TOPOGRAPHIC MAP	



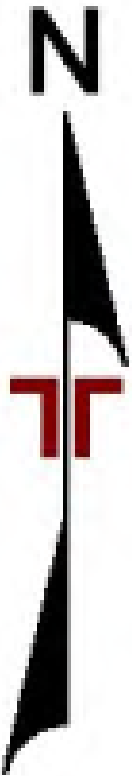
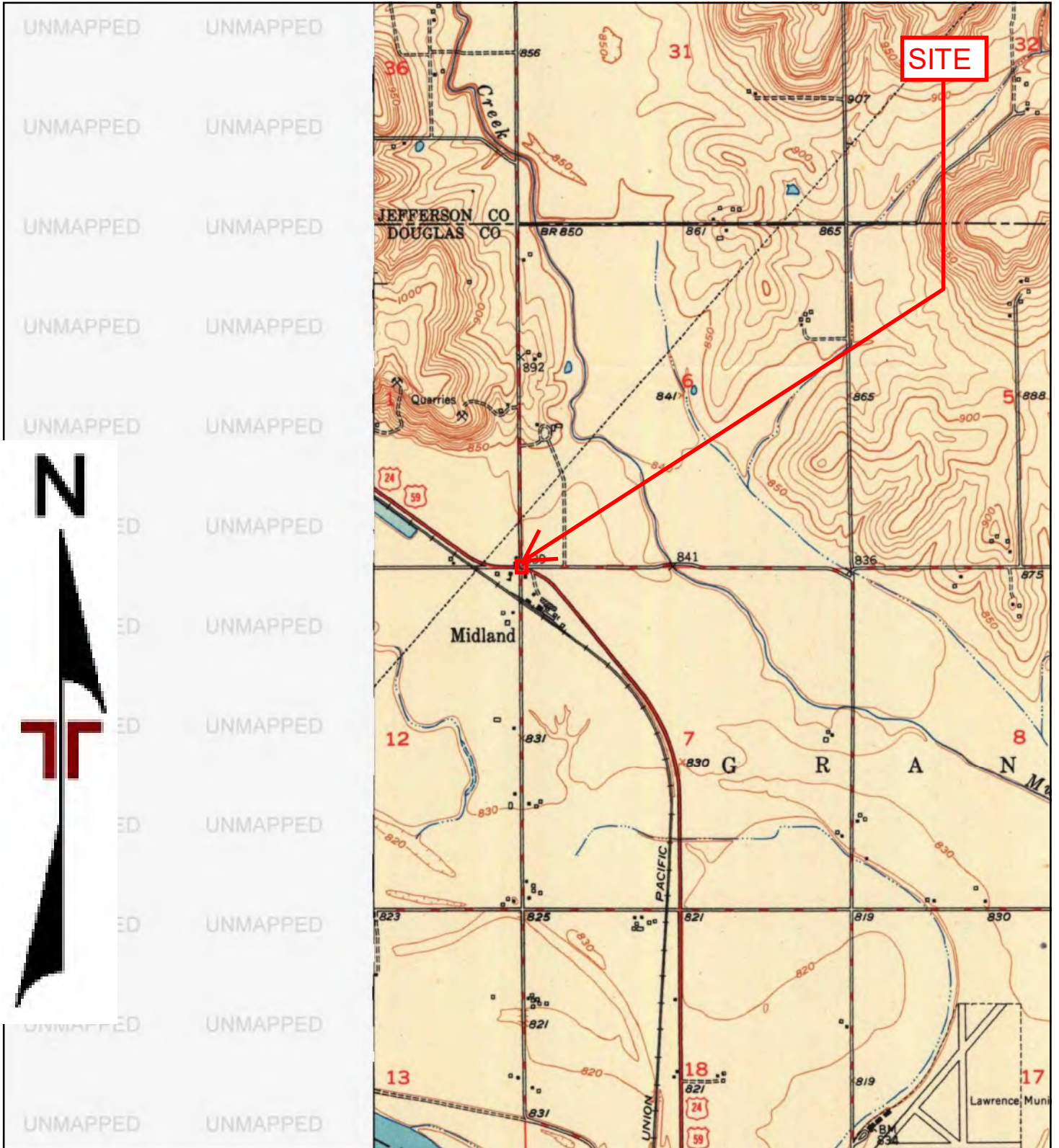
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 NW, Williamstown, 1967, 7.5-minute



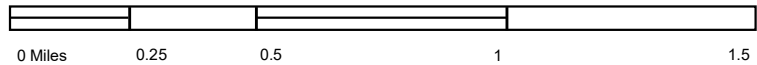
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Approved by:	Date:
	1967



1967 TOPOGRAPHIC MAP	



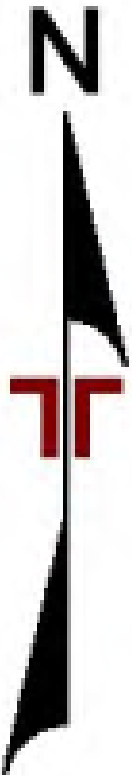
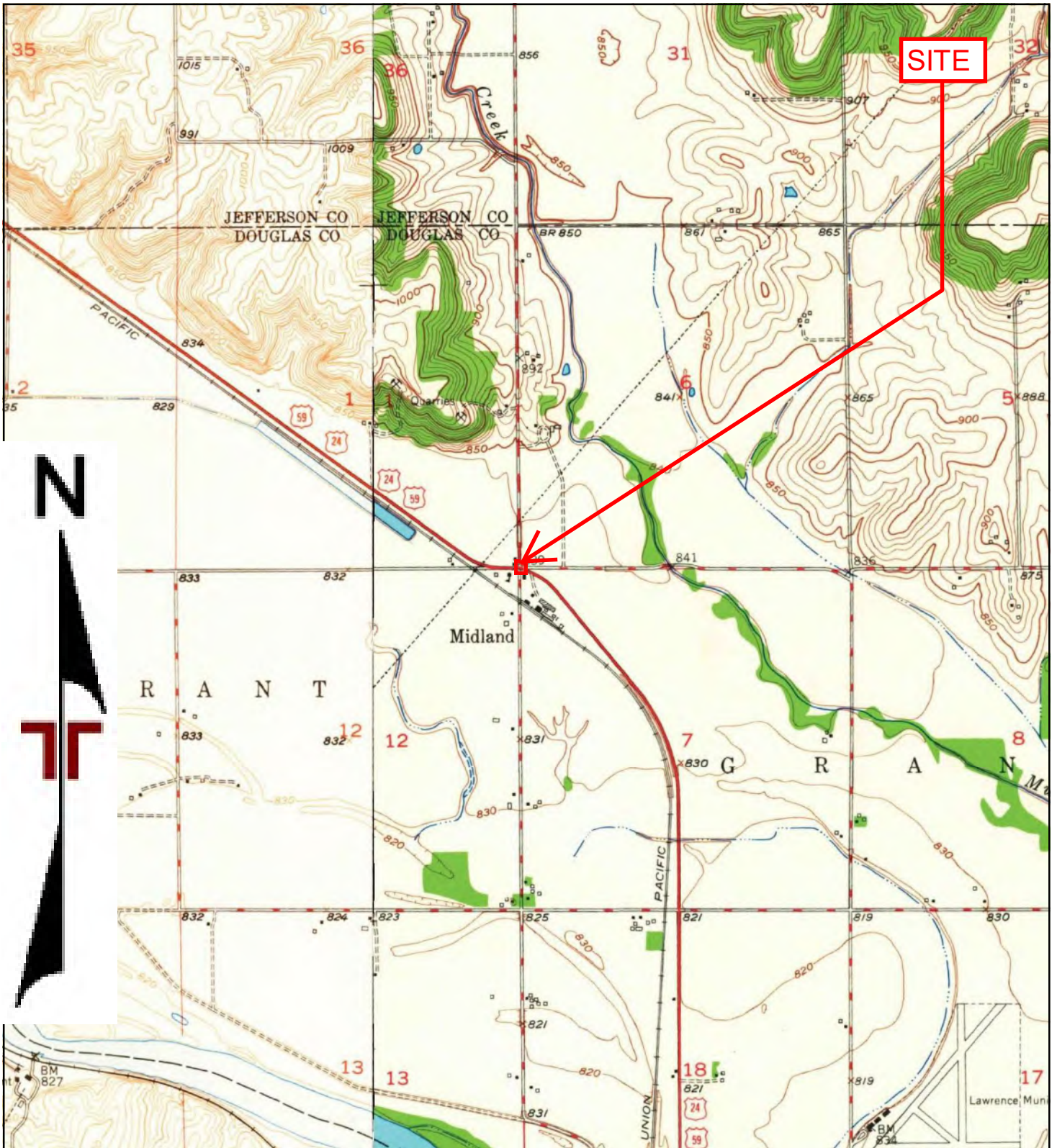
TP, Midland, 1951, 7.5 minute



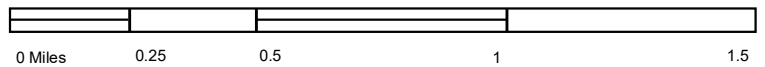
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 195



1951 TOPOGRAPHIC MAP	



TP, Midland, 1 minute
 NW, Williamstown, 1950, 7.5-minute
 NW, Williamstown, 1950, 7.5-minute



Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1950



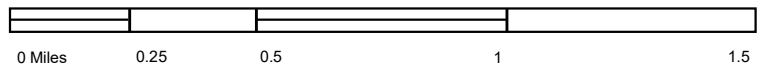
1950 TOPOGRAPHIC MAP	



SITE



NW, Williamstown, 1949, 7.5 minute



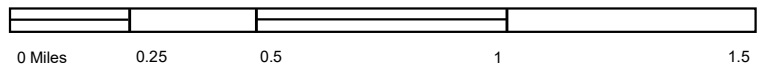
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date:
	194



1949 TOPOGRAPHIC MAP	



TP, Oskaloosa, 1894, 30-minute



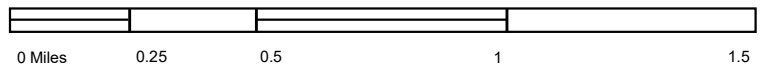
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Approved by:	Date: 1894



1894 TOPOGRAPHIC MAP	



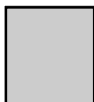
TP, Oskaloosa, 1888, 30-minute



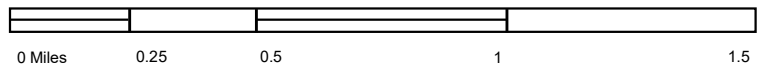
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Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1888



1888 TOPOGRAPHIC MAP	



TP, Oskaloosa, 1886, 30-minute



Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1886



1886 TOPOGRAPHIC MAP	



Midland Feed Store

1401 N 1941 Diagonal Rd

Lawrence, KS 6604

Inquiry Number: 6565864.8

July 09, 2021

The EDR Aerial Photo Decade Package



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

EDR Aerial Photo Decade Package

07/09/21

Site Name:

Midland Feed Store
1401 N 1941 Diagonal Rd
Lawrence, KS 66044
EDR Inquiry # 6565864.8

Client Name:

Terracon
4765 W. Junction St
Springfield, MO 65802
Contact: Becki Davis



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Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2017	1"=500'	Flight Year: 2017	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
2002	1"=750'	Flight Date: February 16, 2002	USGS
1996	1"=500'	Flight Date: March 10, 1996	USGS
1991	1"=500'	Acquisition Date: October 06, 1991	USGS/DOQQ
1985	1"=500'	Flight Date: June 29, 1985	NHAP
1982	1"=1000'	Flight Date: May 07, 1982	USGS
1977	1"=750'	Flight Date: May 10, 1977	USGS
1970	1"=500'	Flight Date: June 07, 1970	USGS
1967	1"=500'	Flight Date: August 28, 1967	USGS
1950	1"=500'	Flight Date: April 19, 1950	USGS
1948	1"=500'	Flight Date: September 09, 1948	USGS

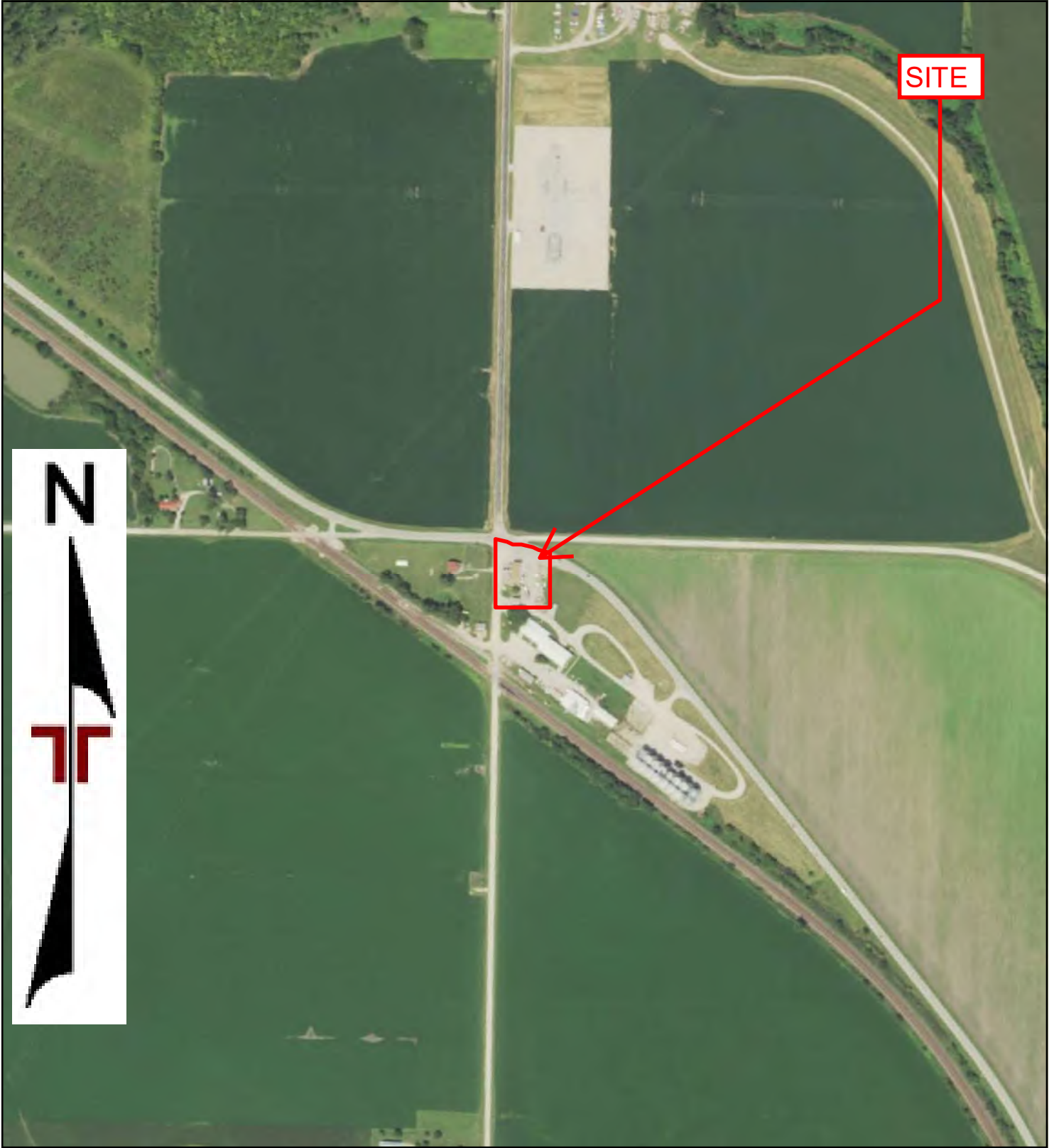
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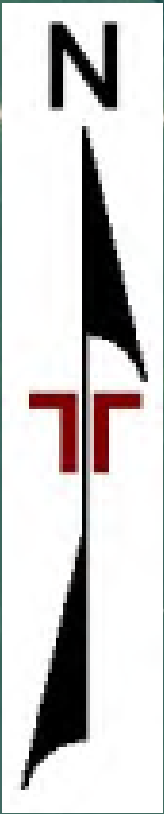
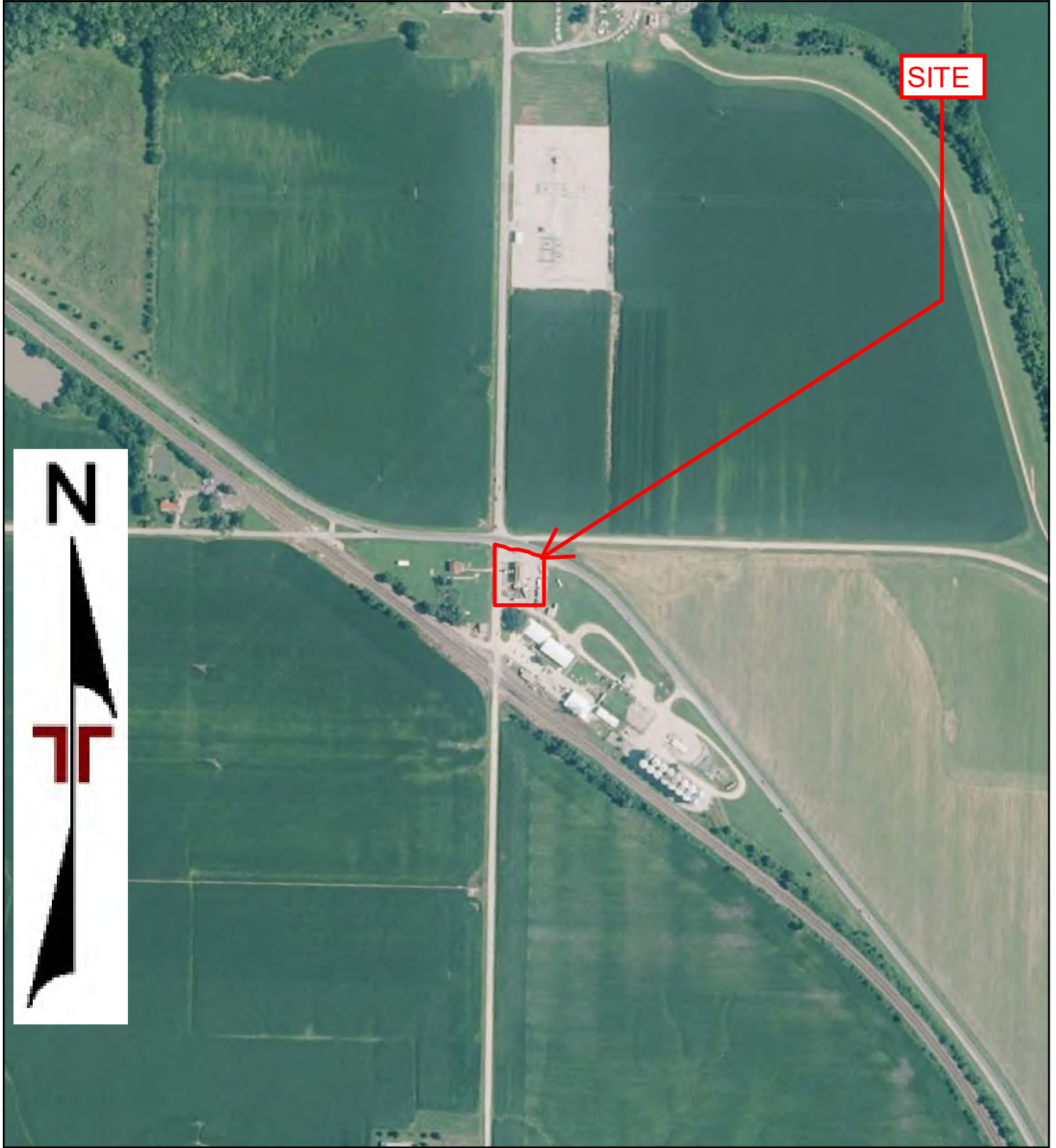
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0 Feet 500 1000 2000

Project Manager	Project No:		2017 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 2017			



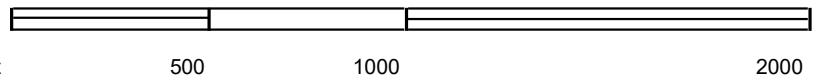
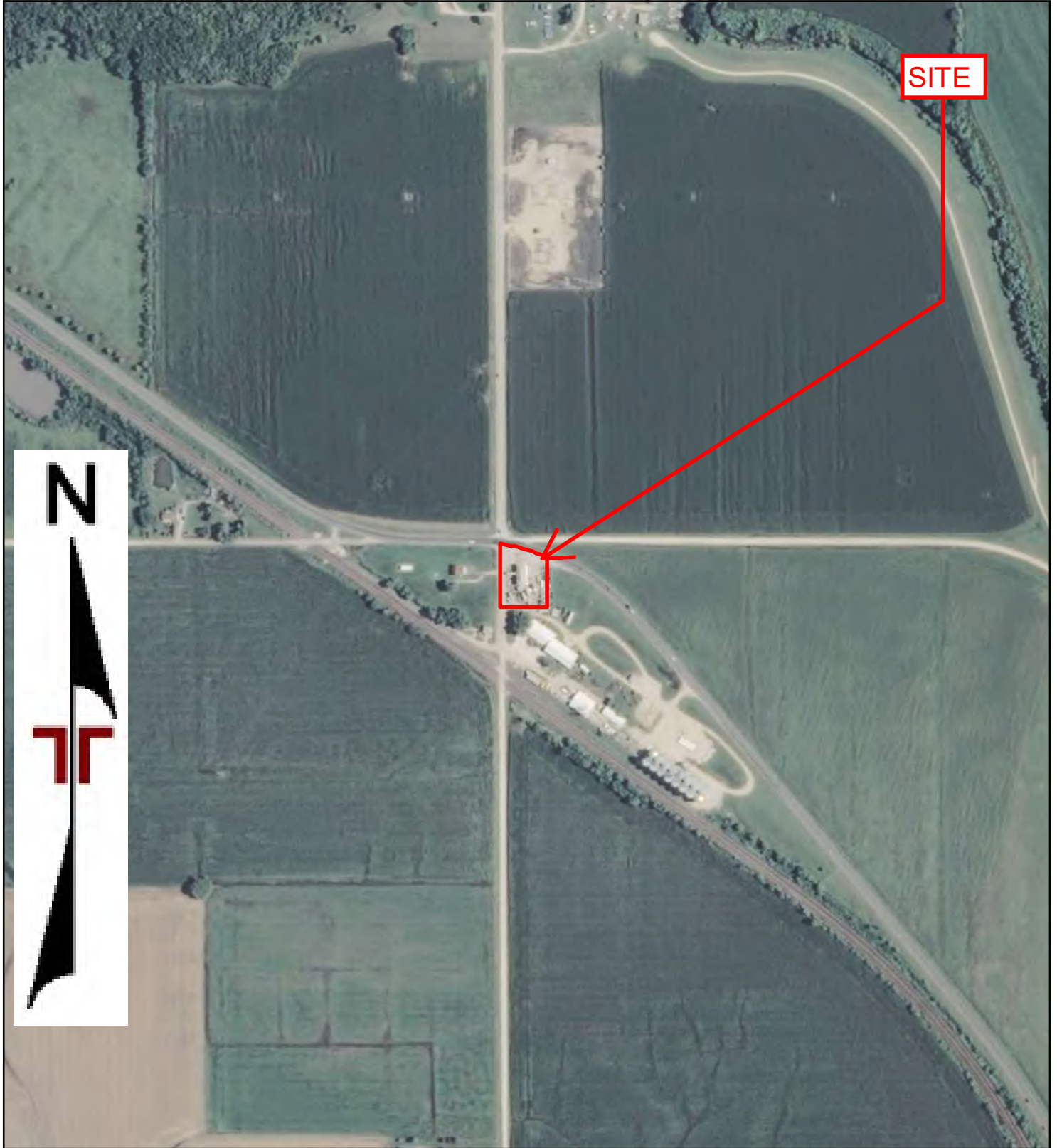
0 Feet

500

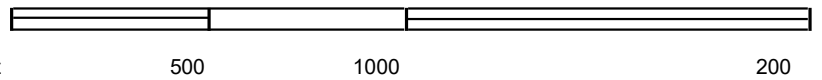
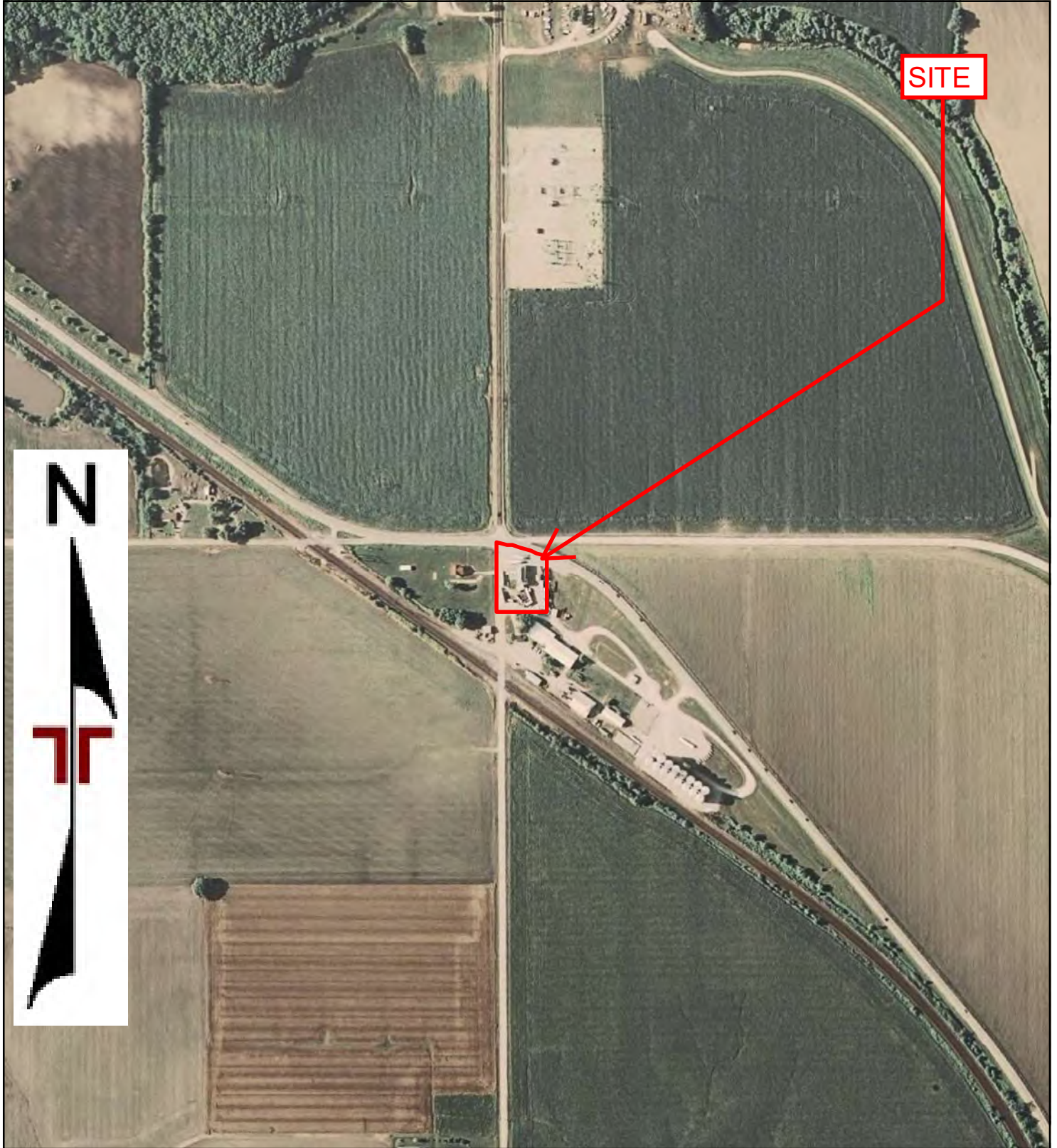
1000

2000

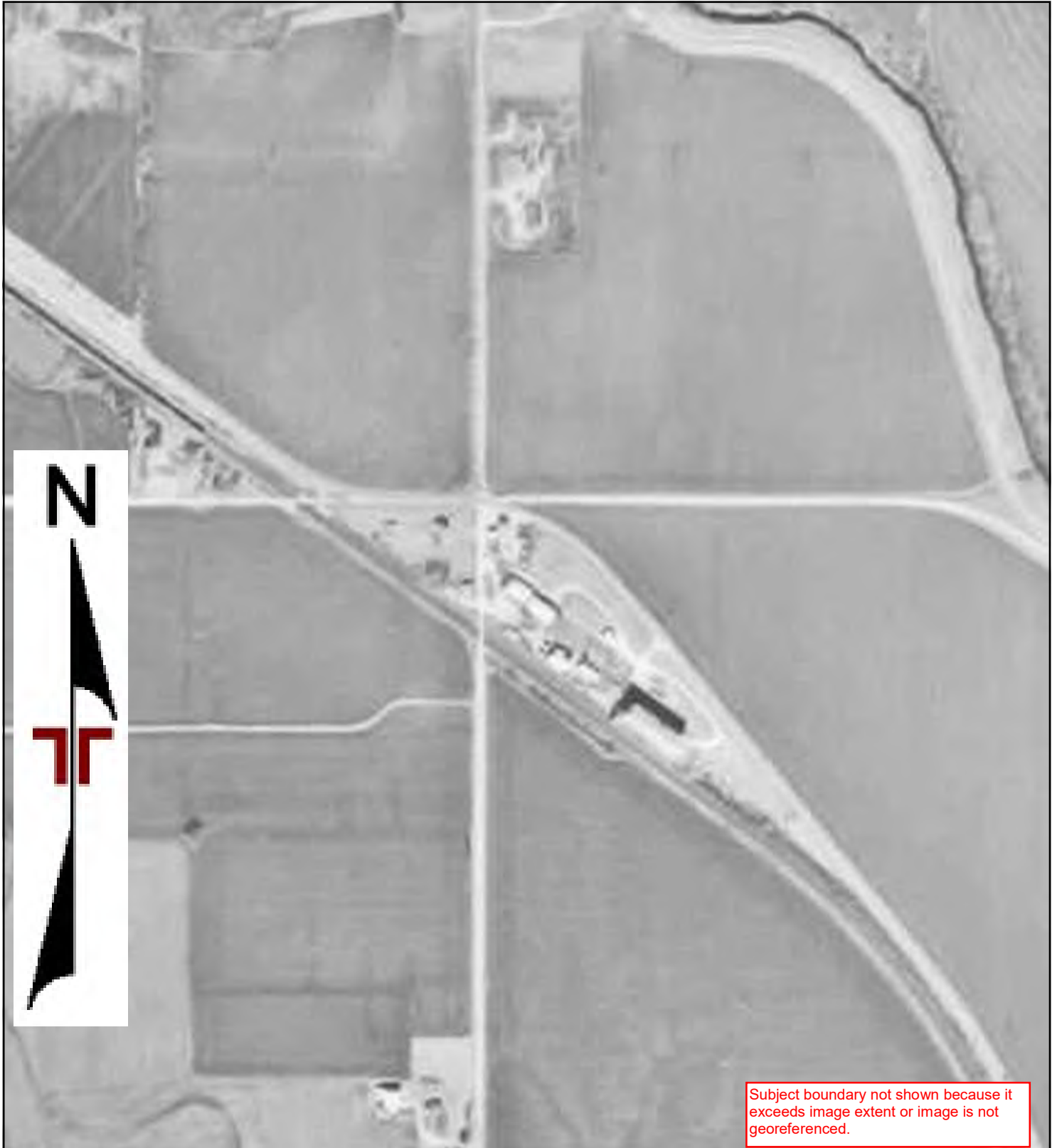
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Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 2014			



Project Manager	Project No:		2010 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 201			

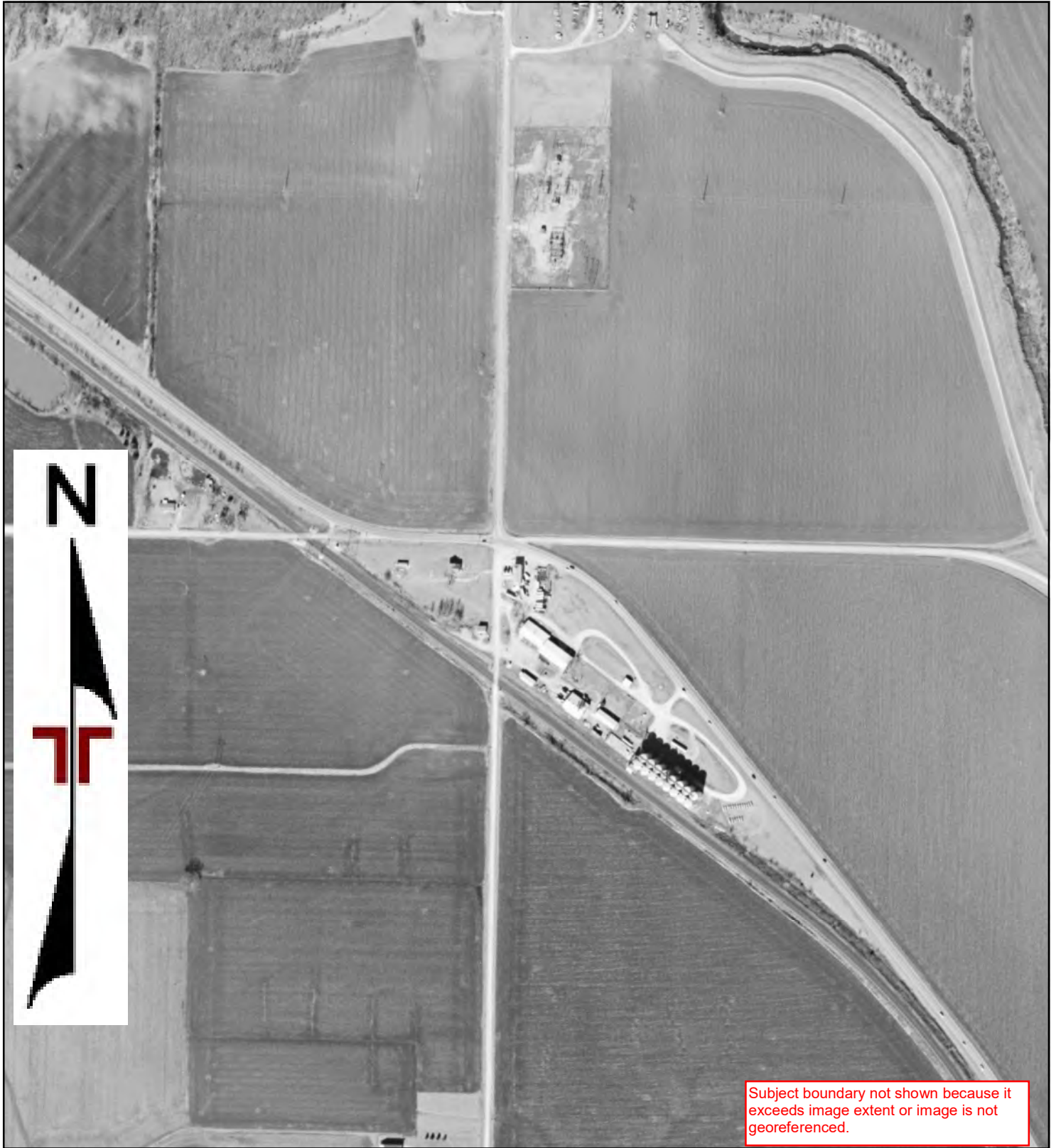


Project Manager	Project No:		2006 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 2006			



0 Feet 750 1500 3000

Project Manager	Project No:	Terracon	2002 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 2002			

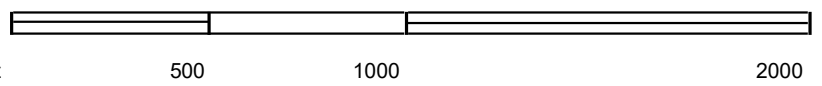
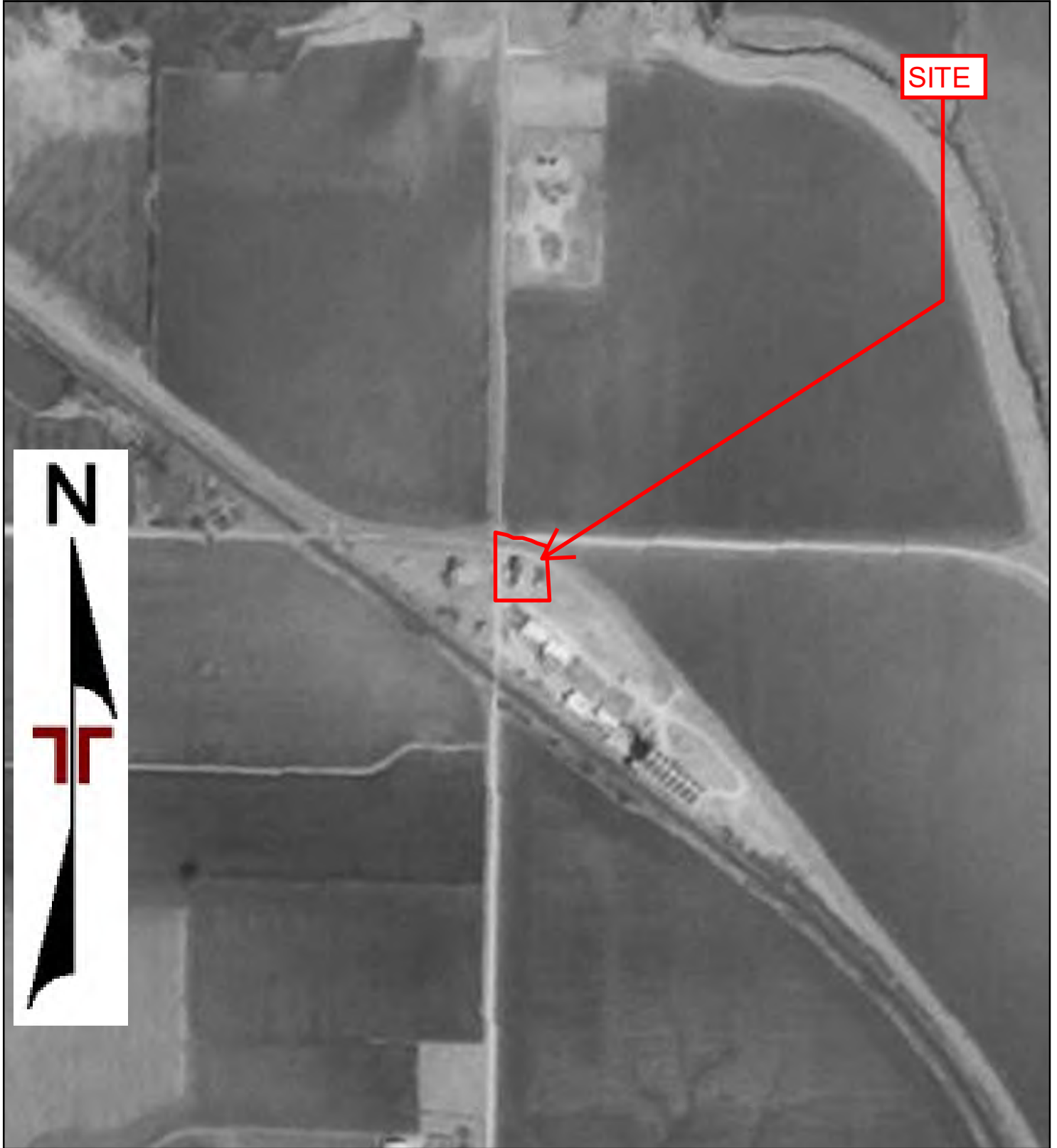



Subject boundary not shown because it exceeds image extent or image is not georeferenced.

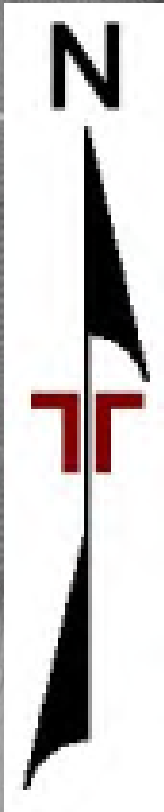
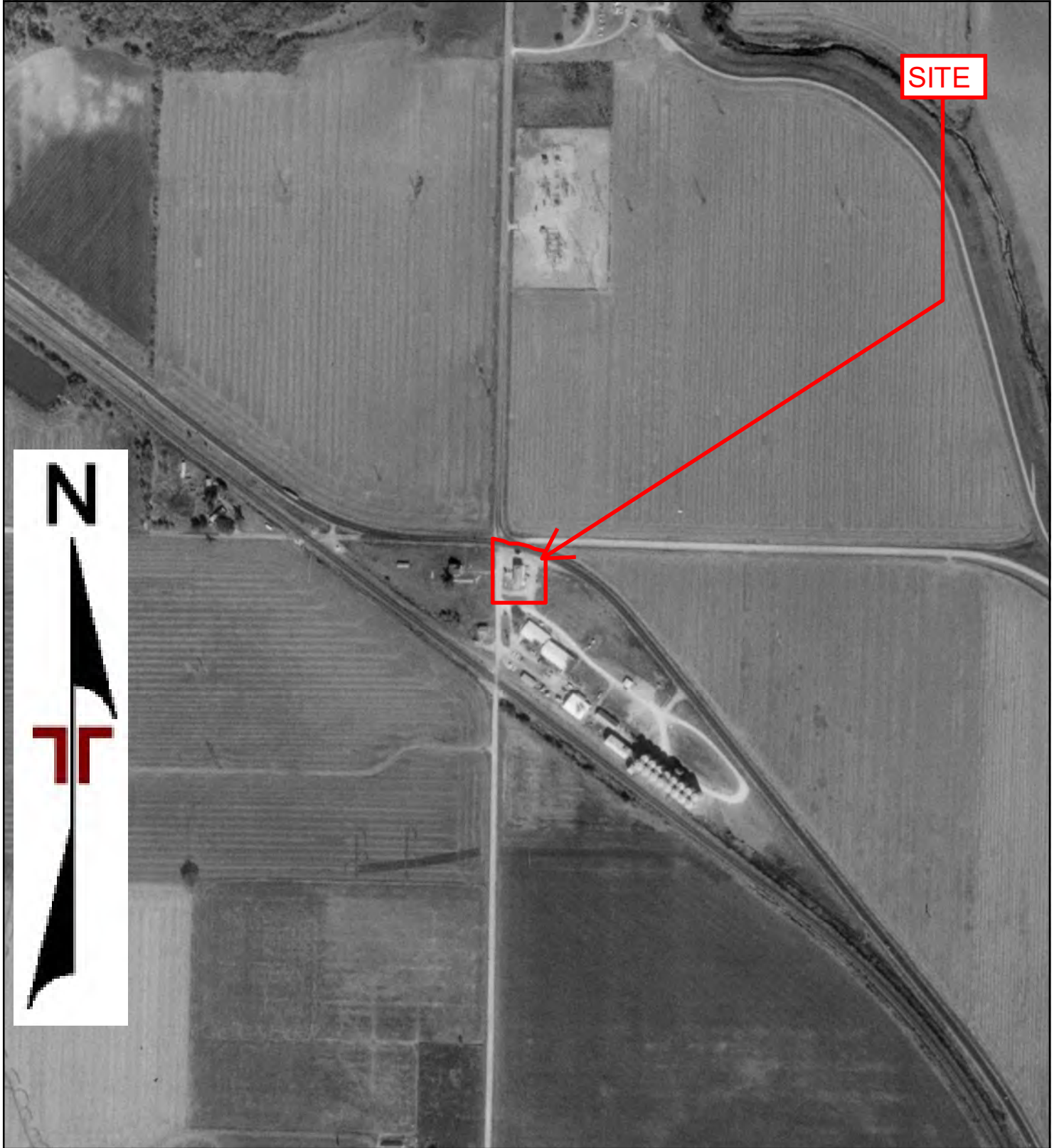


0 Feet 500 1000 2000

Project Manager	Project No:		2002 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 2002			

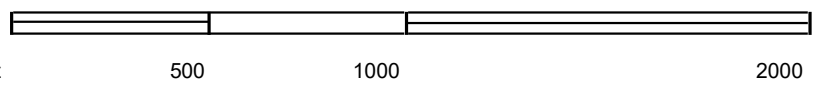
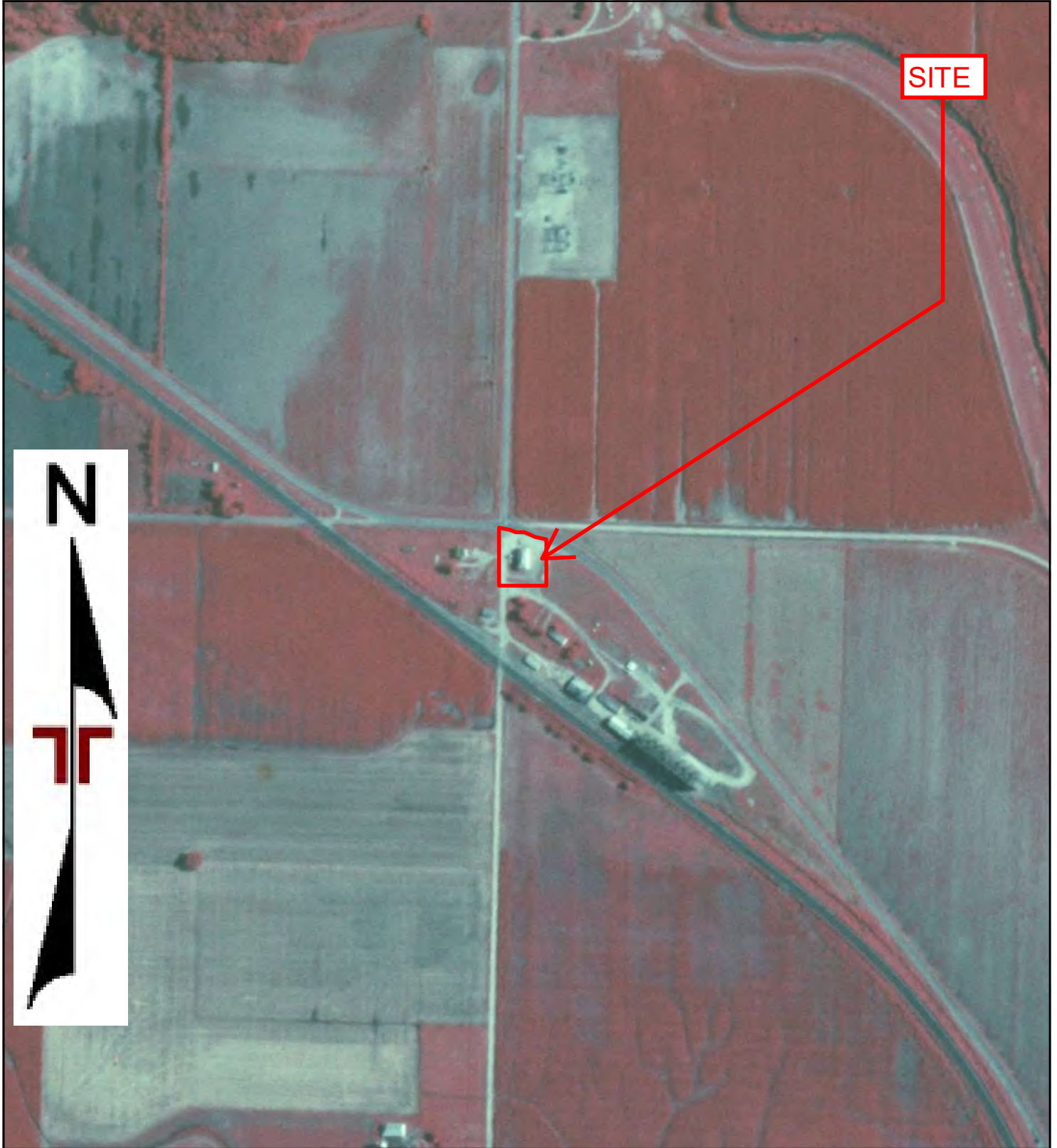


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Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 1996			

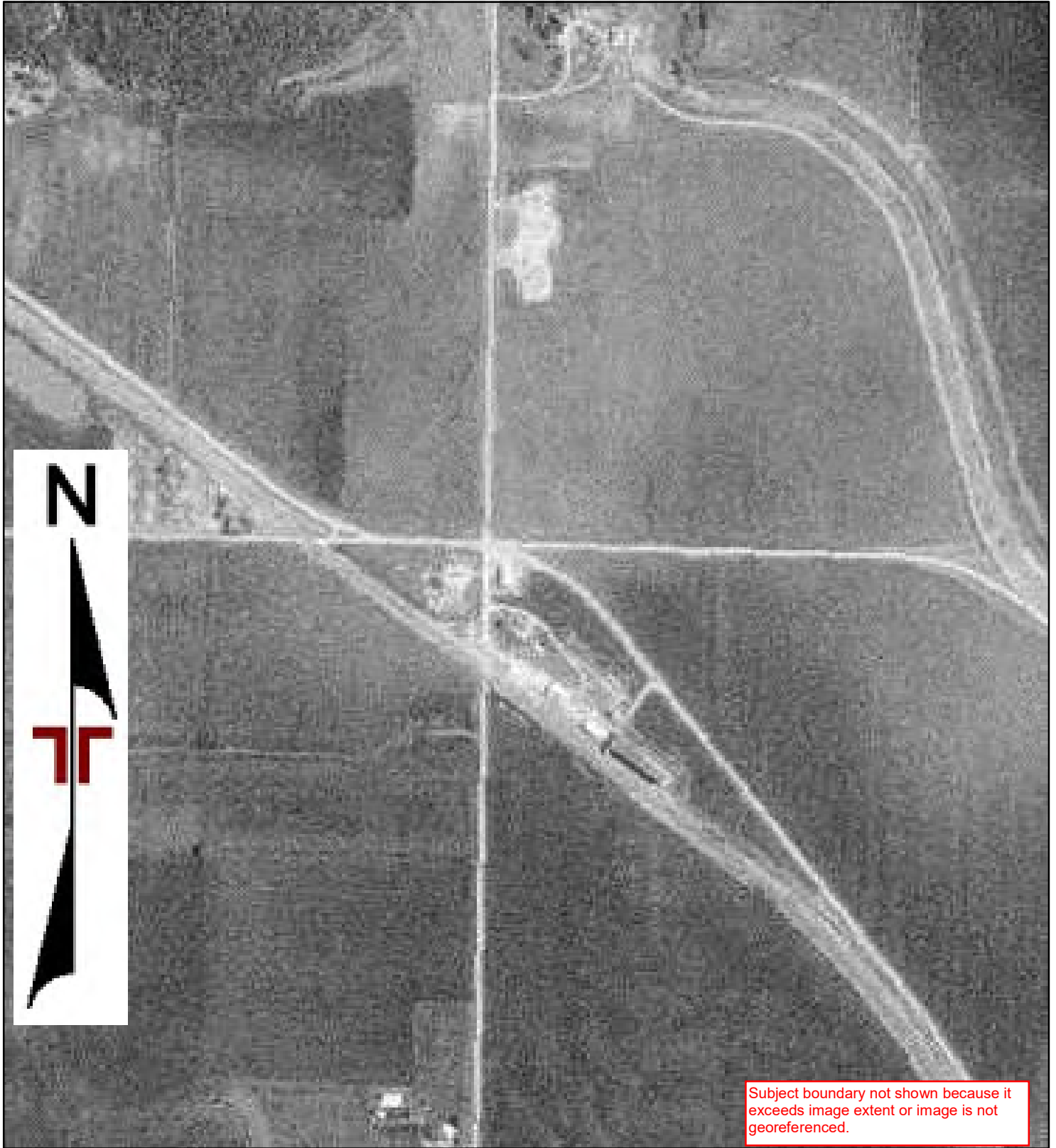


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Project Manager	Project No:		1991 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date:			
	1991			



Project Manager	Project No:		1985 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 1985			



Subject boundary not shown because it exceeds image extent or image is not georeferenced.



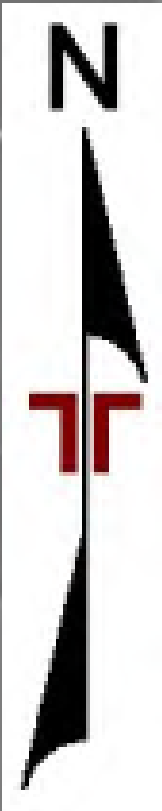
0 Feet

1000

2000

4000

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Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date:			
	198			

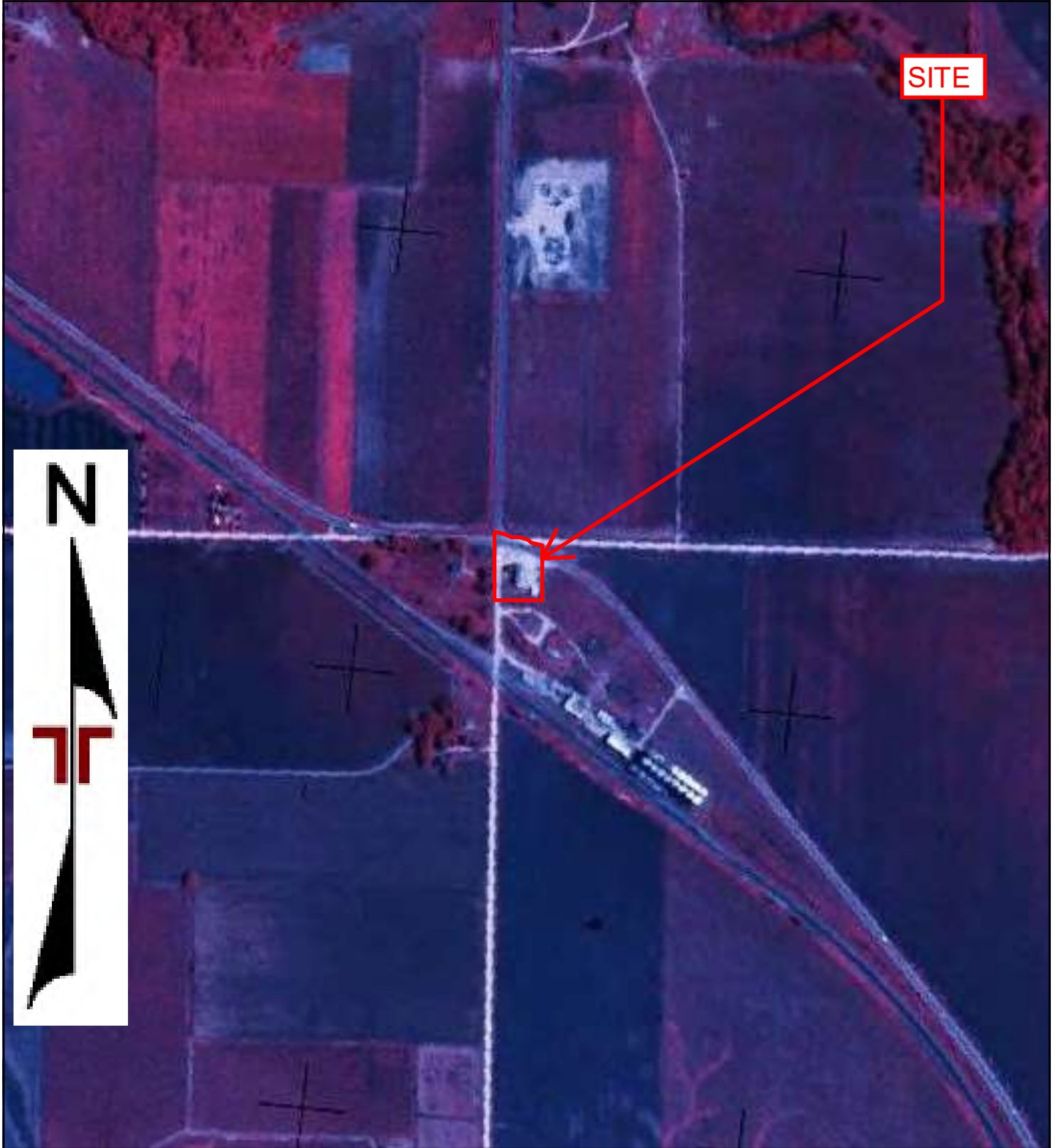


Subject boundary not shown because it exceeds image extent or image is not georeferenced.



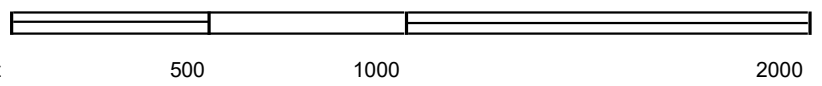
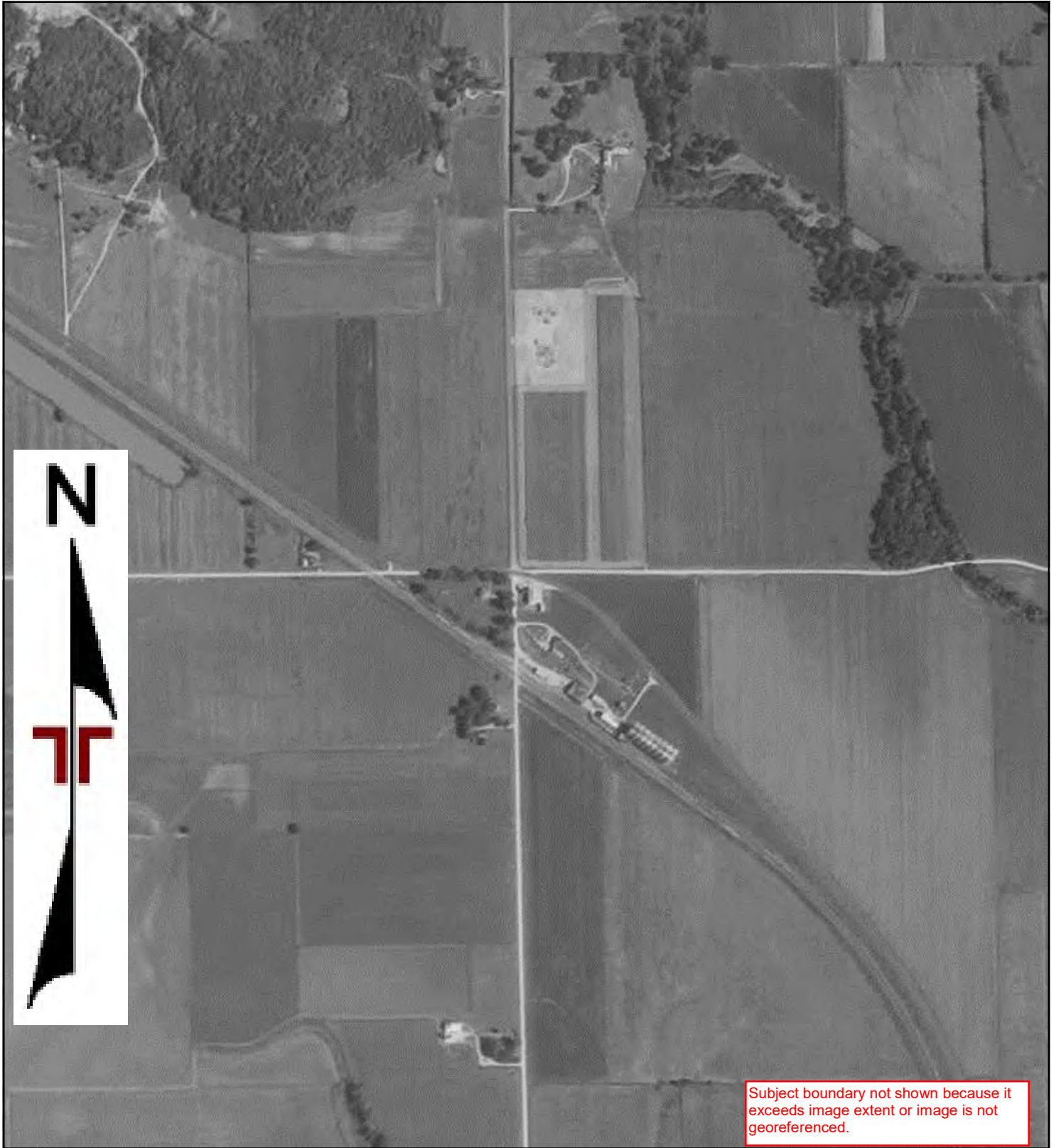
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Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 1977			

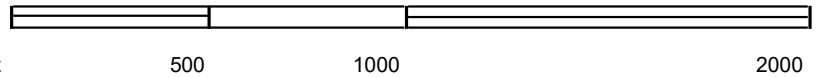
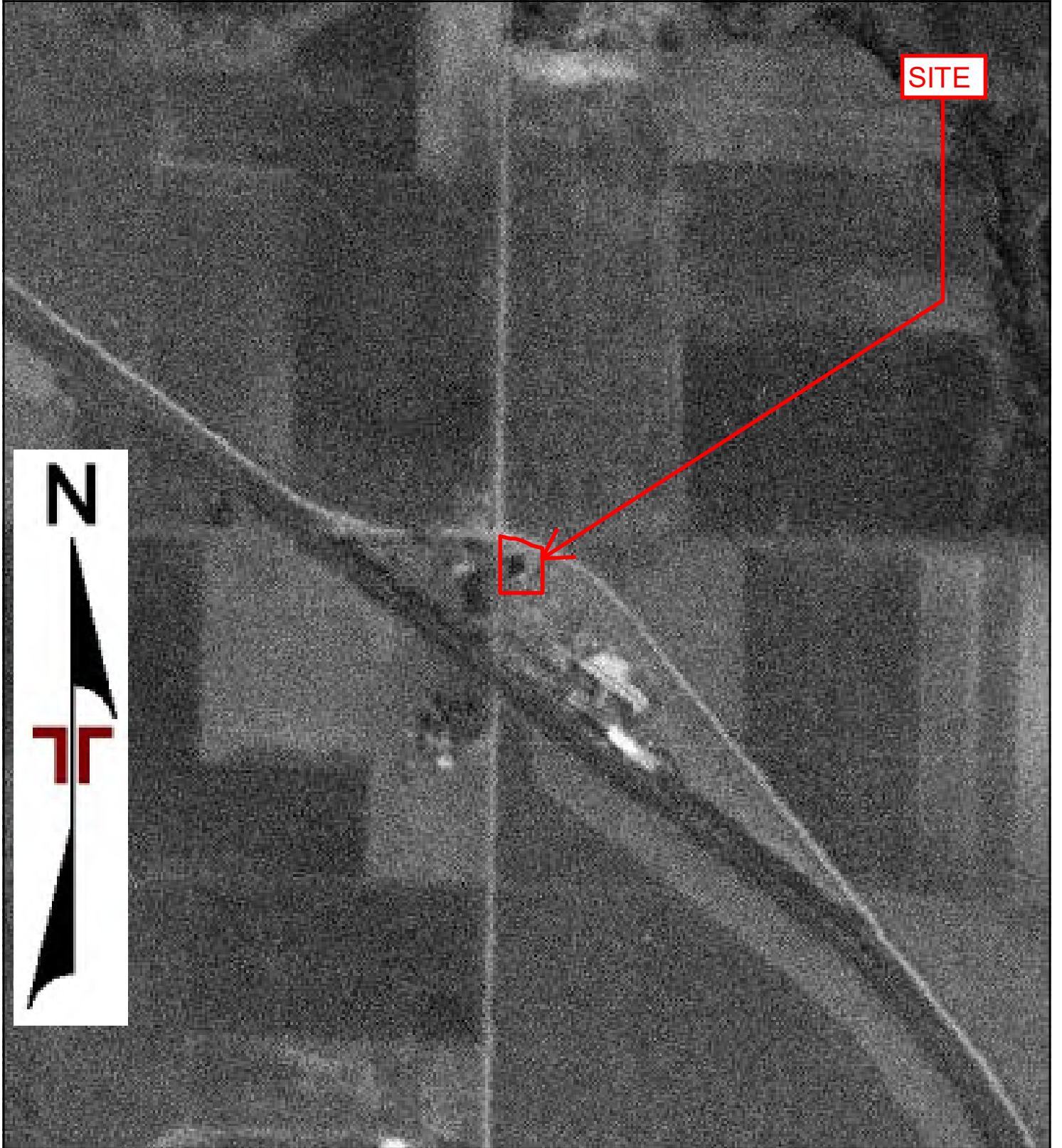


0 Feet 500 1000 20

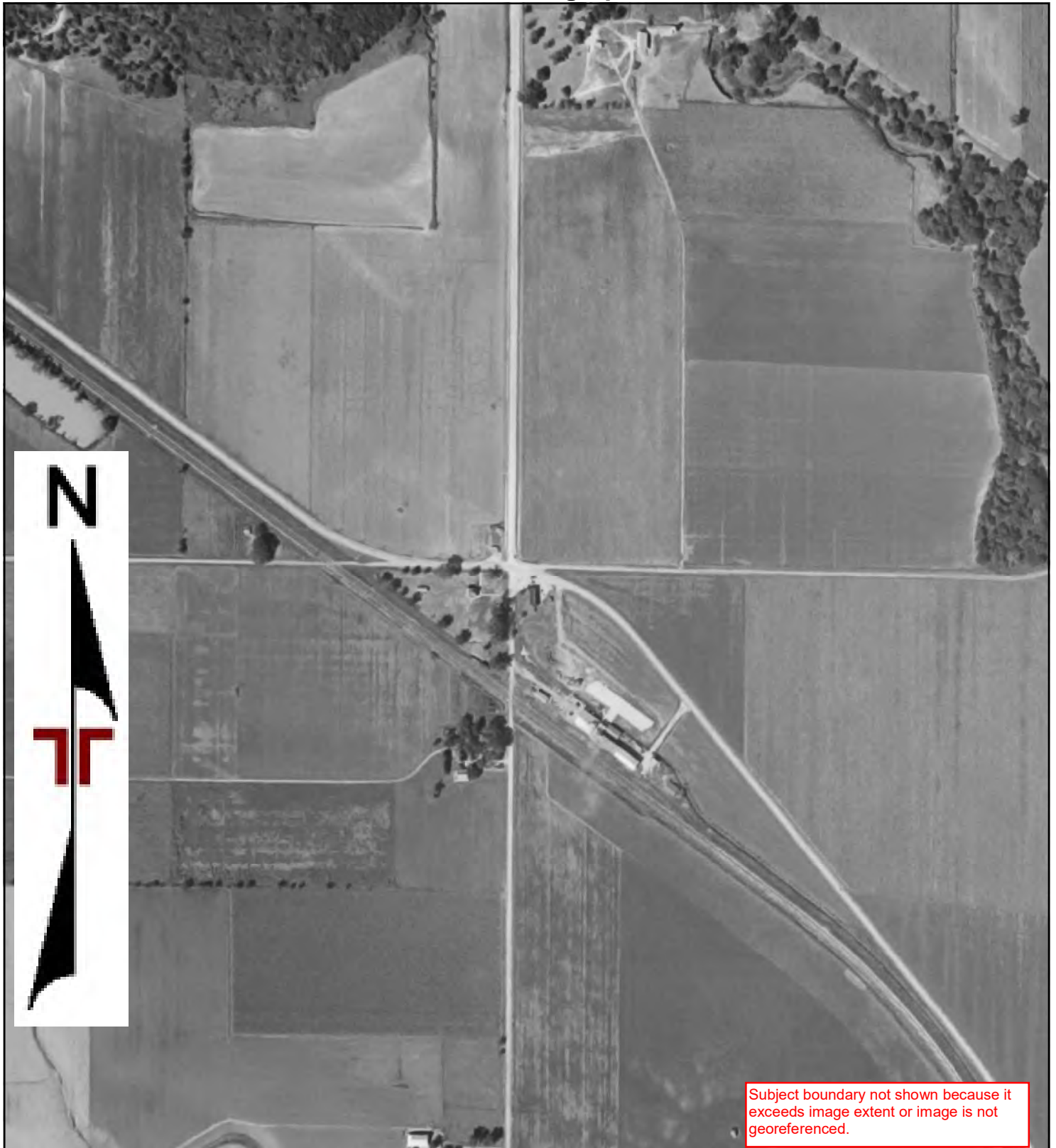
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Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 1970			



Project Manager	Project No:		1967 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 1967			



Project Manager	Project No:		1950 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date:		195	



Subject boundary not shown because it exceeds image extent or image is not georeferenced.



0 Feet 500 1000 2000

Project Manager	Project No:		1948 AERIAL PHOTOGRAPH	
Drawn By:	Scale:			
Checked By:	File Name:			
Approved By:	Date: 1948			

Midland Feed Store

1401 N 1941 Diagonal Rd

Lawrence, KS 66044

Inquiry Number: 6565864.3

July 07, 2021

Certified Sanborn® Map Report



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

Certified Sanborn® Map Report

07/07/21

Site Name:

Midland Feed Store
1401 N 1941 Diagonal Rd
Lawrence, KS 66044
EDR Inquiry # 6565864.3

Client Name:

Terracon
4765 W. Junction St
Springfield, MO 65802
Contact: Becki Davis



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

Certified Sanborn Results:

Certification # 7951-4E71-A841

PO # 02217262

Project Midland Feed Store

UNMAPPED PROPERTY

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



Sanborn® Library search results

Certification #: 7951-4E71-A841

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

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

The Sanborn Library LLC Since 1866™

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Midland Feed Store

1401 N 1941 Diagonal Rd
Lawrence, KS 66044

Inquiry Number: 6565864.5
July 13, 2021

The EDR-City Directory Image Report

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SECTION

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Findings

City Directory Images

Thank you for your business.

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

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

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

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

<u>Year</u>	<u>Target Street</u>	<u>Cross Street</u>	<u>Source</u>
2017	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2014	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2010	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2005	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
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1995	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
1992	<input type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
1989	<input type="checkbox"/>	<input type="checkbox"/>	Polk's City Directory
1984	<input type="checkbox"/>	<input type="checkbox"/>	Polk's City Directory
1979	<input type="checkbox"/>	<input type="checkbox"/>	Polk's City Directory
1974	<input type="checkbox"/>	<input type="checkbox"/>	Polk's City Directory
1969	<input type="checkbox"/>	<input type="checkbox"/>	Polk's City Directory
1963	<input type="checkbox"/>	<input type="checkbox"/>	Polk's City Directory

FINDINGS

TARGET PROPERTY STREET

1401 N 1941 Diagonal Rd
Lawrence, KS 66044

<u>Year</u>	<u>CD Image</u>	<u>Source</u>
-------------	-----------------	---------------

N 1941 DIAG RD

2000	pg A17	EDR Digital Archive
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N 1941 DIAGONAL RD

2017	pg A2	EDR Digital Archive
2014	pg A6	EDR Digital Archive
2010	pg A10	EDR Digital Archive
2005	pg A14	EDR Digital Archive

N 1941ST DIAGONL

1995	pg A20	EDR Digital Archive
------	--------	---------------------

FINDINGS

CROSS STREETS

<u>Year</u>	<u>CD Image</u>	<u>Source</u>	
<u>N 1941 DIAGONAL RD</u>			
1992	-	EDR Digital Archive	Street not listed in Source
1989	-	Polk's City Directory	Street not listed in Source
1984	-	Polk's City Directory	Street not listed in Source
1979	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source

E 1400 RD

2017	pg. A1	EDR Digital Archive	
2014	pg. A4	EDR Digital Archive	
2010	pg. A8	EDR Digital Archive	
2005	pg. A12	EDR Digital Archive	
2000	pg. A16	EDR Digital Archive	
1992	-	EDR Digital Archive	Street not listed in Source
1989	-	Polk's City Directory	Street not listed in Source
1984	-	Polk's City Directory	Street not listed in Source
1979	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source

E 1400TH RD

1995	pg. A19	EDR Digital Archive	
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N 2000 RD

2017	pg. A3	EDR Digital Archive	
2014	pg. A7	EDR Digital Archive	

FINDINGS

<u>Year</u>	<u>CD Image</u>	<u>Source</u>	
2010	pg. A11	EDR Digital Archive	
2005	pg. A15	EDR Digital Archive	
2000	pg. A18	EDR Digital Archive	
1992	-	EDR Digital Archive	Street not listed in Source
1989	-	Polk's City Directory	Street not listed in Source
1984	-	Polk's City Directory	Street not listed in Source
1979	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source

N 2000TH RD

1995	pg. A21	EDR Digital Archive	
------	---------	---------------------	--

US HIGHWAY 24

2017	-	EDR Digital Archive	Target and Adjoining not listed in Source
2014	-	EDR Digital Archive	Target and Adjoining not listed in Source
2010	-	EDR Digital Archive	Target and Adjoining not listed in Source
2005	-	EDR Digital Archive	Target and Adjoining not listed in Source
2000	-	EDR Digital Archive	Street not listed in Source
1995	-	EDR Digital Archive	Street not listed in Source
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1989	-	Polk's City Directory	Street not listed in Source
1984	-	Polk's City Directory	Street not listed in Source
1979	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source

US HIGHWAY 59

2017	-	EDR Digital Archive	Street not listed in Source
2014	-	EDR Digital Archive	Street not listed in Source

FINDINGS

<u>Year</u>	<u>CD Image</u>	<u>Source</u>	
2010	-	EDR Digital Archive	Street not listed in Source
2005	-	EDR Digital Archive	Street not listed in Source
2000	-	EDR Digital Archive	Street not listed in Source
1995	-	EDR Digital Archive	Street not listed in Source
1992	-	EDR Digital Archive	Street not listed in Source
1989	-	Polk's City Directory	Street not listed in Source
1984	-	Polk's City Directory	Street not listed in Source
1979	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source

City Directory Images

Target Street

Cross Street

Source

-

✓

EDR Digital Archive

E 1400 RD

2017

1062	CAROLEE MESERAUL PRINTING UNLIMITED
1992	PINES INTERNATIONAL INC
2046	STEVE BRUCE WELDING FABRICATION LLC

Target Street

✓

Cross Street

-

Source

EDR Digital Archive

N 1941 DIAGONAL RD

2017

1310 LITTLE, DORANCE C
1320 LONG, DEEDEE
1401 MIDLAND FARM STORE
1419 MIDLAND COOP ELEVATOR

-

✓

N 2000 RD

2017

923 WILLITS, RAMONA A
968 JETER, AARON

E 1400 RD**2014**

658 TUCKER, CAROLL J
668 HARRISON, TIMOTHY E
672 ROWE, STANLEY D
754 MEYEN, EDWARD L
765 KEEN, HOUSTON E
767 OCCUPANT UNKNOWN,
769 GEYER, L G
771 OCCUPANT UNKNOWN,
797 FORD, CHAITRA
967 KUHLMANN, MINA
996 CALLICOTT, KENNETH P
1033 MOCK, TIMOTHY W
1055 ALSOP, EDWARD H
1056 WERST, HERBERT H
1059 BOTBYL, JOHN R
1062 CAROLEE MESERAUL
CAROLEE, MESERAUL
1067 WEBER, SCOTT A
1071 CLAUSING, DANIEL
1077 BELLINGER, RICK D
1083 BRADLEY, JOHN S
1097 OCCUPANT UNKNOWN,
1111 HAMEL, FLETCHER G
1115 JACOBSEN, TERRY A
1119 FISHER, JIM B
1135 OCCUPANT UNKNOWN,
1147 FELLERS, PAUL A
1169 WILLIAMS, LORIE A
1173 MEAIRS, WILLIAM R
1180 SIX, FRED N
1873 CHAMBERLIN, JOYCE D
1876 OCCUPANT UNKNOWN,
1904 CAMPBELL, MIKIE L
1908 KUFAHL, MARY K
1921 BURNETT, CHARLES V
1933 OCCUPANT UNKNOWN,
1953 NEITZEL, LOWELL A
1992 PINES INTERNATIONAL INC
2036 ARNIES BOAT
ARNIES BOAT SALES & SERVICE
2039 FALLEY, RICK L
2046 BRUCE, STEVE J
STEVE BRUCE WELDING & FABRICATION LL
2047 TEICHMANN, LINDA L
2048 DOVER, DANNY L
2052 HADL, GEORGE E
2055 BENCOMO, JOEL
2057 OCCUPANT UNKNOWN,
2060 CARTER, LARRY D
2065 WALTER, MICHAEL A

-

✓

E 1400 RD

2014

(Cont'd)

2066	SPRAGUE, BRANDON L
2071	GLEASON, NOAH J
2072	GEDDINGS, JACK L
2078	HEIN, ZACH T
2097	HERMANN, DARIN L

Target Street

✓

Cross Street

-

Source

EDR Digital Archive

N 1941 DIAGONAL RD

2014

1310 LITTLE, DORANCE C
1320 LONG, DEEDEE
1401 MIDLAND FARM STORE
1419 MIDLAND COOP ELEVATOR

N 2000 RD**201**

903	EAGLE PEST CONTROL OCCUPANT UNKNOWN,
923	WILLITS, RAMONA A
968	KASSON, DIANNA L
1381	ERSKIN, EDWARD L
1517	BALDWIN, JOHN A
1529	WORKMAN, DARRELL D
1531	UNDERWOOD, JIM C
1546	OCCUPANT UNKNOWN,
1547	THELLMAN, SCOTT T
1548	OCCUPANT UNKNOWN,
1556	SCHOENHOFER, BRANDON E
1562	LEMON, BRIAN P
1568	KOCH, RYAN R

E 1400 RD**2010**

658 TUCKER, CAROLL J
672 ROWE, STANLEY D
967 KUHLMANN, MINA
996 CALLICOTT, KENNETH P
1033 MOCK, TIMOTHY W
1055 ALSOP, EDWARD H
EDWARD ALSOP CUSTOM WOODWKG
1056 WERST, HERBERT H
1059 BOTBYL, JOHN R
1062 MESERAULL, CLAY F
PRINTING UNLIMITED
1067 WEBER, SCOTT A
1071 CLAUSING, KATHY W
1077 BELLINGER, RICK D
1083 BRADLEY, JOHN S
1097 GIFFORD, AMY
1111 MESERAULL, DOUGLAS R
1115 JACOBSEN, TERRY A
1119 FISHER, JIM B
1135 WELL, MICHAEL A
1147 FELLERS, PAUL A
1165 MOSZETER, TIMOTHY C
1169 WILLIAMS, BETTY C
1173 MEAIRS, WILLIAM R
1180 SIX, FRED N
1873 CHAMBERLIN, JOYCE D
1876 HECK, MICHAEL D
1904 KUFAHL, KEVIN T
1908 KUFAHL, MARY K
1921 BURNETT, CHARLES V
1930 OCCUPANT UNKNOWN,
1933 HECK, EMIL W
1953 NEITZEL, LOWELL
2036 ARNIES BOAT SALES & SVC
BERTS FINE CANDIES
2039 FALLEY, RICK L
2046 BRUCE, STEVE J
STEVE BRUCE ORNAMENTAL IRON
STEVE BRUCE WELDING & FAB
2047 TEICHMANN, LINDA L
2048 DOVER, DANNY L
2052 LITTLE, BONNYE E
2055 RETTER, KENNETH E
2057 FAULCONER, AMANDA R
2060 CARTER, LARRY D
2065 WALTER, MICHAEL R
2066 YOUNG, DALE A
2071 GLEASON, NOAH J
2072 GEDDINGS, JACK L
2078 OCCUPANT UNKNOWN,

Target Street

Cross Street

Source

-

✓

EDR Digital Archive

E 1400 RD

2010

(Cont'd)

2078 WILD GREEN LLC
2097 SISCOE, LENETTE

Target Street

✓

Cross Street

-

Source

EDR Digital Archive

N 1941 DIAGONAL RD

2010

1310 LITTLE, VIRGINIA R
1320 LONG, JARROD W
1401 MIDLAND FARM STORE

N 2000 RD**2010**

903	OCCUPANT UNKNOWN,
923	WILLITS, RAMONA A
968	OCCUPANT UNKNOWN,
1381	ERSKIN, KAREN L
1529	WORKMAN, DARRELL D
1531	UNDERWOOD, JIM C
1546	JANEWAY, ANDREW E
1547	THELLMAN, SCOTT T
1548	JOHNSON, ANTHONY
1556	SCHOENHOFER, BRANDON E
1562	LEMON, BRIAN P
1568	BAKER, STEPHANIE A

E 1400 RD

2005

967 KUHLMANN, MINA
996 CALLICOTT, KENNETH P
1033 OCCUPANT UNKNOWN,
1055 ALSOP CUSTOM WOODWORKING ED
ALSOP, EDWARD H
1056 WERST, HERBERT H
1059 BOTBYL, JOHN R
1067 SCOTT WEBER CONSTRUCTION INC
WEBER, SCOTT A
1077 BELLINGER, RICK D
1097 OCCUPANT UNKNOWN,
1111 MESERAULL, STEVE P
1115 JACOBSEN, TERRY A
PRINTING SOLUTIONS OF KANSAS INC
1119 FISHER, JIM B
1135 PRAIRIE POND STUDIO AND BEAD CO
SCHLOTZHAUER, RON D
1165 KERNS, RANDY L
1169 WILLIAMS, C V
1173 MEAIRS FARM
MEAIRS, WILLIAM R
1180 SIX, FRED N
1873 CHAMBERLIN, JOYCE D
1876 HECK, MICHAEL D
1904 KUFAHL, KEVIN T
1908 KUFAHL, MARY K
1921 BURNETT, CHARLES V
1930 HALL, DON R
1933 HECK, EMIL W
1953 RENICK, MURRAY A
1992 PINES INTERNATIONAL INC
2036 ARNIES BOAT SALES AND SERVICE
ARNOLD MORGISON
BERTS FINE CANDIES
2039 FALLEY, RICK L
2046 BRUCE RACE CARS LLC STEVE
BRUCE WELDING & FABRICATION STEVE
BRUCE, STEVE
STEVE BRUCE RACE CARS
2047 TEICHMANN, LEROY I
2048 DOVER, DANIEL
2052 OCCUPANT UNKNOWN,
2055 KEN RETTER CONSTRUCTION INC
KOLTS, KAREN S
2057 ARMSTRONG, THOMAS P
2060 CARTER, LARRY D
2065 WALTER, MICHAEL R
2066 YOUNG, DALE A
2071 OCCUPANT UNKNOWN,
2072 GEDDINGS, JACK L

Target Street

Cross Street

Source

-

✓

EDR Digital Archive

E 1400 RD

2005

(Cont'd)

2078 MCINTIRE, MARK A
2097 OCCUPANT UNKNOWN,
PATTY CRIQUI

Target Street

✓

Cross Street

-

Source

EDR Digital Archive

N 1941 DIAGONAL RD

2005

1310 LITTLE, VIRGINIA R
1320 LONG, JARROD W
1401 MIDLAND FARM STORE
1419 MIDLAND CO OP ELEVATOR

-

✓

N 2000 RD 2005

903 OCCUPANT UNKNOWN,
923 OCCUPANT UNKNOWN,
1381 ERSKIN, KAREN
1529 WORKMAN, DARRELL D
1531 UNDERWOOD, JIM C
1546 JANEWAY, ANDREW E
1547 THELLMAN, SCOTT T
1548 HEMENWAY, HENDERSON
1556 SCHOENHOFER, BRANDON E
1562 LEMON, BRIAN P
1568 WEBB, JEFF J

E 1400 RD**2000**

996	CALLICOTT, KENNETH
1033	RENFRO, RANDY
1056	LEEPER, MISTY R
1077	BELLINGER, RICK
1097	MATTHIAS, LINDA
1111	MESERAULL, STEVEN
1119	FISHER, JIM
	REINTJES, TERRI
1135	SCHLOTZHAUER, RON
1147	ELWELL, MIKE J
1165	KERNS, RANDY
1173	MEAIRS, WILLIAM R
1873	THORNTON, WILLIAM J
1876	HECK, MICHAEL D
1921	BURNETT, CHARLES V
	JEHOVAH'S WITNESSES
1930	HALL, DON
1933	HECK, EMIL
1953	RENICK, MURRAY
2036	ARNIES BOAT SALES AND SERVICE
	MORGISON, ARNOLD
2039	FALLEY, RICK
2046	MESTAGH, CHARLES A
2047	TEICHMANN, LEROY
2052	HADL, GEORGE E
2055	KOLTS, K S
2060	ARBOR SCAPES TREE SERVICE
	CARTER, LARRY
	WASSON, EDWIN E
2065	WALTER, MICHAEL
2066	BOB NIXON CONSTRUCTION
	NIXON BOB
	NIXON, BOB
2072	GEDDINGS, JACK L
2078	REID, BRUCE M
2097	CRQUI, P D

Target Street
✓

Cross Street
-

Source
EDR Digital Archive

N 1941 DIAG RD

2000

1310 LITTLE, V R
1320 CASSITY, BILL

-

✓

N 2000 RD

2000

903 ENGLEMAN, LEXIE
968 KASSON, EARLE L
1381 ERSKIN, KAREN
1517 BALDWIN, JOHN R
1529 WORKMAN, DARRELL D
1531 UNDERWOOD, JIM
1546 JANEWAY, ANDREW E
1547 THELLMAN, SCOTT
1548 HENDERSON, CARRIE C
1562 LEMON, BRIAN
1568 HADL, STEVE

E 1400TH RD**1995**

996	CALLICOTT, KENNETH
1033	RENFRO, RANDY
1059	BOTBYL, KAREN
1067	CALDWELL, E
1071	FRICK, JOHN
1077	BELLINGER, RICK
1097	REBER, DAVID
1119	WILEY, PHILLIP L
1147	ELWELL, MIKE J
1169	WILLIAMS, LORIE A
1173	MEAIRS, WILLIAM R
1636	GENTZLER, LARRY
1873	HANSHEW, TERRI E
1876	HECK, MICHAEL D
1904	HUSTED, CLYDE
1908	DAVIS, LOUISE
1921	BURNETT, CHARLES V JEHOVAHS WITNESSES
1930	FLOYD, OBIE
1933	HECK, EMIL JR
1953	RENICK, MURRAY
2036	ARNIES BOAT SALES & SVC ARNIES SATELLITES MORGISON, ARNOLD
2046	MESTAGH, CHARLES A
2047	TEICHMANN, LEROY
2048	BUBBLE GUM BASH
2055	SCANLAN, KIM
2060	CARTER, LARRY D CARTERSTORM, YOHANNA SHRADER, D H
2065	WALTER, MICHAEL
2072	GEDDINGS, JACK L
2097	CRQUI, P D

Target Street
✓

Cross Street
-

Source
EDR Digital Archive

N 1941ST DIAGONL

1995

1310 LITTLE, V R

N 2000TH RD

1995

1381 ERSKIN, KAREN
1517 OCCUPANT UNKNOWNN
1529 WORKMAN, DARRELL D
1531 UNDERWOOD, JIM
1546 JANEWAY, ANDREW E
1547 MIDYETT, L H



Kansas EPCRA Tier II Emergency & Hazardous Chemical Inventory

Mail to: Right-to-Know Program
 1000 SW Jackson Suite 330
 Topeka KS 66612-1365
 (785) 296-168

	1. Reporting Period From January 1 to December 31, 2020	Page <u>1</u> of <u>3</u>
3a. Owner/Operator Identification		
Business Name <u>OTTAWA COOP ASSN</u> Address <u>PO BOX 680</u> City <u>OTTAWA</u> State <u>KS</u> Zip <u>66067</u> Business Phone <u>785-242-5170</u> Country <u>USA</u> Submitter <u>BOB NUTT</u> Email <u>bobn106@sbcglobal.net</u> Dun & Bradstreet _____		
3b. Mailing Address if different from Owner/Operator Address		
Business Name _____ Address _____ City _____ State <u>KS</u> Zip _____ ATTN _____ Phone _____		
5. Section Reporting: Please check as appropriate		
<input checked="" type="checkbox"/> Section 312 <input type="checkbox"/> Section 311 <input type="checkbox"/> Section 302 <input checked="" type="checkbox"/> Annual <input type="checkbox"/> Revision <input type="checkbox"/> Identical to last year		
For Official Use Only		
Facility ID # _____	Parent ID # _____	Entered by _____
6. Optional Attachments		
<input type="checkbox"/> Site Plan <input type="checkbox"/> Description of Dikes <input type="checkbox"/> Site Coordinate Abbreviations <input type="checkbox"/> Other Safeguard Measures		
7. Certification (Read and sign after completing all Sections)		
I certify under penalty of law that I have personally examined and am familiar with the information submitted in pages 1 through _____ and based on my inquiry of those individuals responsible for obtaining this information, I believe the submitted information is true, accurate, and complete.		
Name and official title of owner/operator or authorized representative _____		Date _____
Name and official title of owner/operator or authorized representative _____		Signature _____

Important: Read all instructions before completing form

2. Facility Identification 2a. New Facility Yes No

Name MIDLANDCOOP
 Street Address 1941 DIAGONAL RD
 Latitude 39.0286110 Longitude -95.2411590
 City LAWRENCE County DOUGLAS State KS Zip 66046
 Phone 785-841-5331
 NAICS 424910
 RMP Fac ID 1000 0010 546 N/A
 TRI Fac ID _____ N/A
 Max # of occupants _____ Manned Unmanned

Subject to Emergency Planning under Section 302 of EPCRA (40 CFR part 355)?

Yes No

Subject to Chemical Accident Prevention under Section 112r of CAA (40 CFR part 68)?

Yes No

4a. Tier II Contact

Name BOB NUTT Title CROP PROD MGR
 Phone 785-242-1032 24-hour phone 785-418-5031
 Email bobn106@sbcglobal.net

4b. Emergency Contact

Name CLARK WENGER Title GEN MGR
 Phone 785-242-5170 24-hour Phone 913-206-3849
 Email _____

Name DAVID KAINZ Title BRANCH MGR
 Phone 785-418-7952 24-hour Phone 785-893-1937
 Email _____

8. Chemical Information

Chemical Description	Physical Hazards	Health Hazards	Storage Types & Locations <input type="checkbox"/> if Confidential					
Chemical Name: ANHYDROUS AMMONIA CAS #: 7664-41-7 EHS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No EHS Name (if applicable): EHS CAS # (if applicable): <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Trade Secret	<input type="checkbox"/> Explosive <input checked="" type="checkbox"/> Flammable (gases, aerosols, liquids, or solids) <input type="checkbox"/> Oxidizer (gas, liquid, or solid) <input type="checkbox"/> Self-reactive <input type="checkbox"/> Pyrophoric (liquid or solid) <input type="checkbox"/> Pyrophoric gas <input type="checkbox"/> Self-heating <input type="checkbox"/> Organic peroxide <input type="checkbox"/> Corrosive to metal <input checked="" type="checkbox"/> Gas under pressure (compressed gas) <input type="checkbox"/> In contact with water emits flammable gas <input type="checkbox"/> Combustible Dust <input type="checkbox"/> Hazard not otherwise classified	<input checked="" type="checkbox"/> Acute toxicity (any route of exposure) <input checked="" type="checkbox"/> Skin corrosion or irritation <input checked="" type="checkbox"/> Serious eye damage or eye irritation <input checked="" type="checkbox"/> Respiratory or skin sensitization <input type="checkbox"/> Germ cell mutagenicity <input type="checkbox"/> Carcinogenicity <input type="checkbox"/> Reproductive toxicity <input type="checkbox"/> Specific target organ toxicity (single or repeated exposure) <input type="checkbox"/> Aspiration hazard <input type="checkbox"/> Simple asphyxiant <input type="checkbox"/> Hazard not otherwise classified	Container Type Above Ground Tank Pressure Greater than ambient pressure Temperature Ambient temperature Storage Location EAST END OF LOT	355,000 Maximum Daily Amount (lbs) 130,000 Average Daily Amount (lbs) 365 Number of Days on Site <input checked="" type="checkbox"/> Optional Report	Chemical Name: CAS #: EHS: <input type="checkbox"/> Yes <input type="checkbox"/> No EHS Name (if applicable): EHS CAS # (if applicable): <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Trade Secret	<input type="checkbox"/> Explosive <input type="checkbox"/> Flammable (gases, aerosols, liquids, or solids) <input type="checkbox"/> Oxidizer (gas, liquid, or solid) <input type="checkbox"/> Self-reactive <input type="checkbox"/> Pyrophoric (liquid or solid) <input type="checkbox"/> Pyrophoric gas <input type="checkbox"/> Self-heating <input type="checkbox"/> Organic peroxide <input type="checkbox"/> Corrosive to metal <input type="checkbox"/> Gas under pressure (compressed gas) <input type="checkbox"/> In contact with water emits flammable gas <input type="checkbox"/> Combustible Dust <input type="checkbox"/> Hazard not otherwise classified	<input type="checkbox"/> Acute toxicity (any route of exposure) <input type="checkbox"/> Skin corrosion or irritation <input type="checkbox"/> Serious eye damage or eye irritation <input type="checkbox"/> Respiratory or skin sensitization <input type="checkbox"/> Germ cell mutagenicity <input type="checkbox"/> Carcinogenicity <input type="checkbox"/> Reproductive toxicity <input type="checkbox"/> Specific target organ toxicity (single or repeated exposure) <input type="checkbox"/> Aspiration hazard <input type="checkbox"/> Simple asphyxiant <input type="checkbox"/> Hazard not otherwise classified	Container Type Pressure Temperature Storage Location _____ Maximum Daily Amount (lbs) _____ Average Daily Amount (lbs) _____ Number of Days on Site <input type="checkbox"/> Optional Report

MIXTURE COMPONENT INFORMATION FORM

Chemical Name: ANHYDROUS AMMONIA

CAS #: 7664-41-7

Mixture Component Chemicals	CAS #	%	CAS #	EHS
ANHYDROUS AMMONIA	7664-41-7			<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Chemical Name:

CAS #:

Mixture Component Chemicals	CAS #	%	CAS #	EHS
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Chemical Name:

CAS #:

Mixture Component Chemicals	CAS #	%	CAS #	EHS
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Chemical Name:

CAS #:

Mixture Component Chemicals	CAS #	%	CAS #	EHS
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

KDHE INCIDENT NOTIFICATION REPORT

Spill Number: 42233	Reported Date/Time: 8/14/2017 12:23:22 AM	Spill or Complaint: spill
-------------------------------	---	-------------------------------------

DISCHARGER		Organization Type: Industry/Company	
Discharger Name: Union Pacific Railroad		Phone: 888-877-7267	
Contact Name: PennyAnderson		Phone:	
Address: 1400 Douglas Street		Operator Id #:	
City: Omaha		State: NE	Zip: 68179

INCIDENT LOCATION	911 Street Address: Mile post 43.23		City: Lawrence	Zip:
	County: Douglas	KDHE District: NE	Legal Description: , ,	
Facility or Lease Name:		Approximate Location or Other Directions: Kansas Subdivision north of Lawrence		
Facility or Permit Number:		KCC District: Chanute		
Latitude: 39.2816765		Longitude: -95.24216767		
Location Comment:		Official Latitude: 39.028015	Official Longitude: -95.24211	

DATE	Spill Date/Time:	Discovery Date/Time: 8/14/2017 12:09:22 PM
-------------	------------------	--

MATERIAL						
<u>Material Class</u>	CAS #	UN DOT #	Quantity Spilled	Quantity Recovered	Units	Quantity In Water
Material Name						
Other Curve Grease			10			

SOURCE	Source of Spill: Motor Vehicle/Carrier					
	Vehicle ID or Carrier #:					
	Tank Capacity:			Tank Units:		
	Source Description:					

MEDIA	Media Affected: Soil					
	WaterWay Type:			If WaterWay Type is River, River Name:		

CAUSE	Reported Causes: Operator Error					
	Cause Description:					

DAMAGE	# Of Injuries:			# Of Deaths:		
	Damage Description: Called to Union Pacific by an anonymous citizen. Stated that the grease was in the Southeast quadrant of the crossing. Remediation is scheduled to be completed by 8-14.					

ACTIONS	Evacuation: No	Responders: Discharger
	Response Actions Taken: 8/15/17 Emailed UPRR and requested incident report. 10/13/17 2nd request for report. 12/7/17 3rd request for report. 12/27/17 4th request for report. 12/31/17 Received email from UPRR. Response details copied and pasted into following section. No further	

NOTIFIED	Reporter Has Notified:
-----------------	------------------------

INVESTIGATION	Investigating Agencies: KDHE	Site Visited By KDHE: No
	KDHE or KCC Investigators:	Hours Worked:

STATUS	Status: Closed	Referred/Closed Date: 1/9/2018 4:51:06 PM
---------------	--------------------------	---

CLEANUP	Cleanup Methods: Physical Removal
	Cleanup Description:

KDHE INCIDENT NOTIFICATION REPORT

Spill Number: KDHE-17440	Reported Date/Time: 2/12/1986 4:15:00 PM	Spill or Complaint: Spill
------------------------------------	--	-------------------------------------

DISCHARGER		Organization Type: Private Industry/Company	
Discharger Name: KPL		Phone: 913-296-6515	
Contact Name: Bob Fackler		Phone:	
Address: 818 Kansas		Operator Id #:	
City: Topeka		State: KS	Zip:

INCIDENT LOCATION	911 Street Address:		City: Lawrence	Zip:
	County: Douglas	KDHE District: NE	Legal Description: 06 ,12S , 20E	
Facility or Lease Name:		Approximate Location or Other Directions:		
Facility or Permit Number:		KCC District: Chanute		
Latitude:		Longitude:		
Location Comment:		Official Latitude: 39.03241	Official Longitude: -95.24085	

DATE	Spill Date/Time:	Discovery Date/Time: 2/12/1986 2:00:00 PM
-------------	------------------	---

MATERIAL						
<u>Material Class</u>	CAS #	UN DOT #	Quantity Spilled	Quantity Recovered	Units	Quantity In Water
Material Name						
transformer oil (non-PCB) electrical insulating oil/mineral oil	8012951	9277	5	5	gallons	

SOURCE	Source of Spill: fixed facility,transformer	
	Vehicle ID or Carrier #:	
	Tank Capacity:	Tank Units:
	Source Description:	

MEDIA	Media Affected: soil	
	WaterWay Type:	If WaterWay Type is River, River Name:

CAUSE	Reported Causes: equipment failure	
	Cause Description:	

DAMAGE	# Of Injuries:	# Of Deaths:
	Damage Description:	

ACTIONS	Evacuation:	Responders:
	Response Actions Taken:	

NOTIFIED	Reporter Has Notified:
-----------------	------------------------

INVESTIGATION	Investigating Agencies: KDHE	Site Visited By KDHE: Yes
	KDHE or KCC Investigators:	Hours Worked:
		1

STATUS	Status: Closed	Referred/Closed Date: 2/13/1986 12:00:00 AM
---------------	--------------------------	---

CLEANUP	Cleanup Methods: physical removal
	Cleanup Description:

APPENDIX D
ENVIRONMENTAL DATABASE INFORMATION

Midland Feed Store

1401 N 1941 Diagonal Rd
Lawrence, KS 6604

Inquiry Number: 6565864.2s
July 07, 2021

The EDR Radius Map™ Report with GeoCheck®



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

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Map Findings.....	8
Orphan Summary.....	27
Government Records Searched/Data Currency Tracking.....	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum.....	A-1
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Physical Setting Source Map.....	A-10
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Thank you for your business.
 Please contact EDR at 1-800-352-00
 with any questions or comments.

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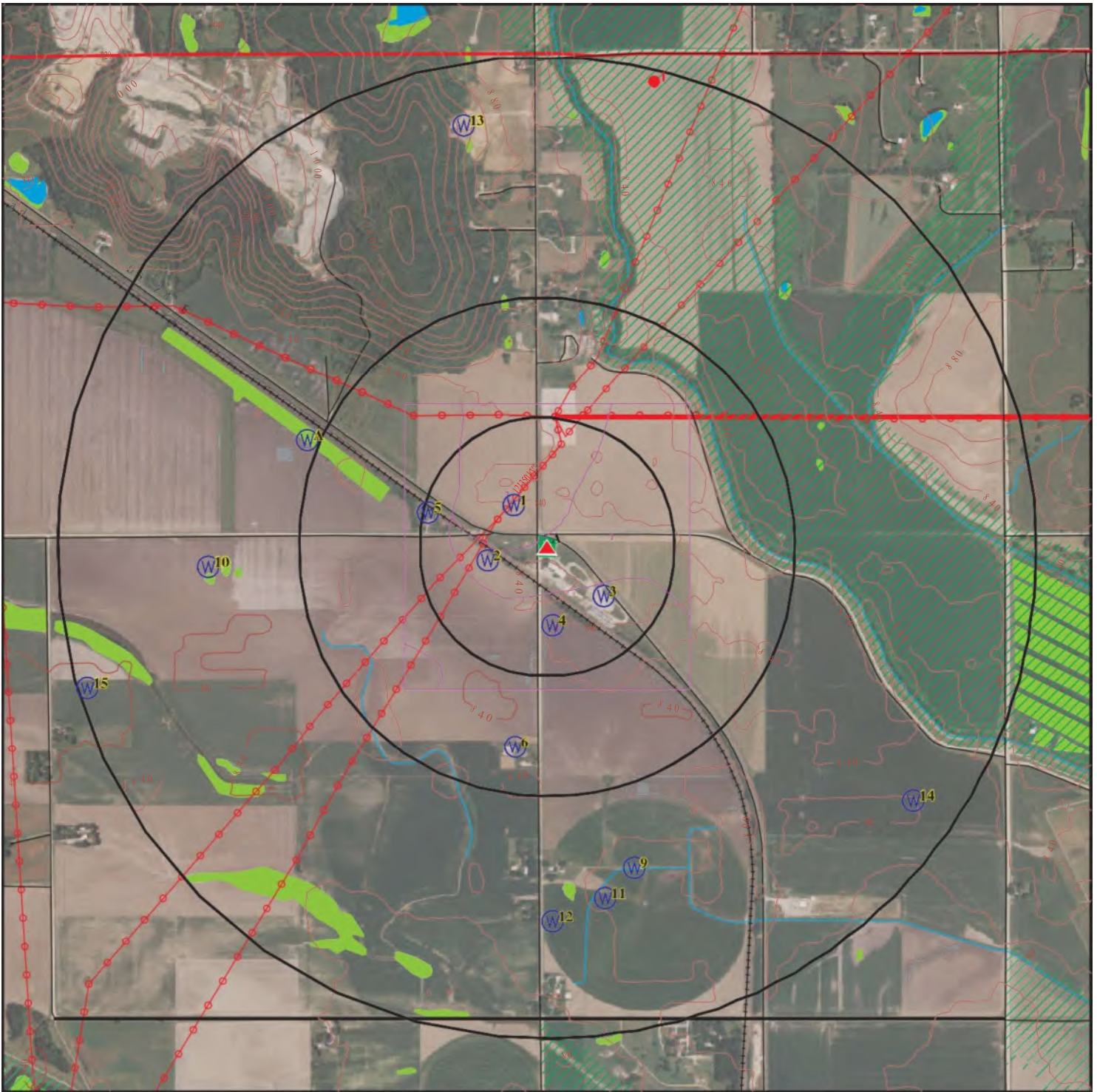
MAPPED SITES SUMMARY


Target Property Address:
1401 N 1941 DIAGONAL RD
LAWRENCE, KS 66044


Click on Map ID to see full detail.


MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	MIDLAND	1941 DIAGONAL ROAD R	RMP		TP
A2	MIDLAND COOP	1941 DIAGONAL RD	TIER 2		TP
A3	MIDLAND COOP	1941 DIAGONAL RD	FINDS		TP
A4	CAPITAL CITY OIL-MID	1941 DIAGONAL RD	FINDS		TP
A5	MIDLAND	1941 DIAGONAL ROAD R	FINDS		TP

OVERVIEW MAP - 6565864.2S



 Target Property

 Sites at elevations higher than or equal to the target property


 Sites at elevations lower than the target property

 Manufactured Gas Plants

 National Priority List Sites


 Dept. Defense Sites

 Indian Reservations BIA

 County Boundary

 Power transmission lines

 Special Flood Hazard Area (1%)

 0.2% Annual Chance Flood Hazard

 National Wetland Inventory

 State Wetlands

 Areas of Concern

0 1/4 1/2 1 Miles

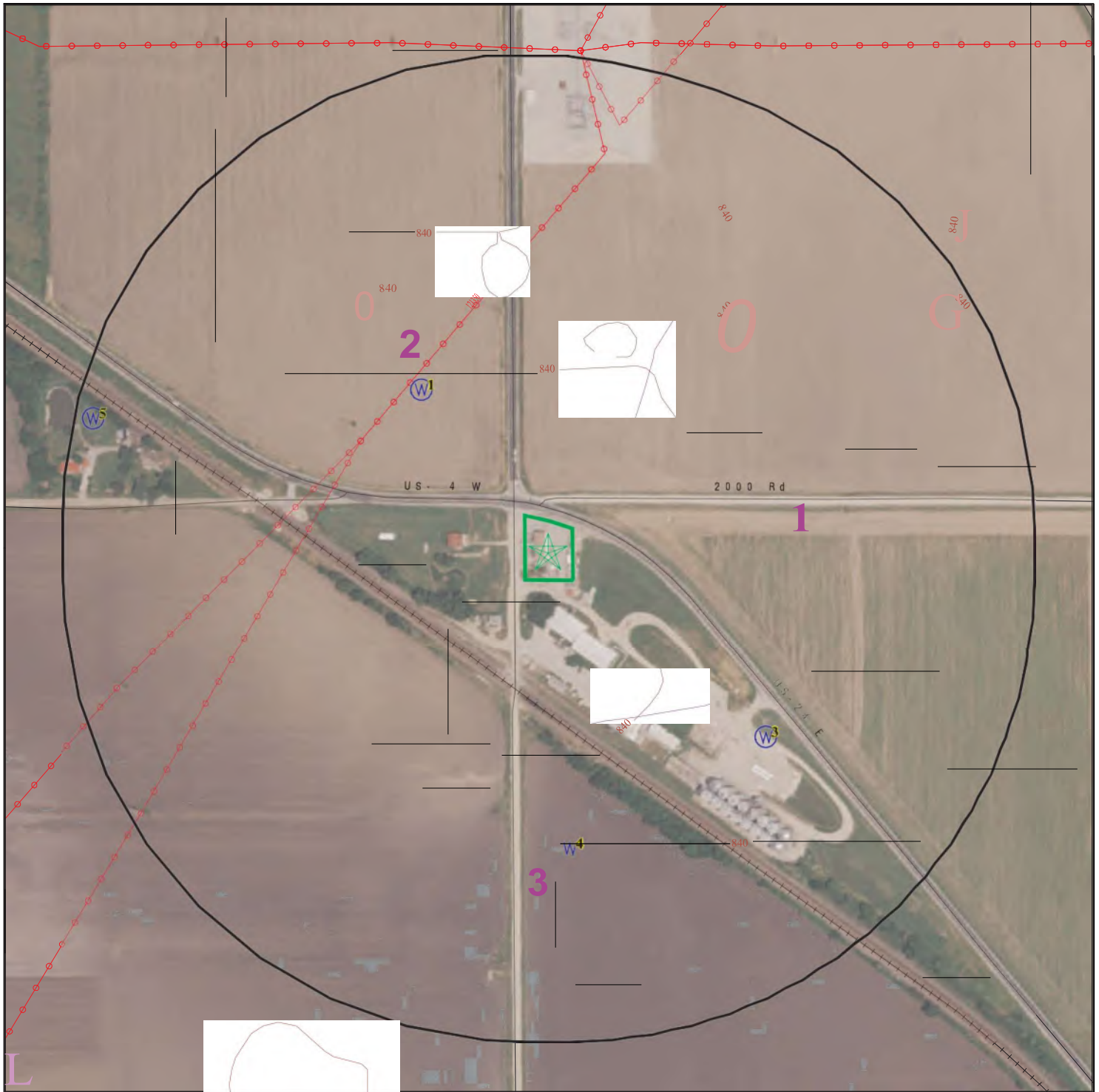


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Midland Feed Store
 ADDRESS: 1401 N 1941 Diagonal Rd
 Lawrence KS 66044
 LAT/LONG: 39.02929 / 95.24186

CLIENT: Terracon
 CONTACT: Becki Davis
 INQUIRY #: 6565864.2s
 DATE: July 07, 2021 11:14 am

DETAIL MAP - 6565864.2S



- N** Target Property
- 840** Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- .1** Manufactured Gas Plants
- Sensitive Receptors
- EJ** National Priority List Sites
- [2J]** Dept. Defense Sites

- D** Indian Reservations BIA
- N** Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard

Areas of Concern



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

<p>SITE NAME: Midland Feed Store ADDRESS: 1401 N 1941 Diagonal Rd Lawrence KS 66044 LAT/LONG: 39.02929 / 95.24186</p>	<p>CLIENT: Terracon CONTACT: Becki Davis INQUIRY#: 6565864.2s DATE: July02,2021 11:15am</p>
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MAP FINDINGS SUMMARY

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

MAP FINDINGS SUMMARY

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

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP	1	NR	NR	NR	NR	NR	1
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	3	NR	NR	NR	NR	NR	3
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
TIER 2	TP	1	NR	NR	NR	NR	NR	1
UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0			NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS	TP		NR	NR	NR	NR	NR	0
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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		5	0	0	0	0	0	5

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A1 **MIDLAND**
Target **1941 DIAGONAL ROAD REAR**
Property **LAWRENCE, KS 66044**

RMP **1011831543**
 N/A

Site 1 of 5 in cluster A

Actual:
835 ft.

RMP:
Facility ID: 27377
Name: MIDLAND
Address: 1941 DIAGONAL ROAD REAR
City,State,Zip: LAWRENCE, KS 66044
LEPC city: Douglas County LEPC
Facility decimal latitude: 39.016667
Facility decimal longitude: -95.243694
Is facility in county box: T
LatLong method: A5
LatLong description: CE
Facility DUNS #: 0
Parents name: OTTAWA COOPERATIVE ASSOCIATION
Parents DUNS #: 0
Partners DUNS #: 0
Operators name: ADRIAN DEROUSSEAU
Operators telephone: 7852425170
Operators address: 302 N MAIN
Operators address2: BOX 680
Operators City,St,Zip: OTTAWA, KS 66067
RMP implementation contact: CALVIN PEARSON
RMP contact title: OPERATIONS MANAGER
Emergency contact: MARK DOMANN
Emergency contact title: LOCATION MANAGER
Emergency contact telephone: 785841533
24 hour emergency telephone: 9138862676
Emergency contact ext/pin #: 911
Number of full time employees: 2
Facility ID provided by CEppo: 100000105469
Is facility covered by OSHA PSM: F
Is facility covered by EPCRA 302: T
Is fac. covered by CAA Title V 112(2): F
Last safety insp. dat: 2002-11-07 00:00:00
Inspected by: KANSAS DEPARTMENT OF AG
Is it OSHA approved with star/merit ranking: False
Will RMP involve predictive filing: False
Submission type: Resubmission
Facility has no accident hist. recs: False
Claim # of employees as CBI: False
Date RMP accepted by EPA: 2003-01-17 00:00:00
Date RMP received: 2003-01-16 00:00:00
Does RMP contain graphics files: False
Does RMP contain attachments: False
Was certification letter received: True
RMP submission method: RMP*Submit
Does RMP contain CBI substantiation: False
Does RMP contain electronic waiver: False
Date RMP postmarked: 2003-01-08 00:00:00
Is RMP complete: True
Anniversary date: 2008-01-08 00:00:00
Does RMP contain CBI data: False
Does RMP contain unsanitized CBI version: False
RMP version #: 2.0

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND (Continued)

1011831543

FRS latitude: 38.9290000000
FRS longitude: -95.22839999999993
FRS Description: PLANT ENTRANCE (GENERAL)
FRS Method: CENSUS-OTHER

Accident History:
Accident History ID: 4467
facid: 2737
Accident Date: 2002-09-30 00:00:00
Accident Time: 1530
NAICS code: 4229
Accident release duration: 00020
Release Event: Gas
Release Source: Joint
Wind speed: 24
Wind speed units: a
Wind direction: SSW
Temperature: 88
Stability class: D
Precipitation was present: False
Weather was unknown: False
Num. of on-site workers killed: 0
Num. of responders killed: 0
Num. of public deaths: 0
Num. of on-site workers injured: 0
Num. of responders injured: 0
Num. of public injured: 0
Property damage in dollars: 0
Num. of on-site deaths: 0
Num. of hospitalizations: 0
Num. of other medical treatments: 0
Num. of evacuated: 0
Num. of sheltered in place: 0
Off-site property damage in dollars: 0
Initiating event: a
Contributing factor: Equipment failure
Were offsite responders notified: Notified and Responded
Changes Made: Improved equipment
Record contains CBI data: False

Accident Chemicals:
Chemical released: Ammonia (anhydrous)
Quantity of chemical released in pounds: 90

Emergency Responses:
Local agency coordinating ER plan: DOUGLAS COUNTY FIRE DEPARTMENT
Telephone of the coordinating local agency: 7858327766
Federal regulation: True
OSHA 1910 120: False
SPCC: False
RCRA: False
OPA 90: False
EPCRA: True

Processes:
Process ID: 39397

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site _____ Database(s) _____ EDR ID Number
 _____ EPA ID Number _____

MIDLAND (Continued)

1011831543

<p>Optional facility description: Program level: Record contains CBI data:</p> <p>Process NAICS: NAICS code description:</p> <p>Prevention Program 2: Safety review date: Federal regulation comment: Major Hazard: Process Control:</p> <p>Mitigation Systems: Changes since the last process hazard analysis: Most recent hazard review/update: Most recent review of op. procedures: Most recent training progs review/update: Expected completion of review changes: Training: Competency testing: Most recent maintenance review date: Most recent equipment inspection date: Equipment tested: Most recent compliance audit date: Expected date of audit completion: Record has CBI data:</p> <p>Process Chemicals: Chemical name: Process chemical qty in 100s lbs:</p> <p>Chemical name: Process chemical qty in 100s lbs:</p> <p>Toxics Alt Releases: Physical state: Analytical basic: Wind speed in meters/second: Stability class: Topography: Active mitigation:</p> <p>Toxics Worst Case: Physical state: Analytical basic: Release duration in minutes: Wind speed in meters/second: Stability class: Topography:</p>	<p>MIDLAND NH3 2 False</p> <p>Farm Supplies Wholesalers</p> <p>2001-02-02 00:00:00 KANSAS COMMERCIAL FERTILIZER LAW (K.S.A. 1997 SUPP 2-1201 Toxic Release, Corrosion, Overfilling, Equipment failure, Tornado ADMINISTRATIVE CONTROLS IN PLACE. EQUIPMENT CONTROLS IN PLACE; INLINE EXCESS FLOW AUTOMATIC SHUT DOWN VALVES</p> <p>None No changes since last PHA 2001-02-01 00:00:00 2001-02-01 00:00:00 2001-02-01 00:00:00 2001-02-01 00:00:00 Classroom Written test, Demonstration, Observation 2002-02-01 00:00:00 2002-02-01 00:00:00 STORAGE TANKS, VALVES, PIPING, NURSE TANKS, AND HOSES 2002-11-07 00:00:00 2002-11-07 00:00:00 False</p> <p>Ammonia (anhydrous) 241400</p> <p>Public OCA Chemical 0</p> <p>c THE FERTILIZER INSTITUTE / DEGADIS 3 D b Excess flow valve, IN LINE EXCESS FLOW AUTOMATIC SHUT DOWN VALVE</p> <p>c THE FERTILIZER INSTITUTE / DEGADIS 10 1.5 F b</p>
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Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A2 **MIDLAND COOP**
Target **1941 DIAGONAL RD**
Property **LAWRENCE, KS 66046**

TIER 2 **S109900078**
 N/A

Site 2 of 5 in cluster A

Actual:
835 ft.

TIER 2:
Facility Id: 357363
Facility Phone: (785)841-533
FID Num: DG00257
PID Num: KS0237
NAICS: 42251
Report Year: 2012
SIC Code: 5153
Section Code: 312
Emergency Name1: ADRIAN DEROUSSEAU
Emergency Title1: GEN MGR
Emergency Phone1: (785)242-5170
Emergency 24phone1: (785)242-7703
Emergency Name2: CHRIS HETHERINGTON
Emergency Title2: BRANCH MGR
Emergency Phone2: (785)841-5331
Emergency 24phone2: (785)841-0146
Updated: 2/21/2012 5:00:44 PM
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION DEPT

Facility Id: 357363
Facility Phone: (785)841-5
FID Num: DG00257
PID Num: KS0237
NAICS: 115116
Report Year: 2016
Nearest Cross Street: E1400 Road
SIC Code: 5191
Section Code: 302
Emergency Name1: CLARK WENGER
Emergency Title1: GEN MGR
Emergency Phone1: (785)242-517
Emergency 24phone1: 913-206-384
Emergency Name2: DAVID KAINZ
Emergency Title2: BRANCH MGR
Emergency Phone2: 785-418-79
Emergency 24phone2: 785-893-19
Updated: 2017-02-23 16:43:02
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION MGR
Facility Latitude: 39.0000000
Facility Longitude: -95.0000000
Tier2 Contact Name: BOB NUTT
Tier2 Title: CROP PRODUCTION MANAGER
Tier2 Phone: 785-242-103
Tier2 Phone24: 785-418-50
Tier2 EMail: bobn106@sbcglobal.net
Annual Revision: annual
Section: 7
Township: 12S
Range0: 20E
RMP Facid: 100000105469

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Subject 302: Y
Subject 112: N

Facility Id: 357363
Facility Phone: (785)841-5331
FID Num: DG00257
PID Num: KS0237
NAICS: 42251
Report Year: 2011
SIC Code: 5153
Section Code: 312
Emergency Name1: ADRIAN DEROUSSEAU
Emergency Title1: GEN MGR
Emergency Phone1: (785)242-5170
Emergency 24phone1: (785)242-7
Emergency Name2: CHRIS HETHERINGTON
Emergency Title2: BRANCH MGR
Emergency Phone2: (785)841-5
Emergency 24phone2: (785)841-0146
Updated: 2/21/2012 5:00:44 PM
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION DEPT

Facility Id: 357363
Facility Phone: (785)841-5331
FID Num: DG00257
PID Num: KS0237
NAICS: 115116
Report Year: 2017
Nearest Cross Street: E1400 Road
SIC Code: 5191
Section Code: 302
Emergency Name1: CLARK WENGER
Emergency Title1: GEN MGR
Emergency Phone1: (785)242-51
Emergency 24phone1: 913-206-3849
Emergency Name2: DAVID KAINZ
Emergency Title2: BRANCH MGR
Emergency Phone2: 785-418-79
Emergency 24phone2: 785-893-1937
Updated: 2017-02-23 16:43:02
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION MGR
Facility Latitude: 39.0000000
Facility Longitude: -95.0000000
Tier2 Contact Name: BOB NUTT
Tier2 Title: CROP PRODUCTION MANAGER
Tier2 Phone: 785-242-1032
Tier2 Phone24: 785-418-503
Tier2 EMail: bobn106@sbcglobal.net
Annual Revision: annual
Section: 7
Township: 12S
Range0: 20E
RMP Facid: 100000105469
Subject 302: Y
Subject 112: N

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Facility Id: 357363
Facility Phone: (785)841-53
FID Num: DG00257
PID Num: KS0237
NAICS: 11511
Report Year: 2014
Nearest Cross Street: E1400 Road
SIC Code: 5191
Section Code: 302
Emergency Name1: CLARK WENGER
Emergency Title1: GEN MGR
Emergency Phone1: (785)242-5170
Emergency 24phone1: 913-206-3849
Emergency Name2: KYLE NITCHER
Emergency Title2: BRANCH MGR
Emergency Phone2: 785-248-119
Emergency 24phone2: 785-248-1195
Updated: 2015-02-11 12:06:28
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION MANAGER
Facility Latitude: 39.0000000
Facility Longitude: -95.0000000
Tier2 Contact Name: BOB NUTT
Tier2 Title: CROP PRODUCTION MANAGER
Tier2 Phone: 785-242-10
Tier2 Phone24: 785-418-5031
Tier2 EMail: bobn106@sbcglobal.net
Annual Revision: annual
Section: 7
Township: 12S
Range0: 20E
RMP Facid: 100000105469
Subject 302: Y
Subject 112: N

Facility Id: 357363
Facility Phone: 785-841-5331
FID Num: DG00257
PID Num: KS0237
NAICS: 42491
Report Year: 2019
Nearest Cross Street: E1400 RD
SIC Code: 5191
Section Code: 312
Emergency Name1: CLARK WENGER
Emergency Title1: GEN MGR
Emergency Phone1: 785-242-5170
Emergency 24phone1: 913-206-38
Emergency Name2: DAVID KAINZ
Emergency Title2: BRANCH MGR
Emergency Phone2: 785-418-7952
Emergency 24phone2: 785-893-193
Updated: 2020-05-06 18:28:16
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION MGR
Facility Latitude: 39.0286110
Facility Longitude: -95.2411590

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Tier2 Contact Name: BOB NUTT
Tier2 Title: CROP PROD MGR
Tier2 Phone: 785-242-1032
Tier2 Phone24: 785-418-5031
Tier2 EMail: bobn106@sbcglobal.net
Annual Revision: annual
Trifids: n/a
RMP Facid: 1000 0010 54
Subject 302: Y
Subject 112: Y

Facility Id: 357363
Facility Phone: (785)841-5331
FID Num: DG00257
PID Num: KS0237
NAICS: 42491
Report Year: 2018
Nearest Cross Street: E1400 RD
SIC Code: 5191
Section Code: 312
Emergency Name1: CLARK WENGER
Emergency Title1: GEN MGR
Emergency Phone1: (785)242-5170
Emergency 24phone1: 913-206-3849
Emergency Name2: DAVID KAINZ
Emergency Title2: BRANCH MGR
Emergency Phone2: 785-418-795
Emergency 24phone2: 785-893-1937
Updated: 2019-04-10 15:36:11
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION MGR
Facility Latitude: 39.0286110
Facility Longitude: -95.241159
Tier2 Contact Name: BOB NUTT
Tier2 Title: CROP PROD MGR
Tier2 Phone: 785-242-1032
Tier2 Phone24: 785-418-503
Tier2 EMail: bobn106@sbcglobal.net
Annual Revision: annual
Trifids: n/a
RMP Facid: 1000 0010 5469
Subject 302: Y
Subject 112: Y

Facility Id: 357363
Facility Phone: (785)841-533
FID Num: DG00257
PID Num: KS0237
NAICS: 115116
Report Year: 2015
Nearest Cross Street: E1400 Road
SIC Code: 5191
Section Code: 302
Emergency Name1: CLARK WENGER
Emergency Title1: GEN MGR
Emergency Phone1: (785)242-51
Emergency 24phone1: 913-206-3849

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Emergency Name2: GLENN MUDD
Emergency Title2: BRANCH MGR
Emergency Phone2: 785-893-1937
Emergency 24phone2: 785-893-1937
Updated: 2016-02-15 13:47:34
Rep Name: BOB NUTT
Rep Title: CROP PRODUCTION MGR
Facility Latitude: 39.0000000
Facility Longitude: -95.0000000
Tier2 Contact Name: BOB NUTT
Tier2 Title: CROP PRODUCTION MANAGER
Tier2 Phone: 785-242-1032
Tier2 Phone24: 785-418-5031
Tier2 EMail: bobn106@sbcglobal.net
Annual Revision: annual
Section: 7
Township: 12S
Range0: 20E
RMP Facid: 100000105469
Subject 302: Y
Subject 112: N

Chemical:
FID Num: DG00257
Chemical Id: 952541
Chemical Name: ANHYDROUS AMMONIA
CAS: 7664-41-7
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Max Daily Amt: 355000
Avg Daily Amt: 130000
Days On Site: 365
Opt Report: 1
Flammable: 1
Gasunder: 1
Acute: 1
Skin: 1
Serious: 1
Respiratory: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Storage Location: EAST END OF LOT

Fid Num: DG0025
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 842967
Chemical Name: ANHYDROUS AMMONIA
CAS: 7664417
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Pressure: Yes
Immediate: Yes
Max Daily Amt: 257000
Avg Daily Amt: 194850
Days On Site: 365
Opt Report: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 90391
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
CAS: 7664417
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Pressure: Yes
Immediate: Yes
Max Daily Amt: 245140
Avg Daily Amt: 122570
Days On Site: 365
Opt Report: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 90391
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
CAS: 7664417
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Pressure: Yes
Immediate: Yes
Max Daily Amt: 245140
Avg Daily Amt: 122570
Days On Site: 365
Opt Report: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 90391
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
CAS: 7664417
Trade Secret: No
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Fid Num: DG00257
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Container: Above Ground Tank
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Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (continued)

S109900078

Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 842967
Chemical Name: ANHYDROUS AMMONIA
CAS: 7664417
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Pressure: Yes
Immediate: Yes
Max Daily Amt: 257000
Avg Daily Amt: 194850
Days On Site: 365
Opt Report: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (continued)

S109900078

Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 842967
Chemical Name: ANHYDROUS AMMONIA
CAS: 7664417
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Pressure: Yes
Immediate: Yes
Max Daily Amt: 257000
Avg Daily Amt: 194850
Days On Site: 365
Opt Report: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (continued)

S109900078

Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 95254
Chemical Name: ANHYDROUS AMMONIA
CAS: 7664-41-7
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Max Daily Amt: 355000
Avg Daily Amt: 13000
Days On Site: 365
Opt Report: 1
Flammable: 1
Gasunder: 1
Acute: 1
Skin: 1
Serious: 1
Respiratory: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (continued)

S109900078

Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA
Storage Id: 1189348
Container: Above Ground Tank
Pressure: Greater than ambient pressure
Temperature: Ambient temperature
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 903910
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
CAS: 7664417
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Pressure: Yes
Immediate: Yes
Max Daily Amt: 245140
Avg Daily Amt: 122570
Days On Site: 365
Opt Report: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (Continued)

S109900078

Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

FID Num: DG00257
Chemical Id: 903910
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
CAS: 7664417
Trade Secret: No
EHS: Yes
Liquid: Yes
Gas: Yes
Pressure: Yes
Immediate: Yes
Max Daily Amt: 24514
Avg Daily Amt: 122570
Days On Site: 365
Opt Report: 1

Storage:
Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDLAND COOP (continued)

S109900078

Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG0025
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

Fid Num: DG00257
Chemical Name: ANHYDROUS AMMONIA (82-0-0)
Storage Id: 1189348
Container: Above Ground Tank
Pressure: G
Temperature: A
Storage Location: EAST END OF LOT

A3
Target
Property

MIDLAND COOP
1941 DIAGONAL RD
LAWRENCE, KS 66046

FINDS 1009415610
N/A

Site 3 of 5 in cluster A

Actual: FINDS:
835 ft. Registry ID: 110024676180

Click Here:

Environmental Interest/Information System:

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

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A4
Target
Property

CAPITAL CITY OIL-MIDLAND
1941 DIAGONAL RD
LAWRENCE, KS 66046

FINDS 100941208
N/A

Site 4 of 5 in cluster A

Actual: FINDS:
835 ft. Registry ID: 110024599718

Click Here:

Environmental Interest/Information System:

KS-FP (Kansas - Facility Profiler) is a geographically-based data warehouse site that presents information about facilities and

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CAPITAL CITY OIL-MIDLAND (Continued)

1009412084

locations of interest to the KDHE. This site has in excess of twenty environmental interest which contains information on closed facilities, completed cleanups, and past operations as well as data on current operations and activities.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**A5
Target
Property**

**MIDLAND
1941 DIAGONAL ROAD REAR
LAWRENCE, KS 6604**

**FINDS 1017431960
N/A**

Site 5 of 5 in cluster A

**Actual:
835 ft.**

FINDS:
Registry ID: 110000906707

Click Here:

Environmental Interest/Information System:

US EPA Risk Management Plan (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).

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

Count: 0 records.

ORPHAN SUMMARY

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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
KS	AIRS	Title V Source Information	Department of Health & Environment	12/31/2019	01/05/2021	03/19/2021
KS	AOCCONCERN	Area of Concern	Department of Environmental Health		04/25/2002	06/28/2002
KS	AST	Aboveground Storage Tank Data	Department of Health and Environment	04/02/2021	04/09/2021	06/30/2021
KS	BROWNFIELDS	Identified Sites List	Department of Health & Environment	04/07/2021	04/08/2021	04/13/2021
KS	CDL	Clandestine Laboratory Data	Department of Health and Environment	02/12/2021	03/10/2021	05/26/2021
KS	CITY DUMPS	City Dump Listing	Department of Health & Environment	02/23/2021	02/24/2021	05/13/2021
KS	COAL ASH	Coal Ash Disposal Site Listing	Department of Health & Environment	08/05/2019	08/07/2019	10/07/2019
KS	DRYCLEANERS	Registered Drycleaning Facilities	Department of Health & Environment	05/21/2021	05/21/2021	05/24/2021
KS	Financial Assurance	Financial Assurance Information Listing	Department of Health & Environment	07/21/2020	09/30/2020	12/18/2020
KS	INST CONTROL	Institutional Controls Information	Department of Health & Environment	04/07/2021	04/08/2021	04/13/2021
KS	LAST	Leaking Aboveground Storage Tanks	Department of Health & Environment	04/02/2021	04/09/2021	06/30/2021
KS	LUST	Leaking Underground Storage Tank Data	Department of Health and Environment	04/02/2021	04/09/2021	06/30/2021
KS	NPDES	Wastewater Permit Listing	Department of Health & Environment	03/29/2021	03/31/2021	06/22/2021
KS	PFAS	PFAS Inventory Report	Department of Health & Environment	06/29/2019	02/14/2020	04/23/2020
KS	RGA HWS	Recovered Government Archive State Hazardous Waste Facility	Department of Health and Environment		07/01/2013	01/03/2014
KS	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Health and Environment		07/01/2013	01/03/2014
KS	RGA LUST	Recovered Government Archive Leaking Underground Storage Tank	Department of Health and Environment		07/01/2013	01/03/2014
KS	SHWS	Identified Sites List	Department of Health and Environment	04/07/2021	04/08/2021	04/13/2021
KS	SPILLS	Kansas Spills Database	Department of Health and Environment	04/07/2021	04/08/2021	04/09/2021
KS	SPILLS 2	Spills Database	Kansas Corporation Commission	04/01/2021	04/06/2021	06/23/2021
KS	SW/FLF	Directory of Sanitary Landfills, Solid Waste Transfer Station	Department of Health and Environment	06/29/2021	06/30/2021	07/02/2021
KS	TIER 2	Tier 2 Information Listing	Department of Health & Environment	12/31/2019	06/29/2020	09/16/2020
KS	UIC	Underground Injection Wells Database Listing	Department of Health & Environment	05/05/2021	05/07/2021	05/13/2021
KS	UST	Underground Storage Tank Data	Department of Health and Environment	04/02/2021	04/09/2021	06/30/2021
KS	VCP	Identified Sites List	Department of Health & Environment	04/07/2021	04/08/2021	04/13/2021
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	03/23/2021	03/25/2021	06/17/2021
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2017	06/22/2020	11/20/2020
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2019	12/01/2020	02/09/2021
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2020	01/13/2021	03/22/2021
US	CORRACTS	Corrective Action Report	EPA	03/22/2021	03/23/2021	05/19/2021
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	11/03/2020	11/17/2020	02/09/2021
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	DOT OPS	Incident and Accident Data	Department of Transportation, Office of Pipeline	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	04/27/2021	05/03/2021	05/19/2021
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	04/04/2021	04/06/2021	06/25/2021
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency			
US	ERNS	Emergency Response Notification System	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	FEDERAL FACILITY	Federal Facility Site Information listing	National Response Center, United States Coast	03/22/2021	03/24/2021	06/17/2021
US	FEDLAND	Federal and Indian Lands	Environmental Protection Agency	02/22/2021	03/30/2021	06/17/2021
US	FEMA UST	Underground Storage Tank Listing	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FINDS	Facility Index System/Facility Registry System	FEMA	01/29/2021	02/17/2021	03/22/2021
US			EPA	02/03/2021	03/03/2021	04/05/2021

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	02/11/2021	02/17/2021	04/05/2021
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/17/2021	02/17/2021	03/22/2021
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/08/2017	09/11/2018	09/14/2018
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	03/22/2021	03/24/2021	06/17/2021
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Services, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/01/2020	12/16/2020	03/12/2021
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	11/12/2020	12/16/2020	03/12/2021
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	10/02/2020	12/18/2020	03/12/2021
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/07/2020	12/16/2020	03/12/2021
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	09/30/2020	12/22/2020	03/12/2021
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/09/2020	12/16/2020	03/12/2021
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/01/2020	12/16/2020	03/12/2021
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/01/2020	12/16/2020	03/12/2021
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	11/12/2020	12/16/2020	03/12/2021
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	10/02/2020	12/18/2020	03/12/2021
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	10/07/2020	12/16/2020	03/12/2021
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	09/30/2020	12/22/2020	03/12/2021
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/09/2020	12/16/2020	03/12/2021
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/01/2020	12/16/2020	03/12/2021
US	INDIAN VCP R1	Underground Storage Tanks on Indian Land	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Listing	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	04/27/2021	05/03/2021	05/19/2021
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	04/27/2021	05/03/2021	05/19/2021
US	LUCIS	Land Use Control Information System	Department of the Navy	02/09/2021	02/11/2021	03/22/2021
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	05/27/2021	05/27/2021	06/10/2021
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	03/08/2021	03/11/2021	05/11/2021
US	NPL	National Priority List	EPA	04/27/2021	05/03/2021	05/19/2021
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	11/19/2020	01/08/2021	03/22/2021
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PCS INACTIVE	Listing of Inactive PCS Permits	EPA	11/05/2014	01/06/2015	05/06/2015
US	PRP	Potentially Responsible Parties	EPA	12/30/2020	01/14/2021	03/05/2021
US	Proposed NPL	Proposed National Priority List Sites	EPA	04/27/2021	05/03/2021	05/19/2021

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	RMP	Risk Management Plans	Environmental Protection Agency	01/22/2021	02/18/2021	05/11/2021
US	ROD	Records Of Decision	EPA	04/27/2021	05/03/2021	05/19/2021
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	SEMS	Superfund Enterprise Management System	EPA	04/27/2021	05/03/2021	05/19/2021
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	04/27/2021	05/03/2021	05/19/2021
US	SSTS	Section 7 Tracking Systems	EPA	01/20/2021	01/21/2021	03/22/2021
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	03/15/2021	03/16/2021	06/10/2021
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	12/07/2020	12/09/2020	03/02/2021
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/22/2021	02/23/2021	05/19/2021
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	03/22/2021	03/23/2021	06/17/2021
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	12/07/2020	12/09/2020	03/02/2021
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/22/2021	02/23/2021	05/19/2021
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/01/2021	02/24/2021	05/19/2021
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2018	07/02/2020	09/17/2020
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	10/05/2020	02/17/2021	05/10/2021
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	04/29/2020	07/10/2020
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2019	02/11/2021	02/24/2021
WI	WI MANIFEST	Manifest information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
KS	State Wetlands	Wetland Inventory	US Fish & Wildlife Service			
US	Topographic Map	Current USGS 7.5 Minute Topographic Map	U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

STREET AND ADDRESS INFORMATION

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GEOCHECK → - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MIDLAND FEED STORE
1401 N 1941 DIAGONAL RD
LAWRENCE, KS 6604

TARGET PROPERTY COORDINATES

Latitude (North):	39.02929 - 39° 1' 45.44"
Longitude (West):	95.24186 - 95° 14' 30.70"
Universal Transverse Mercator:	Zone 15
UTM X (Meters):	305938.1
UTM Y (Meters):	4322210.5
Elevation:	835 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5687979 MIDLAND, KS
Version Date:	2012
Northwest Map:	5688019 WILLIAMSTOWN, KS
Version Date:	2012

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

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

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

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

GEOCHECK → - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

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

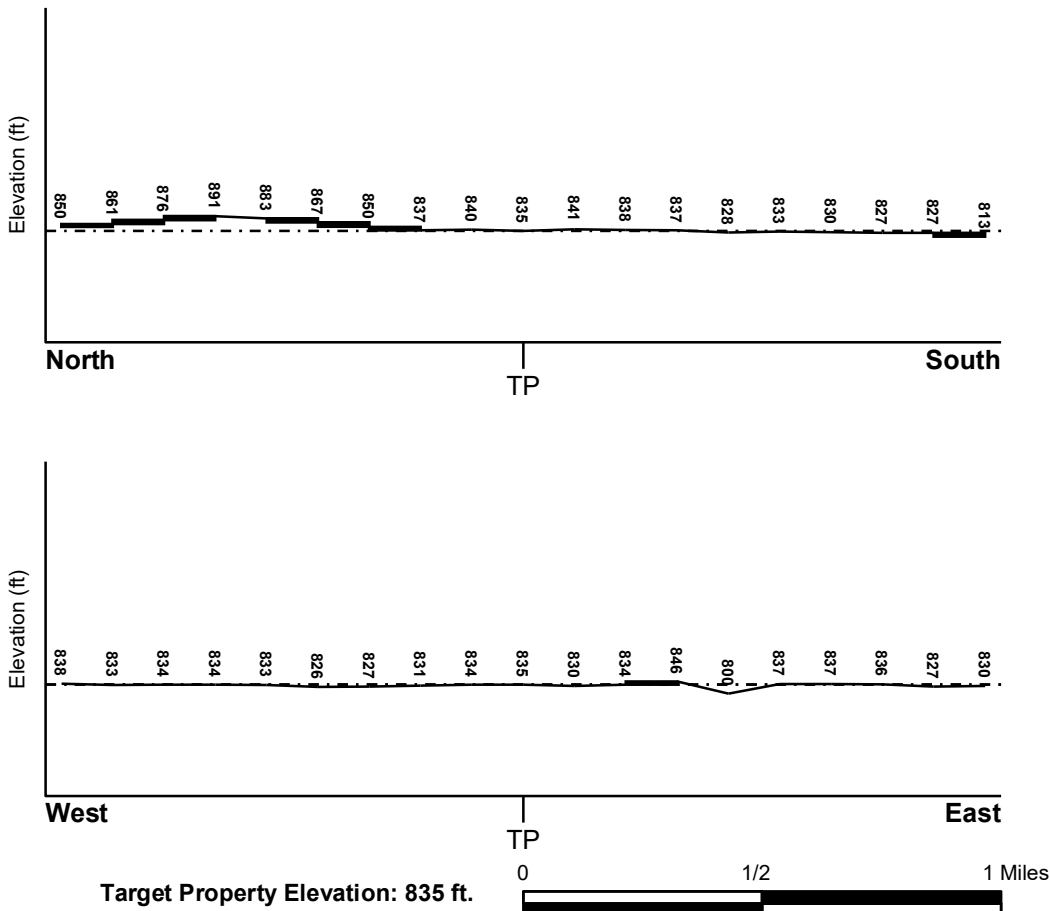
TOPOGRAPHIC INFORMATION

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

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK→ - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

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

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

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
20103C0300G	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
20087C0400D	FEMA FIRM Flood data
20087C0370D	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	NWI Electronic
MIDLAND	<u>Data Coverage</u>
	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

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

AQUIFLOW→

Search Radius: 1.000 Mile.

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

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK → - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

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

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

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

ROCK STRATIGRAPHIC UNIT

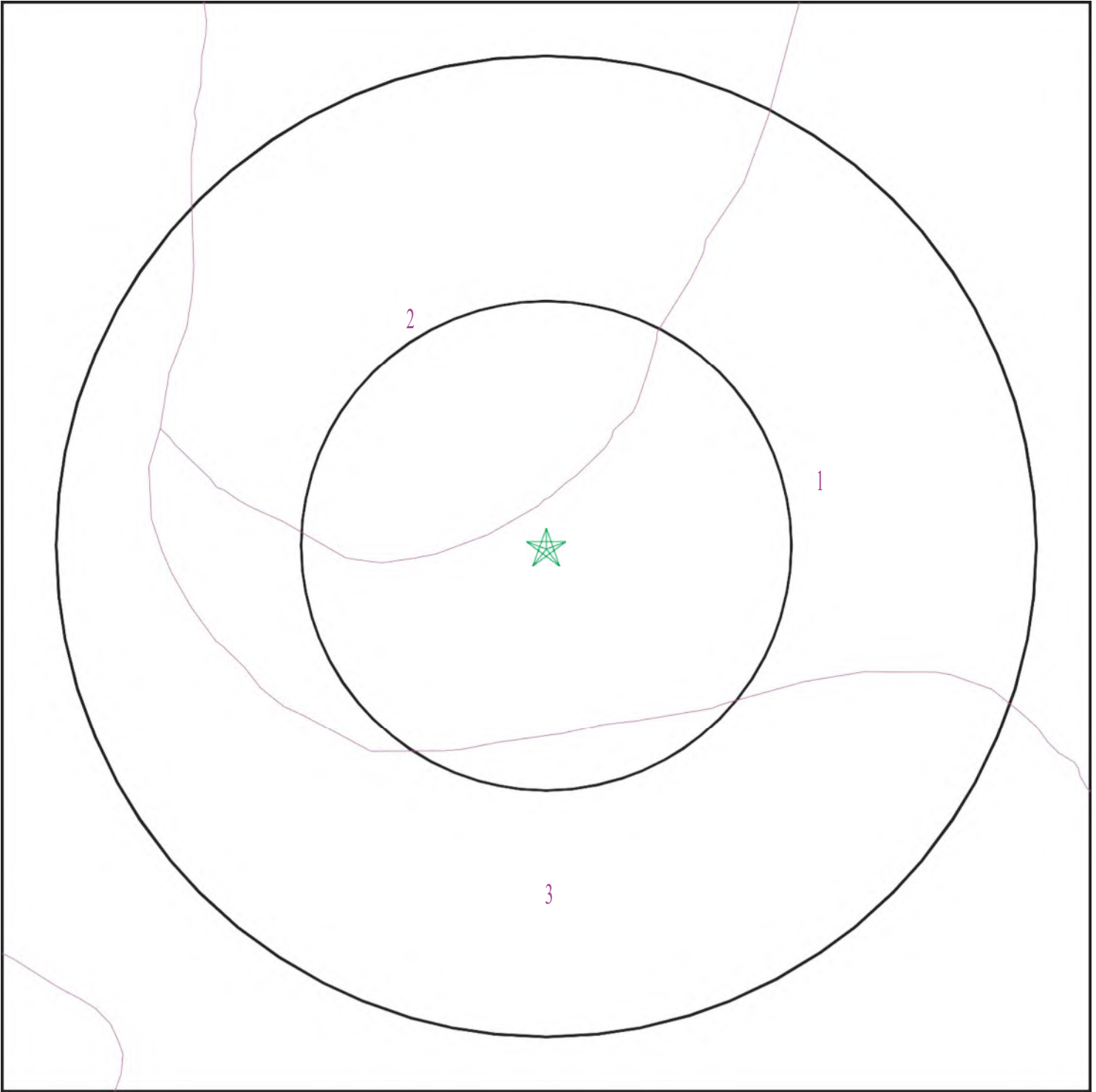
Era: Paleozoic
System: Pennsylvanian
Series: Virgilian Series
Code: PP4 (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

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

SSURGO SOIL MAP - 6565864.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: Midland Feed Store
ADDRESS: 1401 N 1941 Diagonal Rd
Lawrence KS 66044
LAT/LONG: 39.02929 / 95.24186

CLIENT: Terracon
CONTACT: Becki Davis
INQUIRY #: 6565864.2s
DATE: July 07, 2021 11:15 am

GEOCHECK → - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

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

Soil Map ID: 1

Soil Component Name: Kennebec

Soil Surface Texture: silt loam

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

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 107 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		A SHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 6.1
2	48 inches	59 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 6.1
3	35 inches	48 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 6.1

GEOCHECK → - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
4	9 inches	35 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 14.11 Min: 4.233	Max: 7.3 Min: 6.1

Soil Map ID: 2

Soil Component Name: Reading

Soil Surface Texture: silty clay loam

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

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	9 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 14.11 Min: 1.411	Max: 6.5 Min: 5.6
2	35 inches	40 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 14.11 Min: 1.411	Max: 6.5 Min: 5.6

GEOCHECK → - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		A SHTO Group	Unified Soil		
3	40 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 14.11 Min: 1.411	Max: 6.5 Min: 5.6
4	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 14.11 Min: 1.411	Max: 6.5 Min: 5.6
5	14 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 14.11 Min: 1.411	Max: 6.5 Min: 5.6

Soil Map ID: 3

Soil Component Name: Wabash

Soil Surface Texture: silty clay

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

Soil Drainage Class: Poorly drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

GEOCHECK → - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
2	51 inches	79 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
3	5 inches	9 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
4	9 inches	16 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
5	16 inches	27 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
6	27 inches	51 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6

LOCAL / REGIONAL WATER AGENCY RECORDS

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

GEOCHECK → - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
2	USGS40000362226	1/8 - 1/4 Mile WSW
4	USGS40000362212	1/8 - 1/4 Mile South
A7	USGS40000362281	1/2 - 1 Mile WNW
A8	USGS40000362282	1/2 - 1 Mile WNW
12	USGS40000362136	1/2 - 1 Mile South
14	USGS40000362163	1/2 - 1 Mile SE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

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

STATE DATABASE WELL INFORMATION

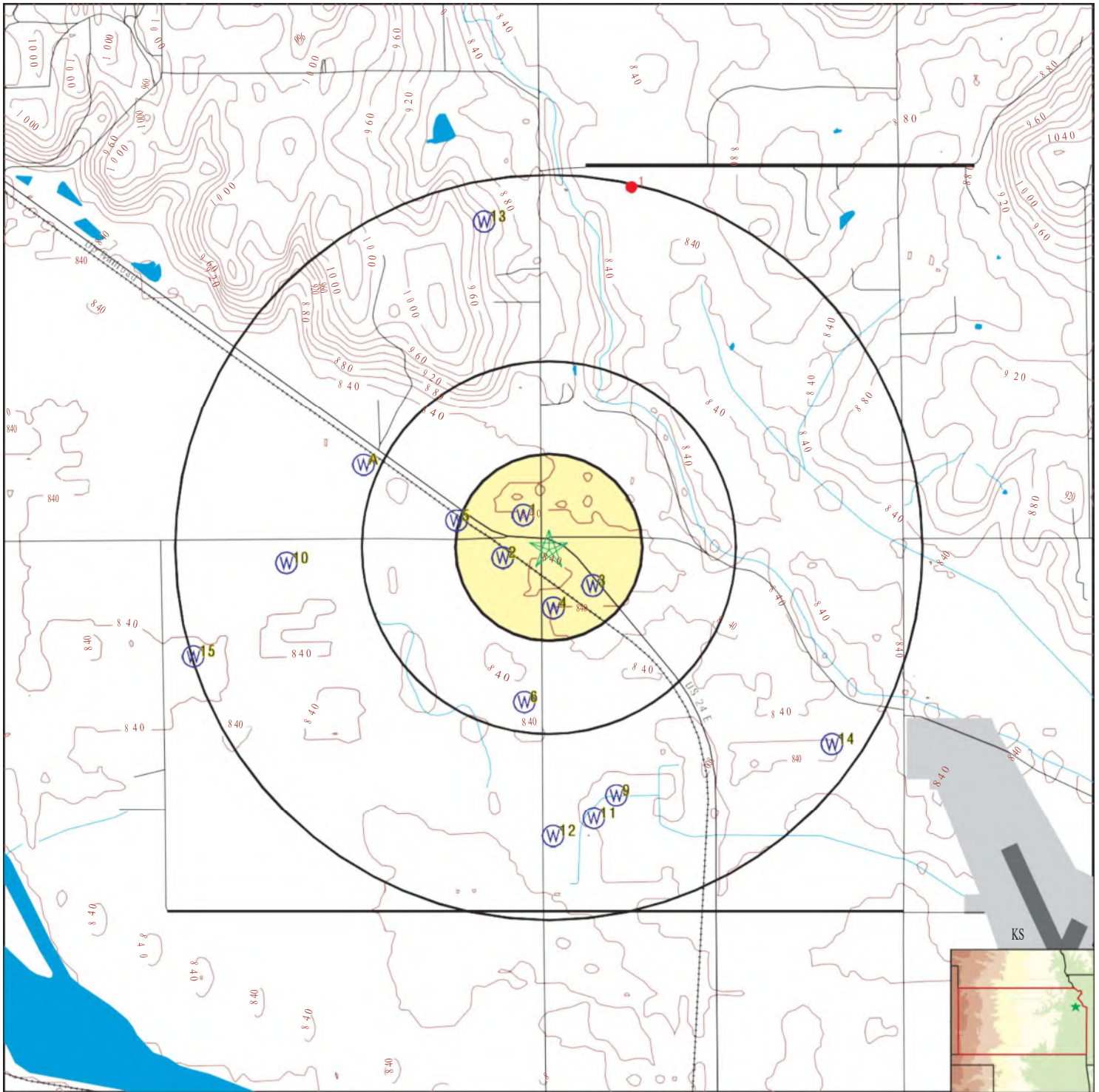
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	KS1100000256140	0 - 1/8 Mile NW
3	KS1100000011980	1/8 - 1/4 Mile SE
5	KS1100000253932	1/4 - 1/2 Mile WNW
6	KS1100000011950	1/4 - 1/2 Mile South
9	KS1100000204339	1/2 - 1 Mile SSE
10	KS1100000259406	1/2 - 1 Mile West
11	KS1100000011979	1/2 - 1 Mile South
13	KS1100000250990	1/2 - 1 Mile North
15	KS1100000011949	1/2 - 1 Mile WSW

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	KSOG13000028996	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 6565864.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Oil, gas or related wells

SITE NAME: Midland Feed Store
 ADDRESS: 1401 N 1941 Diagonal Rd
 Lawrence KS 66044
 LAT/LONG: 39.02929 / 95.24186

CLIENT: Terracon
 CONTACT: Becki Davis
 INQUIRY #: 6565864.2s
 DATE: July 07, 2021 11:15 am

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

1
NW
0 - 1/8 Mile
Higher

KS WELLS KS1100000256140

Well ID:	49505	Owner:	Erskin, Karen
Well Use:	Domestic	Completion Date:	02-Sep-2015
Well Status:	PLUGGED	DWR #:	Not Reported
Well Depth:	60	Elevation:	Not Reported
Static Depth to Water:	38	Est Yield:	Not Reported
Driller:	Patchen Pump & Well Drlg., Inc.		
Casing Type:	Not Reported	Casing Joints:	Not Reported
Casing Diameter 1:	Not Reported	Casing Depth 1:	Not Reported
Casing Diameter 2:	Not Reported	Casing Depth 2:	Not Reported
Casing Diameter 3:	Not Reported	Casing Depth 3:	Not Reported
Casing Height:	Not Reported	Casing Weight:	Not Reported
Casing Thickness:	Not Reported	Screen Perf Material:	Not Reported
Screen Opening Type:	Not Reported	Screen From 1:	Not Reported
Screen to 1:	Not Reported	Screen From 2:	Not Reported
Screen to 2:	Not Reported	Screen From 3:	Not Reported
Screen To 3:	Not Reported	Screen From 4:	Not Reported
Screen to 4:	Not Reported	Gravel Pack 1 From:	Not Reported
Gravel Pack 1 To:	Not Reported	Gravel Pack 2 From:	Not Reported
Gravel Pack 2 To:	Not Reported	Gravel Pack 3 From:	Not Reported
Gravel Pack 3 To:	Not Reported	Grout From 1:	Not Reported
Grout To 1:	Not Reported	Grout From 2:	Not Reported
Grout To 2:	Not Reported	Grout From 3:	Not Reported
Grout To 3:	Not Reported	Contam Source Type:	Not Reported
Contam Source Direction:	Not Reported	Contam Source Distance:	Not Reported
Well KID:	1045633068	Contractor License #:	536
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=495050		

2
WSW
1/8 - 1/4 Mile
Lower

FED USGS USGS40000362226

Organization ID:	USGS-KS	Organization Name:	USGS Kansas Water Science Center
Monitor Location:	12S 19E 01DDD 01	Type:	Well
Description:	Not Reported	HUC:	10270104
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	56	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported
Ground water levels, Number of Measurements:	55	Level reading date:	1976-12-0
Feet below surface:	29.20	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1976-09-07	Feet below surface:	28.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-06-01	Feet below surface:	26.10
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1976-03-08	Feet below surface:	26.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-12-15	Feet below surface:	25.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-09-16	Feet below surface:	25.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-06-16	Feet below surface:	22.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-03-12	Feet below surface:	24.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-12-16	Feet below surface:	24.27
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-09-24	Feet below surface:	24.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-06-18	Feet below surface:	20.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-03-19	Feet below surface:	18.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-12-26	Feet below surface:	16.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-09-19	Feet below surface:	22.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-06-20	Feet below surface:	19.14
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-03-21	Feet below surface:	17.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-12-26	Feet below surface:	22.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-09-20	Feet below surface:	23.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-06-1	Feet below surface:	24.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-03-16	Feet below surface:	26.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-12-14	Feet below surface:	26.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-09-27	Feet below surface:	25.99
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-06-15	Feet below surface:	23.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-03-17	Feet below surface:	24.10
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1970-12-08	Feet below surface:	24.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-09-2	Feet below surface:	23.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-07-09	Feet below surface:	21.24
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-06-25	Feet below surface:	21.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-03-30	Feet below surface:	24.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-01-2	Feet below surface:	23.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-11-26	Feet below surface:	22.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-10-27	Feet below surface:	21.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-09-18	Feet below surface:	20.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-07-2	Feet below surface:	17.69
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-06-25	Feet below surface:	17.19
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-05-26	Feet below surface:	19.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-04-24	Feet below surface:	22.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-03-25	Feet below surface:	22.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-02-24	Feet below surface:	22.43
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-12-26	Feet below surface:	22.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-10-29	Feet below surface:	23.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-09-26	Feet below surface:	22.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-08-26	Feet below surface:	19.86
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-07-31	Feet below surface:	21.78
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-06-26	Feet below surface:	23.22
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1968-06-03	Feet below surface:	22.43
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-04-24	Feet below surface:	22.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-03-22	Feet below surface:	23.69
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1967-10-02	Feet below surface:	22.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1967-03-14	Feet below surface:	26.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-11-28	Feet below surface:	26.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-07-15	Feet below surface:	23.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-06-14	Feet below surface:	21.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-06-13	Feet below surface:	23.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-06-01	Feet below surface:	23.00
Feet to sea level:	Not Reported	Note:	Not Reported

3

SE
1/8 - 1/4 Mile
Higher

KS WELLS KS110000001198

Well ID:	12137	Owner:	White Cloud Grain Co.
Well Use:	Domestic	Completion Date:	05-Oct-1984
Well Status:	CONSTRUCTED	DWR #:	Not Reported
Well Depth:	57	Elevation:	Not Reported
Static Depth to Water:	22	Est Yield:	20
Driller:	Jack W. Robison Well Drilling		
Casing Type:	RMP(SR)	Casing Joints:	Not Reported
Casing Diameter 1:	5	Casing Depth 1:	52
Casing Diameter 2:	0	Casing Depth 2:	0
Casing Diameter 3:	0	Casing Depth 3:	0
Casing Height:	Not Reported	Casing Weight:	Not Reported
Casing Thickness:	Not Reported	Screen Perf Material:	RMP (SR)
Screen Opening Type:	Mill slot	Screen From 1:	52
Screen to 1:	57	Screen From 2:	0
Screen to 2:	0	Screen From 3:	0
Screen To 3:	0	Screen From 4:	0
Screen to 4:	0	Gravel Pack 1 From:	Not Reported
Gravel Pack 1 To:	Not Reported	Gravel Pack 2 From:	Not Reported
Gravel Pack 2 To:	Not Reported	Gravel Pack 3 From:	Not Reported
Gravel Pack 3 To:	Not Reported	Grout From 1:	0
Grout To 1:	20	Grout From 2:	0
Grout To 2:	0	Grout From 3:	0
Grout To 3:	0	Contam Source Type:	Septic Tank
Contam Source Direction:	Not Reported	Contam Source Distance:	0
Well KID:	1040093730	Contractor License #:	316
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=12137		

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

4
South
1/8 - 1/4 Mile
Higher

FED USGS USGS4000036221

Organization ID:	USGS-KS	Organization Name:	USGS Kansas Water Science Center
Monitor Location:	12S 20E 07BBB 01	Type:	Well
Description:	Not Reported	HUC:	10270104
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	48.7	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels, Number of Measurements:	1	Level reading date:	1948-10-0
Feet below surface:	11.50	Feet to sea level:	Not Reported
Note:	Not Reported		

5
WNW
1/4 - 1/2 Mile
Lower

KS WELLS KS1100000253932

Well ID:	491336	Owner:	Erskin, Karen
Well Use:	Domestic, Livestock	Completion Date:	24-Aug-2015
Well Status:	CONSTRUCTED	DWR #:	Not Reported
Well Depth:	83	Elevation:	832
Static Depth to Water:	15	Est Yield:	300
Driller:	Associated Drilling, Inc.	Casing Type:	PVC
Casing Joints:	Glued	Casing Diameter 1:	6
Casing Depth 1:	83	Casing Diameter 2:	Not Reported
Casing Depth 2:	Not Reported	Casing Diameter 3:	Not Reported
Casing Depth 3:	Not Reported	Casing Height:	24
Casing Weight:	Not Reported	Casing Thickness:	SDR26
Screen Perf Material:	PVC	Screen Opening Type:	Mill slot
Screen From 1:	43	Screen to 1:	83
Screen From 2:	Not Reported	Screen to 2:	Not Reported
Screen From 3:	Not Reported	Screen To 3:	Not Reported
Screen From 4:	Not Reported	Screen to 4:	Not Reported
Gravel Pack 1 From:	20	Gravel Pack 1 To:	83
Gravel Pack 2 From:	Not Reported	Gravel Pack 2 To:	Not Reported
Gravel Pack 3 From:	Not Reported	Gravel Pack 3 To:	Not Reported
Grout From 1:	0	Grout To 1:	20
Grout From 2:	Not Reported	Grout To 2:	Not Reported
Grout From 3:	Not Reported	Grout To 3:	Not Reported
Contam Source Type:	Sewer lines	Contam Source Direction:	EAST
Contam Source Distance:	5	Well KID:	1045108348
Contractor License #:	760		
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=491336		

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

6

South
1/4 - 1/2 Mile
Lower

KS WELLS KS1100000011950

Well ID:	12096	Owner:	Heck, Emil Jr.
Well Use:	Domestic	Completion Date:	03-Jul-1979
Well Status:	CONSTRUCTED	DWR #:	Not Reported
Well Depth:	45	Elevation:	832
Static Depth to Water:	23	Est Yield:	50
Driller:	Strader Drilling Co., Inc.		
Casing Type:	Not Reported	Casing Joints:	Not Reported
Casing Diameter 1:	0	Casing Depth 1:	0
Casing Diameter 2:	0	Casing Depth 2:	0
Casing Diameter 3:	0	Casing Depth 3:	0
Casing Height:	Not Reported	Casing Weight:	Not Reported
Casing Thickness:	Not Reported	Screen Perf Material:	Not Reported
Screen Opening Type:	Not Reported	Screen From 1:	35
Screen to 1:	45	Screen From 2:	0
Screen to 2:	0	Screen From 3:	0
Screen To 3:	0	Screen From 4:	0
Screen to 4:	0	Gravel Pack 1 From:	Not Reported
Gravel Pack 1 To:	Not Reported	Gravel Pack 2 From:	Not Reported
Gravel Pack 2 To:	Not Reported	Gravel Pack 3 From:	Not Reported
Gravel Pack 3 To:	Not Reported	Grout From 1:	0
Grout To 1:	0	Grout From 2:	0
Grout To 2:	0	Grout From 3:	0
Grout To 3:	0	Contam Source Type:	Not Reported
Contam Source Direction:	Not Reported	Contam Source Distance:	0
Well KID:	1040093672	Contractor License #:	182
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=120		

A7

WNW
1/2 - 1 Mile
Lower

FED USGS USGS40000362281

Organization ID:	USGS-KS	Organization Name:	USGS Kansas Water Science Center
Monitor Location:	12S 19E 01DBC 01	Type:	Well
Description:	Not Reported	HUC:	10270104
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	82	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

A8

WNW
1/2 - 1 Mile
Lower

FED USGS USGS40000362282

Organization ID:	USGS-KS	Organization Name:	USGS Kansas Water Science Center
Monitor Location:	12S 19E 01DBC 02	Type:	Well
Description:	Not Reported	HUC:	10270104
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Units:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	81	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels, Number of Measurements:	1	Level reading date:	1957-01-01
Feet below surface:	23.0	Feet to sea level:	Not Reported
Note:	Not Reported		

9
SSE
1/2 - 1 Mile
Lower

KS WELLS KS110000020433

Well ID:	422631	Owner:	Husted Management LC
Well Use:	Irrigation	Completion Date:	25-Feb-2009
Well Status:	CONSTRUCTED	DWR #:	46782
Well Depth:	69	Elevation:	Not Reported
Static Depth to Water:	10	Est Yield:	Not Reported
Driller:	Jay C. Woofter Pump & Well, Inc.		
Casing Type:	Not Reported	Casing Joints:	Not Reported
Casing Diameter 1:	Not Reported	Casing Depth 1:	Not Reported
Casing Diameter 2:	Not Reported	Casing Depth 2:	Not Reported
Casing Diameter 3:	Not Reported	Casing Depth 3:	Not Reported
Casing Height:	Not Reported	Casing Weight:	Not Reported
Casing Thickness:	Not Reported	Screen Perf Material:	Not Reported
Screen Opening Type:	Not Reported	Screen From 1:	Not Reported
Screen to 1:	Not Reported	Screen From 2:	Not Reported
Screen to 2:	Not Reported	Screen From 3:	Not Reported
Screen to 3:	Not Reported	Screen From 4:	Not Reported
Screen to 4:	Not Reported	Gravel Pack 1 From:	Not Reported
Gravel Pack 1 To:	Not Reported	Gravel Pack 2 From:	Not Reported
Gravel Pack 2 To:	Not Reported	Gravel Pack 3 From:	Not Reported
Gravel Pack 3 To:	Not Reported	Grout From 1:	Not Reported
Grout To 1:	Not Reported	Grout From 2:	Not Reported
Grout To 2:	Not Reported	Grout From 3:	Not Reported
Grout To 3:	Not Reported	Contam Source Type:	Not Reported
Contam Source Direction:	Not Reported	Contam Source Distance:	Not Reported
Well KID:	1040547621	Contractor License #:	554
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=42263		

10
West
1/2 - 1 Mile
Lower

KS WELLS KS1100000259406

Well ID:	499255	Owner:	Strong, Dan
Well Use:	Irrigation	Completion Date:	03-Feb-2015
Well Status:	CONSTRUCTED	DWR #:	48921
Well Depth:	70	Elevation:	Not Reported
Static Depth to Water:	25	Est Yield:	Not Reported
Driller:	Gary Sisk Drilling Co.	Casing Type:	Not Reported
Casing Joints:	Not Reported	Casing Diameter 1:	Not Reported
Casing Depth 1:	Not Reported	Casing Diameter 2:	Not Reported
Casing Depth 2:	Not Reported	Casing Diameter 3:	Not Reported
Casing Depth 3:	Not Reported	Casing Height:	Not Reported
Casing Weight:	Not Reported	Casing Thickness:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Screen Perf Material:	Not Reported	Screen Opening Type:	Not Reported
Screen From 1:	Not Reported	Screen to 1:	Not Reported
Screen From 2:	Not Reported	Screen to 2:	Not Reported
Screen From 3:	Not Reported	Screen To 3:	Not Reported
Screen From 4:	Not Reported	Screen to 4:	Not Reported
Gravel Pack 1 From:	Not Reported	Gravel Pack 1 To:	Not Reported
Gravel Pack 2 From:	Not Reported	Gravel Pack 2 To:	Not Reported
Gravel Pack 3 From:	Not Reported	Gravel Pack 3 To:	Not Reported
Grout From 1:	Not Reported	Grout To 1:	Not Reported
Grout From 2:	Not Reported	Grout To 2:	Not Reported
Grout From 3:	Not Reported	Grout To 3:	Not Reported
Contam Source Type:	Not Reported	Contam Source Direction:	Not Reported
Contam Source Distance:	Not Reported	Well KID:	1044576747
Contractor License #:	821		
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=499255		

11
South
1/2 - 1 Mile
Lower

KS WELLS KS110000011979

Well ID:	12136	Owner:	Husted, Clyde
Well Use:	Domestic	Completion Date:	26 Nov-1984
Well Status:	CONSTRUCTED	DWR #:	Not Reported
Well Depth:	59	Elevation:	Not Reported
Static Depth to Water:	21	Est Yield:	20
Driller:	Jack W. Robison Well Drilling		
Casing Type:	RMP(SR)	Casing Joints:	Not Reported
Casing Diameter 1:	5	Casing Depth 1:	54
Casing Diameter 2:	0	Casing Depth 2:	0
Casing Diameter 3:	0	Casing Depth 3:	0
Casing Height:	Not Reported	Casing Weight:	Not Reported
Casing Thickness:	Not Reported	Screen Perf Material:	RMP (SR)
Screen Opening Type:	Mill slot	Screen From 1:	54
Screen to 1:	59	Screen From 2:	0
Screen to 2:	0	Screen From 3:	0
Screen To 3:	0	Screen From 4:	0
Screen to 4:	0	Gravel Pack 1 From:	Not Reported
Gravel Pack 1 To:	Not Reported	Gravel Pack 2 From:	Not Reported
Gravel Pack 2 To:	Not Reported	Gravel Pack 3 From:	Not Reported
Gravel Pack 3 To:	Not Reported	Grout From 1:	0
Grout To 1:	20	Grout From 2:	0
Grout To 2:	0	Grout From 3:	0
Grout To 3:	0	Contam Source Type:	Not Reported
Contam Source Direction:	Not Reported	Contam Source Distance:	0
Well KID:	1040093728	Contractor License #:	316
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=12136		

12
South
1/2 - 1 Mile
Lower

FED USGS USGS40000362136

Organization ID:	USGS-KS	Organization Name:	USGS Kansas Water Science Center
Monitor Location:	12S 20E 07CBC 01	Type:	Well
Description:	Not Reported	HUC:	10270104
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Aquifer:	Alluvial aquifers	Formation Type:	Quaternary Alluvium
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	29	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported
Ground water levels, Number of Measurements:		112	Level reading date:
Feet below surface:	16.47	Level reading date:	1991-12-03
Note:	Not Reported	Feet to sea level:	Not Reported
Level reading date:	1991-03-04	Feet below surface:	14.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-12-03	Feet below surface:	14.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-09-05	Feet below surface:	13.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-06-08	Feet below surface:	12.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-03-06	Feet below surface:	14.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-12-13	Feet below surface:	14.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-09-08	Feet below surface:	16.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-06-06	Feet below surface:	16.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-03-07	Feet below surface:	15.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-12-09	Feet below surface:	15.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-09-07	Feet below surface:	15.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-06-09	Feet below surface:	14.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-03-09	Feet below surface:	13.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-12-08	Feet below surface:	13.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-09-09	Feet below surface:	11.48
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-06-03	Feet below surface:	5.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-03-02	Feet below surface:	8.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-12-03	Feet below surface:	7.9

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-09-10	Feet below surface:	11.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-06-04	Feet below surface:	8.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-03-1	Feet below surface:	10.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-12-04	Feet below surface:	6.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-09-11	Feet below surface:	10.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-06-1	Feet below surface:	8.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-03-06	Feet below surface:	10.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-12-07	Feet below surface:	13.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-09-14	Feet below surface:	12.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-06-05	Feet below surface:	9.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-03-07	Feet below surface:	13.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-12-07	Feet below surface:	13.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-09-08	Feet below surface:	13.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-06-07	Feet below surface:	8.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-03-08	Feet below surface:	12.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-12-07	Feet below surface:	13.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-09-08	Feet below surface:	11.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-06-10	Feet below surface:	7.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-03-09	Feet below surface:	12.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-12-0	Feet below surface:	12.70
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1981-09-03	Feet below surface:	12.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-06-01	Feet below surface:	14.59
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-03-05	Feet below surface:	16.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-12-17	Feet below surface:	15.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-09-0	Feet below surface:	15.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-06-03	Feet below surface:	11.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-03-06	Feet below surface:	13.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-12-06	Feet below surface:	13.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-09-13	Feet below surface:	12.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-06-07	Feet below surface:	12.38
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-03-0	Feet below surface:	13.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-12-05	Feet below surface:	14.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-09-14	Feet below surface:	1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-06-06	Feet below surface:	9.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-03-09	Feet below surface:	11.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-12-19	Feet below surface:	10.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-09-19	Feet below surface:	11.64
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-06-17	Feet below surface:	17.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-12-09	Feet below surface:	17.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-09-07	Feet below surface:	16.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-06-01	Feet below surface:	15.62
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1976-03-08	Feet below surface:	15.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-12-12	Feet below surface:	15.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-09-16	Feet below surface:	14.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-06-1	Feet below surface:	11.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-03-1	Feet below surface:	12.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-12-16	Feet below surface:	13.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-09-24	Feet below surface:	13.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-06-18	Feet below surface:	9.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-03-19	Feet below surface:	7.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-12-2	Feet below surface:	5.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-09-19	Feet below surface:	11.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-06-20	Feet below surface:	7.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-03-21	Feet below surface:	5.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-12-26	Feet below surface:	11.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-09-20	Feet below surface:	12.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-06-1	Feet below surface:	14.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-03-16	Feet below surface:	15.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-12-14	Feet below surface:	14.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-09-27	Feet below surface:	14.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-06-15	Feet below surface:	12.64
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-03-17	Feet below surface:	12.85
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1970-12-08	Feet below surface:	12.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-09-21	Feet below surface:	12.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-06-2	Feet below surface:	9.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-06-09	Feet below surface:	9.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-03-30	Feet below surface:	13.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-01-28	Feet below surface:	12.16
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-11-26	Feet below surface:	10.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-10-27	Feet below surface:	9.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-09-18	Feet below surface:	9.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-07-2	Feet below surface:	5.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-06-25	Feet below surface:	6.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-05-26	Feet below surface:	9.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-04-24	Feet below surface:	10.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-03-25	Feet below surface:	11.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-02-2	Feet below surface:	11.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-12-26	Feet below surface:	11.57
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-10-29	Feet below surface:	10.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-09-26	Feet below surface:	10.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-08-26	Feet below surface:	8.62
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-07-31	Feet below surface:	10.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-06-26	Feet below surface:	12.10
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1968-06-03	Feet below surface:	11.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-04-24	Feet below surface:	11.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-03-22	Feet below surface:	12.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1967-10-0	Feet below surface:	11.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1967-03-14	Feet below surface:	15.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-11-28	Feet below surface:	14.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-07-1	Feet below surface:	12.57
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-06-14	Feet below surface:	10.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-06-13	Feet below surface:	13.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-06-0	Feet below surface:	11.00
Feet to sea level:	Not Reported	Note:	Not Reported

**13
North
1/2 - 1 Mile
Higher**

KS WELLS KS110000025099

Well ID:	486563	Owner:	Hulshof, Wayne and Barbara
Well Use:	Geothermal, Closed Loop, Vertical	Well Status:	CONSTRUCTED
Completion Date:	31-Mar-2015	Well Depth:	200
DWR #:	Not Reported	Static Depth to Water:	Not Reported
Elevation:	Not Reported	Driller:	Evans Energy Development, Inc.
Est Yield:	Not Reported	Casing Joints:	Not Reported
Casing Type:	Not Reported	Casing Depth 1:	Not Reported
Casing Diameter 1:	Not Reported	Casing Depth 2:	Not Reported
Casing Diameter 2:	Not Reported	Casing Depth 3:	Not Reported
Casing Diameter 3:	Not Reported	Casing Weight:	Not Reported
Casing Height:	Not Reported	Screen Perf Material:	Not Reported
Casing Thickness:	Not Reported	Screen From 1:	Not Reported
Screen Opening Type:	Not Reported	Screen From 2:	Not Reported
Screen to 1:	Not Reported	Screen From 3:	Not Reported
Screen to 2:	Not Reported	Screen From 4:	Not Reported
Screen To 3:	Not Reported	Gravel Pack 1 From:	Not Reported
Screen to 4:	Not Reported	Gravel Pack 2 From:	Not Reported
Gravel Pack 1 To:	Not Reported	Gravel Pack 3 From:	Not Reported
Gravel Pack 2 To:	Not Reported	Grout From 1:	Not Reported
Gravel Pack 3 To:	Not Reported	Grout From 2:	Not Reported
Grout To 1:	Not Reported	Grout From 3:	Not Reported
Grout To 2:	Not Reported	Contam Source Type:	Not Reported
Grout To 3:	Not Reported	Contam Source Distance:	Not Reported
Contam Source Direction:	Not Reported	Contractor License #:	561
Well KID:	1045019942		
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=48656		

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

14
SE
1/2 - 1 Mile
Higher

FED USGS USGS4000036216

Organization ID:	USGS-KS	Organization Name:	USGS Kansas Water Science Center
Monitor Location:	12S 20E 07ADC 01	Type:	Well
Description:	Not Reported	HUC:	10270104
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	84	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels, Number of Measurements:	1	Level reading date:	1940-12-01
Feet below surface:	23.20	Feet to sea level:	Not Reported
Note:	Not Reported		

15
WSW
1/2 - 1 Mile
Higher

KS WELLS KS11000000119

Well ID:	12095	Owner:	Husted, Clyde
Well Use:	Domestic	Completion Date:	23-Apr-1991
Well Status:	CONSTRUCTED	DWR #:	Not Reported
Well Depth:	34	Elevation:	Not Reported
Static Depth to Water:	10	Est Yield:	20
Driller:	Tom Patchen Pump & Well Drig.		
Casing Type:	PVC	Casing Joints:	Not Reported
Casing Diameter 1:	5	Casing Depth 1:	24
Casing Diameter 2:	0	Casing Depth 2:	0
Casing Diameter 3:	0	Casing Depth 3:	0
Casing Height:	Not Reported	Casing Weight:	Not Reported
Casing Thickness:	Not Reported	Screen Perf Material:	PVC
Screen Opening Type:	Mill slot	Screen From 1:	24
Screen to 1:	34	Screen From 2:	0
Screen to 2:	0	Screen From 3:	0
Screen To 3:	0	Screen From 4:	0
Screen to 4:	0	Gravel Pack 1 From:	Not Reported
Gravel Pack 1 To:	Not Reported	Gravel Pack 2 From:	Not Reported
Gravel Pack 2 To:	Not Reported	Gravel Pack 3 From:	Not Reported
Gravel Pack 3 To:	Not Reported	Grout From 1:	3
Grout To 1:	23	Grout From 2:	0
Grout To 2:	0	Grout From 3:	0
Grout To 3:	0	Contam Source Type:	Septic Tank
Contam Source Direction:	Not Reported	Contam Source Distance:	0
Well KID:	1040093670	Contractor License #:	536
URL:	https://chasm.kgs.ku.edu/ords/wwc5.wwc5d2.well_details?well_id=12095		

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1

NNE

1/2 - 1 Mile

OIL_GAS

KSOG13000028996

API Well #:	20358	Well Class:	Plugged and Abandoned
Well Type:	D&A		
Status:	Never produced, now plugged and abandoned.		
Horizontal leg and Workover #:	Not Reported	Field Name:	Wildcat
Field ID:	0	Lease Name:	Kitsmiller
Well #:	1	Original Well Operator:	Strata Tech Oil Co.
Curr Operator ID:	1027997120	Well Depth (ft):	1423
Spud Date:	06-JUN-83	Permit Date:	20-MAY-83
Completion Date:	10-JUN-83	API #:	15-045-20358
Plug Date:	30-JUN-83	Bushing Elevation:	0
Surface Elevation:	840	Derrick Floor Elevation:	0
Producing Formation:	Not Reported	Completion Year:	1983

GEOCHECK → - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: KS Radon

Radon Test Results

Zipcode	Avg Radon	Max Radon	Num Tests
66044	4.1	44.7	311

Federal EPA Radon Zone for DOUGLAS County: 1

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

Federal Area Radon Information for Zip Code: 66044

Number of sites tested: 16

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.32 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	3.438 pCi/L	69%	31%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

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

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-26

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: US Fish & Wildlife Service

Telephone: 703-358-2171

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

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

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

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

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

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

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-555

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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-37

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Kansas Water Well Completion Records Database

Source: Kansas Geological Survey

Telephone: 913-864-39

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Location Database Listing

Source: Kansas Geological Survey

Telephone: 785-864-3965

RADON

State Database: KS Radon

Source: Department of Health & Environment

Telephone: 785-296-1500

Kansas Indoor Radon Measurements

Area Radon Information

Source: USGS

Telephone: 703-356-402

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

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRRA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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**APPENDIX E
CREDENTIALS**

KAMERON L. LONG

FIELD ENVIRONMENTAL SCIENTIST

PROFESSIONAL EXPERIENCE

Mr. Long is an Environmental Scientist in Terracon's Springfield, Missouri Office. Mr. Long conducts environmental site assessments, limited site investigations, and a wide variety of other environmental tasks. Mr. Long has obtained a Bachelor of Science degree in Environmental Science from Drury University.

PROJECT EXPERIENCE

Atmospheric Emissions Testing- Midwest

Performed emission testing and analysis for national clients, which include a compress time frame and confidentiality to meet client goals.

Environmental Site Assessments - Midwest

Performed 150 Phase 1 Environmental Site Assessments for multiple private and federal clients in Missouri, Kansas, Arkansas, and Oklahoma. Completed Phase 2 Environmental Site Assessments that included asbestos sampling, groundwater sampling, and soil sampling on various sites throughout the Midwest.

Environmental Compliance

Performed both construction and environmental SWPPP inspections on multiple sites throughout the Midwest. Proficient at entering data into the Missouri Electronic Discharge Monitoring Report System. Familiar with general operating permits and stormwater sampling for various types of sites and industries.

Education

Bachelor of Science, Environmental Science, Drury University, 2014

Certifications

40-Hour OSHA HAZWOPER

*Missouri State Asbestos Inspector;
7113110218MOIR1849*

*Missouri State Lead Inspector;
170929-300005405*

Work History

Terracon Consultants, Inc., Field Environmental Scientist, January, 2016-Present

Civil and Environmental Consultants (CEC), Environmental Scientist, Nov 2014 – Dec 2015

SCI Engineering, Engineering Field Technician, May-Nov 2014

KAREN T. RIEKEN, P. E.

ENVIRONMENTAL DEPARTMENT MANAGER

PROFESSIONAL EXPERIENCE

Ms. Rieken is the Environmental Department Manager in Terracon's St. Louis, Missouri Office. She has over 15 years of experience in the environmental field and has provided technical and oversight services to municipal, commercial and industrial clients under a variety of federal and state programs throughout the United States, United States Virgin Islands, and Canada. These include underground and leaking underground storage tanks (UST/LUST) evaluations, site remediation program, brownfields/voluntary cleanup program, Phase I ESA's, as an environmental professional, Phase II assessment, NEPA, SWPP Plans, SPCC Plans, regulatory compliance audits, and remedial excavation activities including contact with state and local environmental regulatory agencies and insurance funds, and applicable permitting, including working towards closure through the risk-based assessment programs in Missouri and Illinois.

Through her work-related experience and training, Ms. Rieken has gained expertise in site investigation and remediation. She has completed numerous projects requiring the application of risk-based clean-up objectives including LUST investigations, and site remediation projects. She works closely with state and federal agencies in the application of risk-based principals as applicable programs are developed and implemented. She also has a thorough understanding of regulatory compliance issues related to the operation of industrial facilities. Her knowledge and familiarity with a variety of industrial processes and systems allow her to develop innovative solutions to meet her clients' needs.

Ms. Rieken has performed Phase I ESA, as an environmental professional, and Phase II field activities, prepared reports for client use and for submittal to state and federal agencies, and corresponded with regulatory staff to move properties to closure. Ms. Rieken also provides site assessment and LUST services to commercial property owners, public and private development groups, lending institutions and others. Activities have included site assessment, risk-based evaluation and corrective action, site monitoring and reporting to achieve closure under applicable programs.

Ms. Rieken's experience includes the performance of Property Condition Assessments of commercial, multi-story office/residential, recreational, and industrial type facilities throughout Missouri, Illinois, Kansas, Texas, and Michigan. Her experience includes geotechnical field oversight and bore logging, construction field testing and oversight, laboratory soils testing, foundation design slope stability analysis, and subsidence investigations.

Education

Bachelor of Science, Civil Engineering, Missouri, Washington University, St. Louis, MO, 199

Continuing Education in field of Architectural Engineering Systems, Lawrence Technological University, Southfield, MI

Registrations

Professional Engineer: Missouri, No. 2008002203

Professional Engineer: Illinois No. 062.062769

Professional Engineer: Kansas No. 2123

Certifications

OSHA 29 CFR 1910.10 40-hour Hazardous Waste Training, 8 hour refresher

Nuclear Density Gauge Safety Training

CPR/First Aid certified

Affiliations

American Society of Civil Engineers (ASCE)

Work History

Terracon Consultants, Inc., 2013-Present

ATC Associates Inc., Senior Engineer 2002 - 2013

Testing Engineers & Consultants, Inc., 2002

Geotechnology, Inc., 1999-2002

PROJECT EXPERIENCE

Environmental

- Provided project management, field assessment, and report preparation for numerous Phase I ESAs, Phase II ESAs, and Limited Site Investigations (LSIs), with concentrated experience in Illinois and Missouri. Property types range from undeveloped sites to operating industrial facilities.
- Provided project management, field assessment, risk-based evaluation, and report preparation for both active and abandoned LUST facilities in Illinois and Missouri.
- Provided project management, risk-based evaluation, and report preparation for several sites enrolled in Illinois' Voluntary Site Remediation Program.
- Provided project management, risk-based evaluation, and report preparation for several sites enrolled in Missouri's Brownfields/Voluntary Cleanup Program, including a decommissioned automobile assembly plant.
- Senior Project Manager, Data Manager, and Field Technical Lead for managing and supervising field activities and data collection consistent with USEPA and Illinois quality assurance and quality control requirements. Managed and directed project scope development and report preparations for USEPA community wide hazardous substances and petroleum products grants for the Greater Wabash Regional Planning Commission (Illinois).
- Composed the PCB Testing & Disposal Plan for EPA approval, Concrete Reuse Plan for State approval for a former automobile assembly plant in Missouri.
- Oversaw concrete and soil testing of on-site environmental issues uncovered during demolition process and characterization of off-site fill brought to the former automobile assembly plant in Missouri.
- Performed Phase I ESA of 60-parcel redevelopment area in the St. Louis, Missouri metropolitan area, which included industrial, commercial, and residential parcels. Directed demolition asbestos surveys and produced reports for all structures on the redevelopment area.
- Performed Phase I ESA and Phase II ESA at a university medical and science waste consolidation facility in Detroit, Michigan. Phase II assessment included coring through building foundation, exterior subsurface investigation in vicinity of potential USTs and identifying historical waste streams, chemicals formerly stored/consolidated at the facility, and unlabelled wastes currently present at the site.
- Performed Phase I ESA and Phase II ESA of a historical bulk oil storage facility in Sterling Heights, Michigan. Phase II assessment included soil borings, temporary monitoring wells and GPR survey.

Storm Water Pollution Protection Plan

- Performed Storm Water Pollution Prevention weekly inspections for construction sites in Detroit, Michigan. Inspections included detailed review of SWPP plan and inspection of outfalls and drainage pathways for erosion.
- Composed SWPP plans and submitted required permitting documentation for industrial and commercial sites in Illinois and Missouri.
- Composed SWPP plans and submitted required permitting documentation for National Pollutant Discharge Elimination System (NPDES) new construction permitting in Illinois, Missouri, and Michigan.

Spill Prevention and Countermeasure Control Plans

- Performed site reconnaissance and designed SPCC plans for automotive industry suppliers, agricultural feed companies, rental car facilities, biofuel facilities, steel cutting and supply facilities, and coal slag reuse facilities in Michigan, Indiana, Kansas, Illinois, and Missouri.
- Have acted as certifying engineer on SPCCs in Illinois, Missouri, and Kansas.

Geotechnical / Construction Materials Testin

- Slope stability analysis of existing and proposed 50-, 100- and 500- ear levees along the Mississippi River, the Missouri River, and the River Des Peres utilizing UTEXAS and SlopeW software.
- Drilling oversight and direction, logging, and engineering of various shallow foundation projects throughout St. Louis, Missouri metropolitan area. Soil conditions encountered include urban rubble fill, high plastic clays, floodplain alluvium, and shallow bedrock. Created boring logs utilizing GINT software.
- Drilling oversight and direction, logging and engineering for deep foundation design of replacement bridges in vicinity of voids and sink holes at various locations in Franklin County, Missouri.
- Design of a tieback support system for retaining structure along lock wall and bridge abutment during replacement of the McAlpine Locks on the Ohio River in Louisville, Kentucky.
- Geotechnical evaluation of structures undergoing subsidence in the St. Louis, metropolitan area (Missouri) due to highly expansive soils.
- Construction observation and inspection of site earthwork grading, drilled piers, rock column piers, and shallow foundations as well as oversight and management of QA/QC technicians.

Property Condition Assessments

- Performed property condition assessments of automobile dealerships, multi-story nursing homes, enclosed commercial shopping centers, strip commercial shopping centers, assisted living facilities, and multi-story and multi-building apartment complexes in southeastern Michigan.
- Performed property condition assessments of self-storage facilities in Michigan and Ohio.
- Performed property condition assessments of strip commercial shopping centers, high rise office buildings, high-rise apartment buildings, and small retail structures in Missouri and Illinois.
- Performed property condition assessment of multi-story office buildings in Nebraska.
- Performed property condition assessments of golf course and apartment communities in Kansas.
- Performed property condition assessments of high-rise buildings in Missouri.
- Performed property condition assessments of industrial facilities in Texas, Missouri, and Illinois.

Thomas A. Marzec

Project Scientist

PROFESSIONAL EXPERIENCE

Mr. Marzec has over 12 years of experience as an Environmental Scientist. This experience includes conducting Phase I and Phase II Investigations as well as managing several environmental projects in Illinois, Indiana, and Tennessee. His project management and technical experience includes contaminant delineation in soil and groundwater, determining appropriate remediation methods, and preparing reports for regulatory agency review. He is familiar with vapor intrusion regulation, sampling methods, and evaluation, statistical trend analysis, soil logging, soil/groundwater sampling, transmissivity testing, monitoring well installation, excavation oversight, UST removal, borehole dilution testing, the injection of reductive dechlorination agents, Soil Vapor Extraction (SVE) systems, Dual Phase Extraction (DPE) systems, and Electro Resistive Heating (ERH) systems. In addition, he is also experienced in the analysis of geologic and chemical data for the purposes of creating conceptual site models.



EDUCATION

Bachelor of Science, Environmental Science, 2009, Benedictine University, Lisle, Illinois

CERTIFICATIONS

40 Hour OSHA Hazardous Waste Operations and Emergency Response Training

PROFESSIONAL TRAINING

OSHA 40-hour Health & Safety
TWIC Card Enrolled
CPR/First Aid Certified

WORK HISTORY

St. John – Mittelhauser & Associates, Inc., a Terracon Company – Downers Grove, Illinois
Staff Environmental Scientist
January 2022 – Present

St. John – Mittelhauser & Associates, Inc.
Downers Grove, Illinois
Senior Staff Geologist
May 2009–December 2019

Whole Foods Market – Wheaton, Illinois
Team Member, Team Leader
August 2002 – May 2009

Thomas A. Marzec

Project Scientist

PROJECT EXPERIENCE

Phase I and II Site Assessments

Multiple Projects

Mr. Marzec has completed multiple Phase I ESAs for large industrial, commercial, and undeveloped properties. This work included research on the past and present uses of the property in question, historical reviews of aerial photographs, topographic maps, fire insurance maps, city directories, and previous environmental reports. His project work also included walkthroughs of the property in question and interviews with site owners and tenants in order to define specific environmental concerns about the property. Based on the findings of the Phase I ESAs, Mr. Marzec has developed and executed Phase II soil and groundwater investigation recommendations to determine if the RECs pose a threat to the property in question.

Vapor Intrusion Investigations

Multiple Projects

Mr. Marzec has conducted vapor intrusion investigations and evaluated exposure pathways for several projects. His experience includes both indoor air sampling and sub slab data collection. He has assisted in the design and development of sub slab sampling methodologies that allow for the use of tracer gasses for quality control purposes.

Statistical Trend Analysis

Multiple Sites

Mr. Marzec has conducted Mann Kendall plume stability analysis for multiple projects, in some cases for properties with over one hundred sampling points. He has carefully evaluated data to ensure reliable conclusions can be drawn.

Investigation and Remedial Investigation/Remedial Action at Former Bulk Chemical Storage Facility

Chlorinated Solvent Contamination at a Former Oil/Chemical Storage Facility; Madison, IN

Mr. Marzec is currently acting as the day to day project/operations manager for a soil and groundwater remediation project at a former oil and chemical storage facility in Madison, Indiana. His project experience includes delineation of a chlorinated solvent source area using Geoprobe and MIP technology, oversight of the installation and operation of ERH and SVE remediation systems, as well as management and monitoring of a groundwater plume that is influenced by nearby public water supply wells.

Investigation and Remedial Investigation/Remedial Action at Former Steel Plant

Steel Industry, Indiana

Mr. Marzec is currently acting as the day to day project/operations manager for a former steel manufacturing facility being remediated under the State of Indiana's Voluntary Remediation Program (VRP). Widespread soil and groundwater contamination from ammonia, chlorides, sulfates, zinc and other metals originating from process unit and sewer leaks, and from disposal in a pit and three landfills have impacted the site. Cleanup efforts began in the 1980s. His project work has included preparing a

Thomas A. Marzec

Project Scientist

Phase I for the site, conducting a site wide evaluation of soil data to determine possible constraints on future site redevelopment, and preparing an RWP for the site. Currently he oversees the effectiveness of a groundwater pump and treat system that is utilized to protect a nearby river.

Investigation and Remediation of Former Car Parts Manufacturer Former General Motors Plant, Anderson, Indiana

Mr. Marzec is currently acting as the assistant project manager at a site that encompasses the Former GM Plant in Anderson, Indiana. He has overseen the investigation and delineation of TCE impacted soil and evaluated the effectiveness of a bentonite slurry wall installed by a previous consultant. Mr. Marzec used the results of the investigation to prepare an RFP for ERH remediation contractors and then helped evaluate the effectiveness of an ERH system that included more than 175 electrodes. He is currently initiating baseline groundwater sampling in order to evaluate the remaining step necessary to bring the site to closure.

Investigation and Remedial Action Activities of Industrial Plant Industrial Plant; Tennessee

Mr. Marzec has been the Project Manager overseeing the investigation and remediation of an industrial property in Tennessee that had been contaminated with TCE and mineral spirits. He has overseen the delineation of soil, groundwater, and vapor encroachment impacts associated with the property as well as the implementation of remedial efforts including the injection of emulsified oils into the groundwater and the installation of an engineered barrier. He is currently monitoring and evaluating the effectiveness of remedial measures in order to move the site toward closure.

Investigation and Remedial Investigation/Remedial Action at Active Oil Refinery Petroleum Refining Corporation; Hartford, Illinois

Mr. Marzec has acted as a Project Scientist for a large-scale, multifaceted project at an active petroleum refining corporation in Hartford, Illinois. His project work involves fieldwork investigation including: soil logging, low flow groundwater sampling, soil and vapor extraction well installation, quarterly well gauging, LNAPL transmissivity testing, and SVE and DPE system maintenance. In addition, he has played a role in ongoing reporting for the site and has conducted Mann Kendall Plume stability analysis for a monitoring well network in excess of 100 wells.

Investigation and Remedial Investigation/Remedial Action of Manufacturing Property Auto-parts Manufacturer; Greensburg, Indiana

Mr. Marzec is currently acting as the Project Scientist for an auto parts manufacturing site in Greensburg, Indiana that has TCE and hexavalent chromium impacted soil and groundwater. His job responsibilities have included overseeing the installation of over eighty monitoring and injection wells into the underlying glacial till and bedrock. He participated in well development and no purge sampling at the site, as well as oversaw the injection of emulsified oils into the TCE impacted soils for the purpose of reductive dechlorination. He has overseen the excavation of the hexavalent chromium impacted soils along an active rail line at the site. He is also experienced in creating cross sections of applicable lithology and is familiar with Mann Kendall plume stability statistical analysis of groundwater data from the site.

APPENDIX F
DESCRIPTION OF TERMS AND ACRONYMS

Description of Selected General Terms and Acronyms

Term/ Acronym	Description
ACM	<p>Asbestos Containing Material. Asbestos is a naturally occurring mineral, three varieties of which (chrysotile, amosite, crocidolite) have been commonly used as fireproofing or binding agents in construction materials. Exposure to asbestos, as well as ACM, has been documented to cause lung diseases including asbestosis (scarring of the lung), lung cancer and mesothelioma (a cancer of the lung lining).</p> <p>Regulatory agencies have generally defined ACM as a material containing greater than one (1) percent asbestos, however some states (e.g. California) define ACM as materials having 0.1% asbestos. In order to define a homogenous material as non-ACM, a minimum number of samples must be collected from the material dependent upon its type and quantity. Homogenous materials defined as non-ACM must either have 1) no asbestos identified in all of its samples or 2) an identified asbestos concentration below the appropriate regulatory threshold. Asbestos concentrations are generally determined using polarized light microscopy or transmission electron microscopy. Point counting is an analytical method to statistically quantify the percentage of asbestos in a sample. The asbestos component of ACM may either be friable or non-friable. Friable materials, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure and have a higher potential for a fiber release than non-friable ACM. Non-friable ACM are materials that are firmly bound in a matrix by plastic, cement, etc. and, if handled carefully, will not become friable.</p> <p>Federal and state regulations require that either all suspect building materials be presumed ACM or that an asbestos survey be performed prior to renovation, dismantling, demolition, or other activities that may disturb potential ACM. Notifications are required prior to demolition and/or renovation activities that may impact the condition of ACM in a building. ACM removal may be required if the ACM is likely to be disturbed or damaged during the demolition or renovation. Abatement of friable or potentially friable ACM must be performed by a licensed abatement contractor in accordance with state rules and NESHAP. Additionally, OSHA regulations for work classification, worker training and worker protection will apply.</p>
AHERA	Asbestos Hazard Emergency Response Act
AST	Aboveground Storage Tanks. ASTs are generally described as storage tanks less than 10% of which are below ground (i.e., buried). Tanks located in a basement, but not buried, are also considered ASTs. Whether, and the extent to which, an AST is regulated, is determined on a case-by-case basis and depends upon tank size, its contents and the jurisdiction of its location.
BER	Business Environmental Risk. A risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate.
BGS	Below Ground Surface
Brownfields	State and/or tribal listing of Brownfield properties addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments.
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes. BTEX are VOC components found in gasoline and commonly used as analytical indicators of a petroleum hydrocarbon release.

Description of Selected General Terms and Acronyms

Term/ Acronym	Description
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (a.k.a. Superfund). CERCLA is the federal act that regulates abandoned or uncontrolled hazardous waste sites. Under this Act, joint and several liability may be imposed on potentially responsible parties for cleanup-related costs.
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System. An EPA compilation of sites having suspected or actual releases of hazardous substances to the environment. CERCLIS also contains information on site inspections, preliminary assessments and remediation of hazardous waste sites. These sites are typically reported to EPA by states and municipalities or by third parties pursuant to CERCLA Section 103.
CESQG	Conditionally Exempt Small Quantity Generators
CFR	Code of Federal Regulations
CREC	Controlled Recognized Environmental Condition is defined in ASTM E1527-13 as “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority) , with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report.”
De minimis	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 <i>de minimis</i> conditions are not recognized environmental conditions nor controlled recognized environmental conditions.
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System. An EPA-maintained federal database which stores information on notifications of oil discharges and hazardous substance releases in quantities greater than the applicable reportable quantity under CERCLA. ERNS is a cooperative data-sharing effort between EPA, DOT, and the National Response Center.
ESA	Environmental Site Assessment
FRP	Fiberglass Reinforced Plastic

Description of Selected General Terms and Acronyms

Term/ Acronym	Description
Hazardous Substance	As defined under CERCLA, this is (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (with some exclusions); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any hazardous air pollutant listed under section 112 of the Clean Air Act; and (F) any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action under section 2606 of Title 15. This term does not include petroleum, including crude oil or any fraction thereof which is not otherwise listed as a hazardous substance under subparagraphs (A) through (F) above, and the term include natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
Hazardous Waste	This is defined as having characteristics identified or listed under section 3001 of the Solid Waste Disposal Act (with some exceptions). RCRA, as amended by the Solid Waste Disposal Act of 1980, defines this term as a "solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."
HREC	Historical Recognized Environmental Condition is defined in ASTM E1527-13 as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time of the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition."
IC/EC	A listing of sites with institutional and/or engineering controls in place. IC include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. EC include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.
ILP	Innocent Landowner/Operator Program
IDEM	Indiana Department of Environmental Management
LQG	Large Quantity Generators
LUST	Leaking Underground Storage Tank. This is a federal term set forth under RCRA for leaking USTs. Some states also utilize this term.

Description of Selected General Terms and Acronyms

Term/ Acronym	Description
MCL	Maximum Contaminant Level. This Safe Drinking Water concept (and also used by many states as a ground water cleanup criteria) refers to the limit on drinking water contamination that determines whether a supplier can deliver water from a specific source without treatment.
MSDS	Material Safety Data Sheets. Written/printed forms prepared by chemical manufacturers, importers and employers which identify the physical and chemical traits of hazardous chemicals under OSHA's Hazard Communication Standard.
NESHAP	National Emissions Standard for Hazardous Air Pollutants (Federal Clean Air Act). This part of the Clean Air Act regulates emissions of hazardous air pollutants.
NFRAP	Facilities where there is "No Further Remedial Action Planned," as more particularly described under the Records Review section of this report.
NOV	Notice of Violation. A notice of violation or similar citation issued to an entity, company or individual by a state or federal regulatory body indicating a violation of applicable rule or regulations has been identified.
NPDES	National Pollutant Discharge Elimination System (Clean Water Act). The federal permit system for discharges of polluted water.
NPL	The NPL is the EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund Program.
OSHA	Occupational Safety and Health Administration or Occupational Safety and Health Act
PACM	Presumed Asbestos-Containing Material. A material that is suspected of containing or presumed to contain asbestos but which has not been analyzed to confirm the presence or absence of asbestos.
PCB	Polychlorinated Biphenyl. A halogenated organic compound commonly in the form of a viscous liquid or resin, a flowing yellow oil, or a waxy solid. This compound was historically used as dielectric fluid in electrical equipment (such as electrical transformers and capacitors, electrical ballasts, hydraulic and heat transfer fluids), and for numerous heat and fire sensitive applications. PCB was preferred due to its durability, stability (even at high temperatures), good chemical resistance, low volatility, flammability, and conductivity. PCBs, however, do not break down in the environment and are classified by the EPA as a suspected carcinogen. 1978 regulations, under the Toxic Substances Control Act, prohibit manufacturing of PCB-containing equipment; however, some of this equipment may still be in use today.
pCi/L	picoCuries per Liter of Air. Unit of measurement for Radon and similar radioactive materials.
PLM	Polarized Light Microscopy (see ACM section of the report, if included in the scope of services)
PST	Petroleum Storage Tank. An AST or UST that contains a petroleum product.

Description of Selected General Terms and Acronyms

Term/ Acronym	Description
Radon	A radioactive gas resulting from radioactive decay of naturally-occurring radioactive materials in rocks and soils containing uranium, granite, shale, phosphate, and pitchblende. Radon concentrations are measured in picoCuries per Liter of Air. Exposure to elevated levels of radon creates a risk of lung cancer; this risk generally increases as the level of radon and the duration of exposure increases. Outdoors, radon is diluted to such low concentrations that it usually does not present a health concern. However, radon can accumulate in building basements or similar enclosed spaces to levels that can pose a risk to human health. Indoor radon concentrations depend primarily upon the building's construction, design and the concentration of radon in the underlying soil and ground water. The EPA recommended annual average indoor "action level" concentration for residential structures is 4.0 pCi/l.
RCRA	Resource Conservation and Recovery Act. Federal act regulating solid and hazardous wastes from point of generation to time of disposal ("cradle to grave"). 42 U.S.C. 6901 et seq.
RCRA Generators	The RCRA Generators database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as either large (LQG), small (SQG), or conditionally exempt (CESQG). LQG produce at least 1000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. SQG produce 100-1000 kg/month of non-acutely hazardous waste. CESQG are those that generate less than 100 kg/month of non-acutely hazardous waste.
RCRA CORRACT S/TSDs	The USEPA maintains a database of RCRA facilities associated with treatment, storage, and disposal (TSD) of hazardous materials which are undergoing "corrective action". A "corrective action" order is issued when there is a release of hazardous waste or constituents into the environment from a RCRA facility.
RCRA Non- CORRACT S/TSDs	The RCRA Non-CORRACTS/TSD Database is a compilation by the USEPA of facilities which report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required.
RCRA Violators List	RAATS. RCRA Administrative Actions Taken. RAATS information is now contained in the RCRIS database and includes records of administrative enforcement actions against facilities for noncompliance.
RCRIS	Resource Conservation and Recovery Information System, as defined in the Records Review section of this report.
REC	Recognized Environmental Conditions are defined by ASTM E1527-13 as "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. De minimis conditions are not recognized environmental conditions."
SCL	State "CERCLIS" List (see SPL /State Priority List, below).
SPCC	Spill Prevention, Control and Countermeasures. SPCC plans are required under federal law (Clean Water Act and Oil Pollution Act) for any facility storing petroleum in tanks and/or containers of 55-gallons or more that when taken in aggregate exceed 1,320 gallons. SPCC plans are also required for facilities with underground petroleum storage tanks with capacities of over 42,000 gallons. Many states have similar spill prevention programs, which may have additional requirements.

Description of Selected General Terms and Acronyms

Term/ Acronym	Description
SPL	State Priority List. State list of confirmed sites having contamination in which the state is actively involved in clean up activities or is actively pursuing potentially responsible parties for clean up. Sometimes referred to as a State "CERCLIS" List.
SQG	Small Quantity Generator
SWF/LF	State and/or Tribal database of Solid Waste/Landfill facilities. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.
TPH	Total Petroleum Hydrocarbons
TRI	Toxic Release Inventory. Routine EPA report on releases of toxic chemicals to the environment based upon information submitted by entities subject to reporting under the Emergency Planning and Community Right to Know Act.
TSCA	Toxic Substances Control Act. A federal law regulating manufacture, import, processing and distribution of chemical substances not specifically regulated by other federal laws (such as asbestos, PCBs, lead-based paint and radon). 15 U.S.C 2601 et seq.
USACE	United States Army Corps of Engineers
USC	United States Code
USGS	United States Geological Survey
USNRCS	United States Department of Agriculture-Natural Resource Conservation Service
UST	Underground Storage Tank. Most federal and state regulations, as well as ASTM E1527-13, define this as any tank, incl., underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10% or more beneath the surface of the ground (i.e., buried).
VCP	State and/or Tribal facilities included as Voluntary Cleanup Program sites.
VOC	Volatile Organic Compound
Wetlands	<p>Areas that are typically saturated with surface or ground water that creates an environment supportive of wetland vegetation (i.e., swamps, marshes, bogs). The <u>Corps of Engineers Wetlands Delineation Manual</u> (Technical Report Y-87-1) defines wetlands as areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. For an area to be considered a jurisdictional wetland, it must meet the following criteria: more than 50 percent of the dominant plant species must be categorized as Obligate, Facultative Wetland, or Facultative on lists of plant species that occur in wetlands; the soil must be hydric; and, wetland hydrology must be present.</p> <p>The federal Clean Water Act which regulates "waters of the US," also regulates wetlands, a program jointly administered by the USACE and the EPA. Waters of the U.S. are defined as: (1) waters used in interstate or foreign commerce, including all waters subject to the ebb and flow of tides; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, etc., which the use, degradation, or destruction could affect interstate/ foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U. S., (5) tributaries of waters identified in 1 through 4 above; (6) the territorial seas; and (7) wetlands adjacent to waters identified in 1 through 6 above. Only the USACE has the authority to make a final wetlands jurisdictional determination.</p>