



Location Restrictions Demonstration Report 322 Landfill

Tecumseh Energy Center

Prepared for: Westar Energy
Tecumseh Energy Center
Tecumseh, Kansas

Prepared by:
APTIM Environmental & Infrastructure, Inc.

October 2018



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1.0 INTRODUCTION AND PURPOSE

The Disposal of Coal Combustion Residuals (CCR) from Electric Utilities Final Rule (CCR Rule) 40 CFR §257.64 requires owner/operators of existing CCR landfills units to make demonstrations in the event a unit is located in certain areas. The purpose of this report is to demonstrate whether the 322 Landfill (Unit) at Westar Energy's (Westar) Tecumseh Energy Center (TEC) is located in any of those areas, and if so, to make certain demonstrations per the CCR Rule that will permit continued CCR disposal/management operations.

The Unit, which is an existing CCR Landfill, is located at TEC in Tecumseh, Kansas, as indicated in **Figure 1**.

APTIM Environmental & Infrastructure, Inc. (APTIM) has reviewed available historical reports provided in **Section 3.0** as well as undertaken a site visit in May 2018 to develop this report. This report provides the demonstrations necessary to document CCR Rule requirements outlined in 40 CFR §257.64 to determine if the Unit is located in an unstable area.

The applicable CCR Rule requirement is listed in **Section 2.0** in italics followed by an explanation of the review and determinations completed by APTIM.



2.0 UNSTABLE AREAS (§257.64)

§257.64 (a) An existing or new CCR landfill, existing or new CCR surface impoundment, or any lateral expansion of a CCR unit must not be located in an unstable area unless the owner or operator demonstrates by the dates specified in paragraph (d) of this section that recognized and generally accepted good engineering practices have been incorporated into the design of the CCR unit to ensure that the integrity of the structural components of the CCR unit will not be disrupted.

APTIM evaluated the location of the Unit for the presence of on-site or local unstable areas as defined in §257.53. Evaluations of the conditions listed in §257.64(b)(1) through (3) were evaluated and are discussed below. Based on this review, APTIM determined the Unit is not located within an unstable area as defined in §257.53. Consequently, no additional demonstration is necessary.

257.64 (b) The owner or operator must consider all of the following factors, at a minimum, when determining whether an area is unstable:

2.1 Unstable Factors Considered: Differential Settling (§257.64(b)(1))

On-site or local soil conditions that may result in significant differential settling;

APTIM has visited the Unit and evaluated site-specific reports detailing the conditions of the on-site and local soils for conditions that could result in significant differential settling. The Unit is located on stiff silty clay that is typically less than 10 feet thick and is underlain by bedrock which consists of shale and limestone (SCS Engineers, 2016). No significant differential settlement of the clay has been recorded since the construction of the Unit. Based on this information, APTIM's professional opinion is that the Unit will not experience significant differential settlement and is not located within an area that may result in significant differential settling. Pertinent sections of reports used to determine this are provided in **Appendix A.1** summarizing the soil properties at and near the Unit.

2.2 Unstable Factors Considered: Geologic/Geomorphologic Features (§257.64(b)(2))

On-site or local geologic or geomorphologic features; and

APTIM visited the Unit in May 2018 in addition to evaluating the most recent USGS Topographic Map; and reviewing site-specific reports characterizing the site geology (Knightly Environmental Inc., 2008 and SCS Engineers, 2016) for the presence of on-site or local geologic and geomorphologic features such as karst terrain, steep slopes, and sinkholes. The Unit is underlain by typically 0 to 10 feet of stiff silty clay and is underlain by the shale bedrock, which is at least 13 feet thick, and includes a discontinuous limestone layer (SCS Engineers, 2016). The groundwater flow is predominantly towards the northeast, with the uppermost aquifer characteristics consisting of the silty clay (SCS Engineers, 2016). A review of the terrain at or near the site indicated no steep slopes, terrain features, or other local geologic or geomorphologic features that could feasibly result in an unstable condition. The visit and references indicated that the Unit is not underlain by significant amounts of limestone and there are no known near surface karst terrain or sinkholes in the area, nor is this area of Kansas known to have near-surface karst terrain or sinkholes. Based on a review of this information and the site visit, APTIM has concluded that there are no steep slopes, terrain features, or other

local geologic or geomorphologic features that could feasibly result in an unstable condition. Pertinent documents and sections of documents reviewed are provided in **Appendix A.2**.

2.3 Unstable Factors Considered: Human-made Features or Events (§257.64(b)(3))

On-site or local human-made features or events (both surface and subsurface).

APTIM visited the Unit in May 2018 as well as evaluated published data and site-specific reports for the presence of on-site or local human-made features or events (both surface and subsurface), including surface and subsurface mining, extensive oil and gas extractions, and sources of rapid groundwater drawdown that could feasibly impact the Unit. Documents and websites reviewed include:

- Kansas Geological Survey, Water Wells Interactive Map
- Kansas Geological Survey, Oil and Gas Wells and Fields Interactive Map
- Kansas Geological Survey, Industrial Minerals – Shawnee County
- Haley & Aldrich (2016), CCR Groundwater Monitoring Network Description for the Tecumseh Energy Center.

While there are records of oil and gas drilling and coal mining in eastern Shawnee County, there are no known records of any surface or subsurface mining, oil and gas extractions and/or groundwater drawdowns near to the Unit. APTIM concludes that, absent these features and events (both surface and subsurface), there will not be an unstable condition at the Unit due to human-made activities. Pertinent documents and sections of documents reviewed are provided in **Appendix A.3**, and indicate the location of the Unit in relation to the known on-site or local human-made features or events (both surface and subsurface).

3.0 REFERENCES

Haley & Aldrich (2016), CCR Groundwater Monitoring Network Description for the Tecumseh Energy Center.

Knightly Environmental Inc. (2008), Preliminary Geologic Assessment, Tecumseh Energy Center, Industrial Landfill Expansion, Shawnee County, Kansas, Westar Energy.

SCS Engineers (2016), Seep Investigation Report Tecumseh Energy Center.

U.S. Environmental Protection Agency (2015), Hazardous Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, Federal Register Volume 80, No. 74 40 CFR Parts 257 and 261, April 17, 2015.



4.0 QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION (§257.64(c))

The undersigned registered professional engineer is familiar with the requirements of the CCR Rule and has visited and examined the Unit and/or has supervised examination of the Unit and development of this report by appropriately qualified personnel. I hereby certify based on a review of available information and observations, that this report meets the requirements of paragraph §257.64(a).

Name of Professional Engineer: Richard Southorn, P.E., P.G.

Company: APTIM

PE Registration State: Kansas

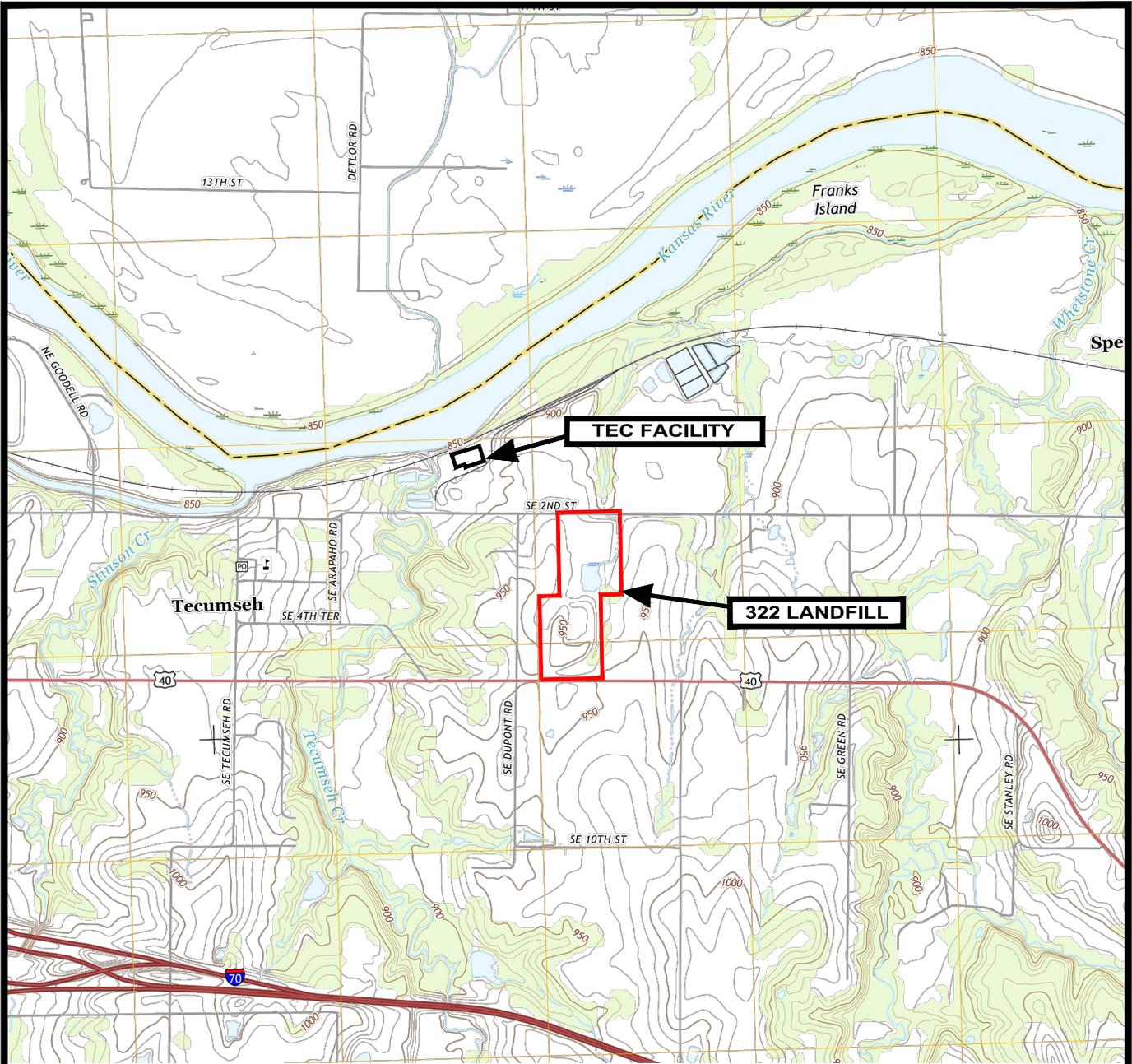
PE Registration Number: 25201

Professional Engineer Seal:



FIGURES

Figure 1 – Site Location Map



LEGEND

APPROXIMATE CCR UNIT BOUNDARY

NOTES

1. AERIAL TOPO OBTAINED FROM USGS 7.5-MINUTE SERIES, GRANTVILLE QUADRANGLE, KANSAS, 2014.
2. ALL BOUNDARIES ARE APPROXIMATE



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5636 SE 2nd ST., TECUMSEH, KS

FIGURE 1
SITE LOCATION MAP

APPROVED BY: RDS	PROJ. NO.: 631236415	DATE: OCT. 2018
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APPENDIX A

Unstable Areas

APPENDIX A.1

Differential Settling

4 INVESTIGATION RESULTS

4.1 GEOLOGY

Data gathered from this investigation generally agreed with the information provided by Westar from the previously referenced 1978 WCC investigation report. Borings drilled and sampled outside of the landfill footprint and borings drilled through the landfill into native material generally confirmed the reported pre-landfill subsurface stratigraphy. Nearly every boring encountered clay, generally less than 10 feet in most areas, overlying bedrock consisting of shale. Borings previously drilled by others also reported encountering limestone; however, SCS borings did not encounter limestone. The top of native clay and top of native bedrock generally follow the pre-landfill ground surface contours mirroring the pre-landfill valley through the center of the site as shown on the 1950 USGS topographic map (**Appendix A**). Therefore, the top of rock surface slopes from the west side of the landfill toward the center of the landfill and the top of rock surface slopes from the east side of the landfill to the center of the landfill creating a valley which slopes to the north.

Cross sections were prepared from the existing ground surface, boring logs, and the 1950 USGS topographic map. The locations of the cross sections across the site are shown on **Figure 4**. The cross sections are provided on **Figures 5, 6, and 7**. The cross sections show the approximate landfill extents, stratigraphy, and estimated groundwater levels.

Clay material encountered beneath the landfill ranged from approximately 0 to 10 feet thick and was often silty, black or dark gray with organics, saturated, and soft. Only one of the 11 borings through the ash did not encounter clay above the shale bedrock. The shale observed beneath the clay is likely the Tecumseh Shale Formation primarily based on (Davis and Carlson, 1952 and Zeller, 1968). The Tecumseh Shale can range from 45 to 65 feet thick and is generally clayey and sandy and may have a thin discontinuous limestone layer in the upper portion. This limestone layer may be what was reported in the bottom of the borings for MW-2, MW-3, and MW-4. The total thickness of shale beneath the landfill is unknown; however, based on the log for MW-6, it is at least 13 feet thick at that location. The Tecumseh Shale reportedly only yields small amounts of water from the sandy zones.

Piezometers P-05 and P-06 (Haley & Aldrich), piezometers P-102, P-103, P-104 (SCS), and borings B201 through B208 (SCS) were all drilled within the landfill footprint. The SCS borings and piezometers within the landfill footprint extended through 9.5 to 26.5 feet of ash and encountered clay and shale at the bottom. The Haley & Aldrich piezometer P-05 reportedly drilled through ash from 0 to 3.5 feet below ground surface (bgs) and through grey silt from 3.5 to 16 feet bgs. Piezometer P-06 (Haley & Aldrich) reportedly drilled through brown silt from 0 to 3 feet bgs and through grey silt from 3 to 15 feet bgs. SCS Boring B-201 was located within

APPENDIX A.2

Geologic/Geomorphologic Features Documentation

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APPENDIX A.3

Human-made Features or Events Documentation

Geology of Eastern Shawnee County

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Geology of Eastern Shawnee County, Kansas, and Vicinity

by William D. Johnson, Jr., and W. L. Adkison

Originally published in 1967 as U.S. Geological Survey Bulletin 1215-A, prepared in cooperation with the State Geological Survey of Kansas as a part of a U.S. Department of the Interior program for the development of the Missouri River basin.

This is, in general, the original text as published in 1967. The information has not been updated. Volume B, [Geology of Western Shawnee County, Kansas, and Vicinity](#), is also online.

Abstract

The eastern Shawnee County and vicinity study area, encompassing about 355 square miles of northeastern Kansas, was mapped as part of a study of Upper Pennsylvanian rocks. The area includes eastern Shawnee County and parts of southeastern Jackson, southwestern Jefferson, and westernmost Douglas Counties. Topographic coverage is provided by the Elmont, Grantville, Meriden, Richland, Topeka, and Wakarusa 7 1/2-minute quadrangles and the northernmost parts of the Carbondale and Overbrook quadrangles.

The unexposed sedimentary rocks in the area range in age from Late Cambrian to Late Pennsylvanian and are as much as 2,700 feet thick. Biotite granite of the Precambrian basement complex has been penetrated in two wells.

Exposed sedimentary rocks in the area are about 725 feet thick and are in the Shawnee and Wabaunsee Groups, of Late Pennsylvanian (Virgil) age. Relatively thick shale formations of claystone, siltstone, and sandstone and alternating thinner limestone formations record a cyclic pattern of deposition. The shale formations were deposited largely under nonmarine conditions. The limestone units were deposited largely under marine conditions ranging from beach or extremely shallow water to deeper, fairly quiet water of normal salinity. The claystone and siltstone in the limestone formations were deposited in estuarine, shallow lagoonal, and normal-marine environments. The widespread Nodaway coal bed of the Howard Limestone was deposited during subaerial conditions. Local channels have eroded several formations, particularly the Topeka and Howard Limestones.

Scattered deposits of chert gravel of pre-Kansan age occur in the area but are too small to map. Kansan glacial drift, consisting mainly of unstratified and unsorted clay till, covers most of the area. Thick deposits of stratified glacial outwash occur along the Kansas and Wakarusa Rivers.

Alluvial material of Quaternary age fills the Kansas and Wakarusa River valleys and the valleys of the larger creeks. In the Kansas River valley, extensive deposits correlated with the Newman terrace of Wisconsin age occupy much of the valley floor, and a broad band of Recent alluvium borders the river. In the Wakarusa River valley the alluvial fill is also correlated with the Newman terrace, but small terrace remnants, questionably correlated with the Buck Creek terrace of Illinoian age, locally occur along the valley sides.

The mapped area is in the western part of the Forest City basin. Outcropping rocks in the area strike about N. 20°-30° E. and dip northwest, generally 20-40 feet to the mile. The regional dip is interrupted by minor folds, a few of which have almost 20 feet of closure.

No oil or gas in commercial quantities has been discovered in the area, but in several test wells slight oil stains have been found in rocks in the part of the Hunton Formation that is of Devonian age and in the Simpson Group, of Middle Ordovician age. Coal was formerly mined from the Nodaway coal bed of the Howard Limestone at many localities, particularly around Topeka, but the mines are no longer in operation. Limestone and river sand and gravel are being quarried commercially.

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Geology of Eastern Shawnee County

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Economic Geology

Oil and Gas

Eighteen wells have been drilled for oil or gas in eastern Shawnee County and vicinity, but no shows of oil or gas have been reported (Jewett, 1954, p. 336). The well locations are shown on the geologic map ([pl. 1](#)). Oil in adjacent Wabaunsee County, which is also in the Forest City basin, has been found primarily on small anticlinal structures (Smith and Anders, 1951; Hilpman, 1958; Goebel and others, 1962); the oil is mainly from porous zones in carbonate rocks of the Viola Limestone (Middle and Upper Ordovician) and the Hunton Formation (Silurian and Devonian). In a few wells oil has been obtained from sandstone in the Simpson Group (Middle Ordovician) and from limestone in the Kansas City Group (Upper Pennsylvanian). In the abandoned McLouth gas and oil field in Jefferson County, about 18 miles east of the mapped area, gas and oil were obtained from sandstone in the Cherokee Group (Middle Pennsylvanian) and from limestone and dolomite of Mississippian age (Lee and Payne, 1944).

The rocks that yield oil or gas in various fields adjacent to Shawnee County are in the subsurface of the mapped area. Zones of pinhole porosity are present in both the Viola Limestone and the Hunton rocks in the Murchison Federal Land Bank 1 well in the SE cor. sec. 28, T. 10 S., R. 15 E., and in the J. J. Lynn Warner 1 well in the center of the SE NW sec. 5, T. 13 S., R. 17 E., ([pl. 2](#)). Very slight oil stains occur in the upper few feet of the Hunton and in Simpson rocks in the J. J. Lynn Warner 1 well and in Simpson rocks in the Murchison Federal Land Bank 1 well.

Several small anticlinal folds with less than 20 feet of closure are reflected by the structure contours drawn at an interval of 20 feet on the base of the Topeka Limestone, but no detailed information is available about the relation of these folds to the structure of older rocks at depth. Zones of porosity and oil staining in the Viola Limestone and in rocks of the Hunton and Simpson suggest the possibility that stratigraphic traps may be present in these rocks.

Coal

Thin beds of coal occur locally in rocks of the Shawnee and Wabaunsee Groups in eastern Shawnee County and vicinity, but only the Nodaway coal bed, at the base of the Howard Limestone, is of sufficient thickness to have been mined for domestic and commercial uses. Schoewe (1946) described the coal resources of the Wabaunsee Group in detail; most data presented herein are from that publication. Previously, Whitla (1940) had described the coal resources of all post-Cherokee rocks in Kansas.

The Nodaway coal bed in the mapped area ranges in thickness from 0.2 to 1.5 feet and is bituminous in rank, banded, shiny, brittle, and moderately hard. Analyses of coal from 10 mines in adjacent Osage County and nearby parts of Jefferson County show an average of 10.2 percent moisture, 35.7 percent volatile matter, 43.5 percent fixed carbon, 10 percent ash, 7.6 percent sulfur, 11,093 Btu per pound as received, and 13,843 Btu per pound on a moisture-matter-free basis (Schoewe, 1946, table 3).

The Nodaway was mined at 25 known mines in Shawnee County; 3 were strip mines, 5 were shaft mines, and the rest were small drift mines (Schoewe, 1946, p. 129). Coal was mined at Topeka by the early settlers; but by 1908 most mining in the county had ceased, and no mining activity was reported after 1927. The mines were located in four areas: west of Meriden, along Muddy Creek near State Route 4; north of Topeka, along a tributary of Halfday Creek in secs. 2 and 12, T. 11 S., R. 15 E.; on the west edge of Topeka, near Gage Park and the State Hospital; and in the southwestern part of Topeka, along Shunganunga Creek in the S2 sec. 10, in the SW sec. 13, and along South Branch Shunganunga Creek in the NE sec. 26, T. 12 S., R. 15 E.

Schoewe (1946, p. 133) reported that the total amount of coal produced in Shawnee County probably exceeded 80,000 tons, most of which was from the Nodaway. He estimated that the proved reserves of coal in the Nodaway are approximately 10,290,000 tons. The Nodaway is of little economic value now because of the thinness of the coal, the amount of overburden, and the position of the bed under part of the city of Topeka.

Limestone

Limestone quarried in the eastern part of Shawnee County and adjacent parts of Jefferson County is used primarily as concrete aggregate and road metal, although in 1959 some was quarried for riprap material for the new channel of Soldier Creek around North Topeka.

The Ervine Creek Limestone Member of the Deer Creek Limestone and the Burlingame and Wakarusa Limestone Members of the Bern Limestone are the principal beds quarried in the mapped area. Rock from the Hartford and Curzon Limestone Members of the Topeka Limestone is quarried immediately east of Forbes Air Force Base. Quarrying of the Bern Limestone centers around the town of Elmton. The Burlingame Limestone Member is the principal source in these quarries, but the Wakarusa is also taken where it is not deeply weathered. Quarries in the Ervine Creek Limestone Member are located east of Topeka along Tecumseh and Stinson Creeks, in the Wakarusa River valley about 2 miles east of Wakarusa, and about 2 miles northeast of Grantville. Where quarried, the Ervine Creek is 14-18 feet thick, the Hartford and Curzon Limestone Members of the Topeka are 6.2 and 10.4 feet thick, respectively, and the Burlingame is 5-10 feet thick. Chemical analyses of rock from these and from two other limestone members are given in table 2.

Table 2--Chemical analyses of selected limestones in eastern Shawnee County and adjacent parts of Douglas County, Kansas. [In percent by weight; Tr. = trace; Adapted from Runnels and Schleicher, 1956; CaCO₃, MgCO₃ and CaCO₃ equivalent are all calculated; L.O.I. is net loss of weight on ignition from 105° to 1000° C; Al₂O₃ includes MnO, ZrO₂, V₂O₅, and TiO₂ when present; Total iron expressed as Fe₂O₃; S omitted from computing total because it is included in L.O.I.; Total does not include amounts shown for CaCO₃, MgCO₃ or CaCO₃.]

Formation	Member	Sample locality				Thickness (ft.)	Lab. No.	CaCO ₃	MgCO ₃	CaCO ₃ equivalent	CaO	MgO	L.O.I.	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	K ₂ O	Na ₂ O	SC
		Section	Township	Range	County														
Bern Limestone	Burlingame Limestone	NE NW 26	10 S.	15 E.	Shawnee	4.5	53210	87.86	1.86	90.34	49.29	0.89	39.75	4.71	1.47	2.91			Tr.
Topeka Limestone	Curzon Limestone	C 16	11 S.	16 E.	Shawnee	4.0	49454	85.19	3.33	88.82	47.91	1.59	39.08	9.04	0.87	1.93			0
Topeka Limestone	Curzon Limestone	SE SW 11	12 S.	17 E.	Douglas	3.0	54369	91.38	0.61	92.04	51.27	0.79	40.50	4.66	1.62	1.15			Tr.
Topeka Limestone		SW SW 4	13 S.	16 E.	Shawnee	13.0	53211	76.44	7.32	85.86	43.03	3.50	37.78	10.12	2.06	2.64	0.25	0.12	0.1

	Curzon and Hartford Limestones																		
Topeka Limestone	Hartford Limestone	C 16	11 S.	16 e.	Shawnee	3.0	49445	83.60	4.58	88.61	47.05	2.19	38.99	5.40	1.51	5.53			0.1
Deer Creek	Ervine Creek Limestone	SE 14	11 S.	16 E.	Shawnee	10.0	49455	93.56	1.07	93.93	52.53	0.51	41.33	4.08	0.87	1.37			0
Deer Creek	Ervine Creek Limestone	SE NW 4	12 S.	17 E.	Shawnee	6.9	53213	92.83	1.36	93.25	52.05	0.65	41.03	3.54	0.87	1.65			0
Deer Creek	Ervine Creek Limestone	SE SE 10	13 S.	16 E.	Shawnee	8.8	53214	91.08	2.72	94.48	51.15	1.30	41.57	3.63	0.93	1.15			0.1
Deer Creek	Ozawkie Limestone	SE (?) 36	11 S.	17 E.	Douglas		50554	95.07		95.18	53.27		41.88	2.11	0.71	0.89			0
Lecompton Limestone	Spring Branch Limestone	NE NW 36	11 S.	17 E.	Douglas	6.8	53216	73.94	12.41	90.91	41.63	5.93	40.00	6.29	1.55	4.22			0.1

No dimension stone is produced in this area, but several limestone members have been quarried along their outcrops for local use as building stone. Near Topeka, rock from the Hartford Limestone Member of the Topeka has been used in construction of houses, barns, and small bridges. This limestone is difficult to saw because of its hardness, but it can be hand dressed without difficulty (Riser, 1960, p. 110). Near Richland, rock from beds in the Lecompton Limestone is locally used for building stone. Small amounts of stone have also been quarried for local use from the Maple Hill and Tarkio Limestone Members of the Zeandale Limestone and from the Reading Limestone Member of the Emporia Limestone.

Sand and Gravel

All sand and gravel currently (1961) produced commercially in Shawnee County is from the alluvium along the Kansas River. Most of the sand is used for building, for paving, and as fill, although small amounts are used as engine and blast sand. The building industry utilizes most of the gravel, but some is used in paving and as fill.

Deposits of glacial sand and gravel of Kansan age have been quarried at several localities in the mapped area, especially south of the Kansas River. A fairly large amount of material was dug from a morainal deposit along the south side of Shunganunga Creek in the SW SW sec. 10, T. 12 S., R. 15 E.; also, a large pit was formerly operated in the SW SW sec. 24, T. 13 S., R. 16 E. Because these deposits are poorly sorted and contain cemented zones, the pits were probably difficult to operate. Material from both pits was probably used mainly as road metal. North of the Kansas River small deposits, mainly of chert gravel, were quarried in the SW NW sec. 7, T. 11 S., R. 16 E. and in the SW NE sec. 18, T. 11 S., R. 17 E. Small deposits of glacial sand and gravel, such as that in the creekbank in the W2 NW sec. 15, T. 10 S., R. 17 E., probably supplied the needs of local residents.

Clay

Claystone immediately beneath the Nodaway coal bed of the Howard Limestone was formerly dug from a pit on the west side of Topeka in the SE NE sec. 27, T. 11 S., R. 15 E., for the manufacture of brick. Digging operations ceased at this pit in the 1930's, and no clay or shale is currently being dug in Shawnee County for ceramic use. Claystone was dug from the Calhoun Shale along the east side of Deer Creek in the SW sec. 3, T. 12 S., R. 16 E., for several years (around 1950) and was blended with clay from the Dakota Formation (Lower Cretaceous) of central Kansas for the manufacture of small pottery objects.

A sample from near the middle of the Calhoun Shale in the center of the N2 SW sec. 15, T. 11 S., R. 16 E., produced a light weight aggregate with a density of 48.5 pounds per cubic foot (Plummer and Hladik, 1951, p. 60). If this sample was representative, the clayey parts of the Calhoun Shale probably are usable for the production of lightweight aggregate.

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Geology of Eastern Shawnee County

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Economic Geology

Oil and Gas

Eighteen wells have been drilled for oil or gas in eastern Shawnee County and vicinity, but no shows of oil or gas have been reported (Jewett, 1954, p. 336). The well locations are shown on the geologic map ([pl. 1](#)). Oil in adjacent Wabaunsee County, which is also in the Forest City basin, has been found primarily on small anticlinal structures (Smith and Anders, 1951; Hilpman, 1958; Goebel and others, 1962); the oil is mainly from porous zones in carbonate rocks of the Viola Limestone (Middle and Upper Ordovician) and the Hunton Formation (Silurian and Devonian). In a few wells oil has been obtained from sandstone in the Simpson Group (Middle Ordovician) and from limestone in the Kansas City Group (Upper Pennsylvanian). In the abandoned McLouth gas and oil field in Jefferson County, about 18 miles east of the mapped area, gas and oil were obtained from sandstone in the Cherokee Group (Middle Pennsylvanian) and from limestone and dolomite of Mississippian age (Lee and Payne, 1944).

The rocks that yield oil or gas in various fields adjacent to Shawnee County are in the subsurface of the mapped area. Zones of pinhole porosity are present in both the Viola Limestone and the Hunton rocks in the Murchison Federal Land Bank 1 well in the SE cor. sec. 28, T. 10 S., R. 15 E., and in the J. J. Lynn Warner 1 well in the center of the SE NW sec. 5, T. 13 S., R. 17 E., ([pl. 2](#)). Very slight oil stains occur in the upper few feet of the Hunton and in Simpson rocks in the J. J. Lynn Warner 1 well and in Simpson rocks in the Murchison Federal Land Bank 1 well.

Several small anticlinal folds with less than 20 feet of closure are reflected by the structure contours drawn at an interval of 20 feet on the base of the Topeka Limestone, but no detailed information is available about the relation of these folds to the structure of older rocks at depth. Zones of porosity and oil staining in the Viola Limestone and in rocks of the Hunton and Simpson suggest the possibility that stratigraphic traps may be present in these rocks.

Coal

Thin beds of coal occur locally in rocks of the Shawnee and Wabaunsee Groups in eastern Shawnee County and vicinity, but only the Nodaway coal bed, at the base of the Howard Limestone, is of sufficient thickness to have been mined for domestic and commercial uses. Schoewe (1946) described the coal resources of the Wabaunsee Group in detail; most data presented herein are from that publication. Previously, Whitla (1940) had described the coal resources of all post-Cherokee rocks in Kansas.

The Nodaway coal bed in the mapped area ranges in thickness from 0.2 to 1.5 feet and is bituminous in rank, banded, shiny, brittle, and moderately hard. Analyses of coal from 10 mines in adjacent Osage County and nearby parts of Jefferson County show an average of 10.2 percent moisture, 35.7 percent volatile matter, 43.5 percent fixed carbon, 10 percent ash, 7.6 percent sulfur, 11,093 Btu per pound as received, and 13,843 Btu per pound on a moisture-matter-free basis (Schoewe, 1946, table 3).

The Nodaway was mined at 25 known mines in Shawnee County; 3 were strip mines, 5 were shaft mines, and the rest were small drift mines (Schoewe, 1946, p. 129). Coal was mined at Topeka by the early settlers; but by 1908 most mining in the county had ceased, and no mining activity was reported after 1927. The mines were located in four areas: west of Meriden, along Muddy Creek near State Route 4; north of Topeka, along a tributary of Halfday Creek in secs. 2 and 12, T. 11 S., R. 15 E.; on the west edge of Topeka, near Gage Park and the State Hospital; and in the southwestern part of Topeka, along Shunganunga Creek in the S2 sec. 10, in the SW sec. 13, and along South Branch Shunganunga Creek in the NE sec. 26, T. 12 S., R. 15 E.

Schoewe (1946, p. 133) reported that the total amount of coal produced in Shawnee County probably exceeded 80,000 tons, most of which was from the Nodaway. He estimated that the proved reserves of coal in the Nodaway are approximately 10,290,000 tons. The Nodaway is of little economic value now because of the thinness of the coal, the amount of overburden, and the position of the bed under part of the city of Topeka.

Limestone

Limestone quarried in the eastern part of Shawnee County and adjacent parts of Jefferson County is used primarily as concrete aggregate and road metal, although in 1959 some was quarried for riprap material for the new channel of Soldier Creek around North Topeka.

The Ervine Creek Limestone Member of the Deer Creek Limestone and the Burlingame and Wakarusa Limestone Members of the Bern Limestone are the principal beds quarried in the mapped area. Rock from the Hartford and Curzon Limestone Members of the Topeka Limestone is quarried immediately east of Forbes Air Force Base. Quarrying of the Bern Limestone centers around the town of Elmton. The Burlingame Limestone Member is the principal source in these quarries, but the Wakarusa is also taken where it is not deeply weathered. Quarries in the Ervine Creek Limestone Member are located east of Topeka along Tecumseh and Stinson Creeks, in the Wakarusa River valley about 2 miles east of Wakarusa, and about 2 miles northeast of Grantville. Where quarried, the Ervine Creek is 14-18 feet thick, the Hartford and Curzon Limestone Members of the Topeka are 6.2 and 10.4 feet thick, respectively, and the Burlingame is 5-10 feet thick. Chemical analyses of rock from these and from two other limestone members are given in table 2.

Table 2--Chemical analyses of selected limestones in eastern Shawnee County and adjacent parts of Douglas County, Kansas. [In percent by weight; Tr. = trace; Adapted from Runnels and Schleicher, 1956; CaCO₃, MgCO₃ and CaCO₃ equivalent are all calculated; L.O.I. is net loss of weight on ignition from 105° to 1000° C; Al₂O₃ includes MnO, ZrO₂, V₂O₅, and TiO₂ when present; Total iron expressed as Fe₂O₃; S omitted from computing total because it is included in L.O.I.; Total does not include amounts shown for CaCO₃, MgCO₃ or CaCO₃.]

Formation	Member	Sample locality				Thickness (ft.)	Lab. No.	CaCO ₃	MgCO ₃	CaCO ₃ equivalent	CaO	MgO	L.O.I.	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	K ₂ O	Na ₂ O	SC
		Section	Township	Range	County														
Bern Limestone	Burlingame Limestone	NE NW 26	10 S.	15 E.	Shawnee	4.5	53210	87.86	1.86	90.34	49.29	0.89	39.75	4.71	1.47	2.91			Tr.
Topeka Limestone	Curzon Limestone	C 16	11 S.	16 E.	Shawnee	4.0	49454	85.19	3.33	88.82	47.91	1.59	39.08	9.04	0.87	1.93			0
Topeka Limestone	Curzon Limestone	SE SW 11	12 S.	17 E.	Douglas	3.0	54369	91.38	0.61	92.04	51.27	0.79	40.50	4.66	1.62	1.15			Tr.
Topeka Limestone		SW SW 4	13 S.	16 E.	Shawnee	13.0	53211	76.44	7.32	85.86	43.03	3.50	37.78	10.12	2.06	2.64	0.25	0.12	0.1

	Curzon and Hartford Limestones																		
Topeka Limestone	Hartford Limestone	C 16	11 S.	16 e.	Shawnee	3.0	49445	83.60	4.58	88.61	47.05	2.19	38.99	5.40	1.51	5.53			0.1
Deer Creek	Ervine Creek Limestone	SE 14	11 S.	16 E.	Shawnee	10.0	49455	93.56	1.07	93.93	52.53	0.51	41.33	4.08	0.87	1.37			0
Deer Creek	Ervine Creek Limestone	SE NW 4	12 S.	17 E.	Shawnee	6.9	53213	92.83	1.36	93.25	52.05	0.65	41.03	3.54	0.87	1.65			0
Deer Creek	Ervine Creek Limestone	SE SE 10	13 S.	16 E.	Shawnee	8.8	53214	91.08	2.72	94.48	51.15	1.30	41.57	3.63	0.93	1.15			0.1
Deer Creek	Ozawkie Limestone	SE (?) 36	11 S.	17 E.	Douglas		50554	95.07		95.18	53.27		41.88	2.11	0.71	0.89			0
Lecompton Limestone	Spring Branch Limestone	NE NW 36	11 S.	17 E.	Douglas	6.8	53216	73.94	12.41	90.91	41.63	5.93	40.00	6.29	1.55	4.22			0.1

No dimension stone is produced in this area, but several limestone members have been quarried along their outcrops for local use as building stone. Near Topeka, rock from the Hartford Limestone Member of the Topeka has been used in construction of houses, barns, and small bridges. This limestone is difficult to saw because of its hardness, but it can be hand dressed without difficulty (Riser, 1960, p. 110). Near Richland, rock from beds in the Lecompton Limestone is locally used for building stone. Small amounts of stone have also been quarried for local use from the Maple Hill and Tarkio Limestone Members of the Zeandale Limestone and from the Reading Limestone Member of the Emporia Limestone.

Sand and Gravel

All sand and gravel currently (1961) produced commercially in Shawnee County is from the alluvium along the Kansas River. Most of the sand is used for building, for paving, and as fill, although small amounts are used as engine and blast sand. The building industry utilizes most of the gravel, but some is used in paving and as fill.

Deposits of glacial sand and gravel of Kansan age have been quarried at several localities in the mapped area, especially south of the Kansas River. A fairly large amount of material was dug from a morainal deposit along the south side of Shunganunga Creek in the SW SW sec. 10, T. 12 S., R. 15 E.; also, a large pit was formerly operated in the SW SW sec. 24, T. 13 S., R. 16 E. Because these deposits are poorly sorted and contain cemented zones, the pits were probably difficult to operate. Material from both pits was probably used mainly as road metal. North of the Kansas River small deposits, mainly of chert gravel, were quarried in the SW NW sec. 7, T. 11 S., R. 16 E. and in the SW NE sec. 18, T. 11 S., R. 17 E. Small deposits of glacial sand and gravel, such as that in the creekbank in the W2 NW sec. 15, T. 10 S., R. 17 E., probably supplied the needs of local residents.

Clay

Claystone immediately beneath the Nodaway coal bed of the Howard Limestone was formerly dug from a pit on the west side of Topeka in the SE NE sec. 27, T. 11 S., R. 15 E., for the manufacture of brick. Digging operations ceased at this pit in the 1930's, and no clay or shale is currently being dug in Shawnee County for ceramic use. Claystone was dug from the Calhoun Shale along the east side of Deer Creek in the SW sec. 3, T. 12 S., R. 16 E., for several years (around 1950) and was blended with clay from the Dakota Formation (Lower Cretaceous) of central Kansas for the manufacture of small pottery objects.

A sample from near the middle of the Calhoun Shale in the center of the N2 SW sec. 15, T. 11 S., R. 16 E., produced a light weight aggregate with a density of 48.5 pounds per cubic foot (Plummer and Hladik, 1951, p. 60). If this sample was representative, the clayey parts of the Calhoun Shale probably are usable for the production of lightweight aggregate.

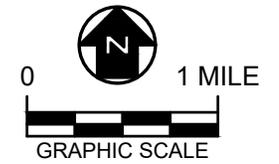
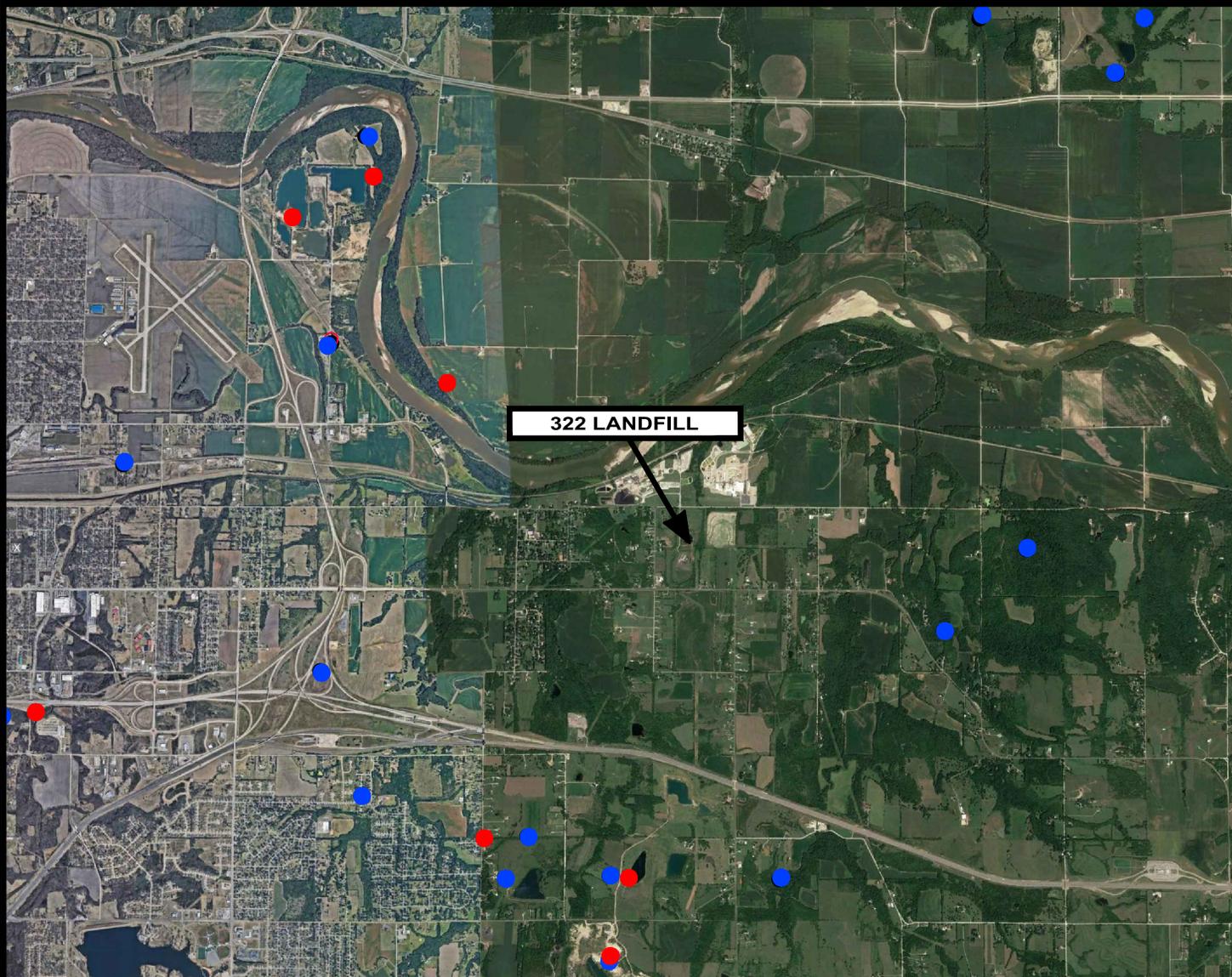
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LEGEND

- ACTIVE
- ABANDONED

NOTES

1. AERIAL PHOTO FROM GOOGLE EARTH, AUGUST 2017.
2. QUARRY LOCATIONS ARE APPROXIMATE.
3. FOR CLARITY, NOT ALL SITE FEATURES MAY BE SHOWN.



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**WESTAR ENERGY
5636 SE 2nd ST., TECUMSEH, KS**

QUARRIES NEAR 322 LANDFILL

DRAWN BY:	ORC	APPROVED BY:	RDS	PROJ. NO.:	631236340	DATE:	OCTOBER 2018
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Industrial Minerals--Shawnee County; Both Active and Abandoned Quarries

163 records returned. You may also choose to [save this data to a file.](#)

[Show Active Quarries](#) || [Show Abandoned Quarries](#) || **Both Active and Abandoned Quarries Shown**

Building Limestone

Company	Type	Location
Native Stone Company 9120 Sw 10th Street Topeka, Ks 66615 785-478-9359	Surface Active	T11S, R14E, Sec. 36, NENE Long: -95.80005, Lat: 39.05585

Coal

Company	Type	Location
Name Unknown	Abandoned	T10S, R16E, Sec. 10, NE Long: -95.61271, Lat: 39.19813
	Abandoned	T11S, R15E, Sec. 11, Long: -95.71516, Lat: 39.10924
	Abandoned	T11S, R15E, Sec. 12, Long: -95.69647, Lat: 39.10933
	Abandoned	T12S, R15E, Sec. 13, Long: -95.69672, Lat: 39.00786

Limestone

Company	Type	Location
Concrete Materails	Abandoned	T12S, R17E, Sec. 7, SW Long: -95.57152, Lat: 39.01887
J.H. & J. Rock Co.	Abandoned	T10S, R15E, Sec. 10, SE Long: -95.72448, Lat: 39.19117

Shawnee Limestone Co.	Abandoned	T11S, R14E, Sec. 35, N2 Long: -95.82565, Lat: 39.05409
Native Stone Company 7820 Southwest 10th Street Topeka, Kansas 66615 913-478-9359	Surface Active	T11S, R14E, Sec. 36, NE Long: -95.80237, Lat: 39.05402
	Surface Active	T12S, R14E, Sec. 2, NWNE Long: -95.82328, Lat: 39.04144
H.C.Luttjohann	Abandoned	T11S, R15E, Sec. 31, SW Long: -95.79324, Lat: 39.04683
Martin Marietta	Abandoned	T12S, R17E, Sec. 18, NW Long: -95.57156, Lat: 39.0116
	Abandoned	T13S, R16E, Sec. 20, SE Long: -95.65494, Lat: 38.90265
Martin Marietta Aggr.	Abandoned	T12S, R17E, Sec. 22, SW Long: -95.51463, Lat: 38.98955
	Abandoned	T12S, R17E, Sec. 27, NE Long: -95.50529, Lat: 38.98226
	Abandoned	T13S, R17E, Sec. 7, SE Long: -95.56142, Lat: 38.9314
Concrete Mateials	Abandoned	T10S, R15E, Sec. 26, NW Long: -95.71468, Lat: 39.1548
(Miller Clarkson)	Abandoned	T11S, R17E, Sec. 33, SE Long: -95.52427, Lat: 39.04778
H.C. Luttjohann	Abandoned	T12S, R14E, Sec. 3, NE Long: -95.83958, Lat: 39.03976
Anderson Oxandale	Abandoned	T12S, R16E, Sec. 11, NE Long: -95.59976, Lat: 39.02604
F.E. Fritts	Abandoned	T12S, R16E, Sec. 22, NE Long: -95.6188, Lat: 38.99702
Hamm, N.R., Quarry, Inc	Abandoned	T10S, R15E, Sec. 11, NE Long: -95.70557, Lat: 39.19835

	Abandoned	T10S, R15E, Sec. 15, NE Long: -95.72446, Lat: 39.18388
	Abandoned	T12S, R13E, Sec. 2, ALL Long: -95.93723, Lat: 39.03696
	Abandoned	T13S, R16E, Sec. 13, SE Long: -95.58083, Lat: 38.91699
Martin Marietta Aggregates 1303 W 42nd Street Topeka, Kansas 66609 913-267-5230	Surface Active	T10S, R15E, Sec. 11, W2SE Long: -95.70796, Lat: 39.19109
	Abandoned	T10S, R15E, Sec. 11, NW Long: -95.71506, Lat: 39.19842
	Surface Abandoned	T10S, R15E, Sec. 11, NW Long: -95.71506, Lat: 39.19842
	Surface Active	T12S, R16E, Sec. 12, Long: -95.58574, Lat: 39.02245
	Surface Active	T12S, R17E, Sec. 7, SW Long: -95.57152, Lat: 39.01887
	Surface Active	T12S, R17E, Sec. 7, SW Long: -95.57152, Lat: 39.01887
	Surface Active	T12S, R17E, Sec. 7, SW Long: -95.57152, Lat: 39.01887
	Surface Active	T12S, R17E, Sec. 18, NW Long: -95.57156, Lat: 39.0116
	Surface Active	T12S, R17E, Sec. 18, NW Long: -95.57156, Lat: 39.0116
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	Surface Active	T12S, R17E, Sec. 22, SESW Long: -95.5123, Lat: 38.98772
	Surface Active	T12S, R17E, Sec. 27, Long: -95.5099, Lat: 38.97864
	Active	T13S, R14E, Sec. 17, Long: -95.88197, Lat: 38.92091
	Abandoned	T13S, R16E, Sec. 20, SESE Long: -95.65263, Lat: 38.90082
	Surface Abandoned	T13S, R16E, Sec. 20, SESE Long: -95.65263, Lat: 38.90082
Surface Active	T13S, R17E, Sec. 7, SE Long: -95.56142, Lat: 38.9314	
Shawnee County 3137 S. E. 29th Street	Surface	T12S, R17E, Sec. 22, SE Long: -95.50537, Lat: 38.98951
	Surface	

Topeka, Kansas 66605 913-266-0192		T12S, R17E, Sec. 27, NE Long: -95.50529, Lat: 38.98226
N.R.Hamm	Abandoned	T10S, R15E, Sec. 11, NE Long: -95.70557, Lat: 39.19835
	Abandoned	T10S, R15E, Sec. 13, SW Long: -95.69615, Lat: 39.17651
	Abandoned	T10S, R15E, Sec. 15, NE Long: -95.72446, Lat: 39.18388
	Abandoned	T11S, R15E, Sec. 8, SE Long: -95.76659, Lat: 39.10516
	Abandoned	T12S, R13E, Sec. 2, Long: -95.93723, Lat: 39.03696
	Abandoned	T12S, R13E, Sec. 23, SW Long: -95.94193, Lat: 38.98995
	Abandoned	T12S, R13E, Sec. 26, Long: -95.93733, Lat: 38.97898
	Abandoned	T12S, R14E, Sec. 4, SE Long: -95.85813, Lat: 39.03271
	Abandoned	T12S, R16E, Sec. 4, SE Long: -95.63692, Lat: 39.03333
	Abandoned	T12S, R17E, Sec. 8, SW Long: -95.55228, Lat: 39.01881
	Abandoned	T13S, R16E, Sec. 13, SE Long: -95.58083, Lat: 38.91699
	Abandoned	T10S, R13W, Sec. 13, NE Long: -98.71753, Lat: 39.18771
G.W.Baker	Abandoned	T10S, R15E, Sec. 29, SE Long: -95.76104, Lat: 39.1476
	Abandoned	T13S, R16E, Sec. 4, SW Long: -95.64639, Lat: 38.94625
Name Unknown	Abandoned	T10S, R15E, Sec. 32, NE Long: -95.76109, Lat: 39.14033
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	Abandoned	T11S, R14E, Sec. 29, NW Long: -95.88565, Lat: 39.06912
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	Abandoned	T11S, R15E, Sec. 31, SE Long: -95.78432, Lat: 39.04697
	Abandoned	T12S, R14E, Sec. 11, NE Long: -95.82098, Lat: 39.02529

	Abandoned	T12S, R14E, Sec. 18, SW Long: -95.90475, Lat: 39.00404
	Abandoned	T12S, R15E, Sec. 7, NW Long: -95.79346, Lat: 39.02511
	Abandoned	T12S, R15E, Sec. 31, S2 Long: -95.78931, Lat: 38.95982
	Abandoned	T12S, R16E, Sec. 15, E2 Long: -95.61874, Lat: 39.0079
	Abandoned	T12S, R16E, Sec. 22, SE Long: -95.6188, Lat: 38.98975
	Abandoned	T12S, R16E, Sec. 26, NW Long: -95.60944, Lat: 38.98247
	Abandoned	T12S, R16E, Sec. 27, NW Long: -95.62807, Lat: 38.98251
	Abandoned	T12S, R16E, Sec. 27, NE Long: -95.61877, Lat: 38.98249
	Abandoned	T12S, R17E, Sec. 20, NW Long: -95.55196, Lat: 38.99702
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	Abandoned	T13S, R16E, Sec. 9, SE Long: -95.63683, Lat: 38.93171
	Abandoned	T13S, R16E, Sec. 15, NW Long: -95.62739, Lat: 38.9244
	Abandoned	T13S, R16E, Sec. 24, NE Long: -95.58073, Lat: 38.90972
	Abandoned	T13S, R16E, Sec. 31, SWNW Long: -95.68451, Lat: 38.87905
	Abandoned	T13S, R16E, Sec. 31, NW Long: -95.68221, Lat: 38.88085
(O.F.Griffen)	Abandoned	T11S, R16E, Sec. 16, NW Long: -95.64542, Lat: 39.09882
Concrete Matrials	Abandoned	T12S, R16E, Sec. 2, Long: -95.60416, Lat: 39.03702
N.R. Hamm Quarries, Inc. P. O. Box 17 One Perry Plaza Perry, Ks 66073-0017 785-597-5111	Surface Active	T10S, R15E, Sec. 11, NE Long: -95.70557, Lat: 39.19835
	Surface Abandoned	T10S, R15E, Sec. 11, NE Long: -95.70557, Lat: 39.19835
	Surface Active	T10S, R15E, Sec. 15, SE Long: -95.72433, Lat: 39.17661

	Surface Abandoned	T10S, R15E, Sec. 15, NE Long: -95.72446, Lat: 39.18388
	Surface Active	T10S, R15E, Sec. 15, SE Long: -95.72433, Lat: 39.17661
	Surface Active	T12S, R13E, Sec. 2, N2 Long: -95.93723, Lat: 39.04049
	Surface Active	T12S, R13E, Sec. 2, NW Long: -95.94186, Lat: 39.0405
	Surface Abandoned	T12S, R13E, Sec. 2, ALL Long: -95.93723, Lat: 39.03696
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	Surface Abandoned	T13S, R16E, Sec. 13, SE Long: -95.58083, Lat: 38.91699
Martin Marietta Materials Inc 11252 Aurora Street Des Moines, Ia 50322 515-254-0050	Surface Active	T10S, R15E, Sec. 11, E2 Long: -95.70557, Lat: 39.19471
	Surface Active	T12S, R16E, Sec. 12, E2 Long: -95.58104, Lat: 39.02248
	Surface Active	T13S, R17E, Sec. 7, E2 Long: -95.56142, Lat: 38.93501
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	Abandoned	T10S, R15E, Sec. 14, SE Long: -95.70556, Lat: 39.17654
	Abandoned	T10S, R15E, Sec. 14, SW Long: -95.71506, Lat: 39.17657
	Abandoned	T10S, R15E, Sec. 23, SW Long: -95.71475, Lat: 39.16204
	Abandoned	T11S, R14E, Sec. 36, Long: -95.80701, Lat: 39.05039
	Abandoned	T11S, R16E, Sec. 15, NW Long: -95.62668, Lat: 39.09889
	Abandoned	T12S, R14E, Sec. 2, N2 Long: -95.82561, Lat: 39.03967
	Abandoned	T12S, R16E, Sec. 12, SE Long: -95.5811, Lat: 39.01884
	Abandoned	T12S, R17E, Sec. 4, NW Long: -95.5336, Lat: 39.04054
	Abandoned	T13S, R14E, Sec. 17, SE Long: -95.87733, Lat: 38.91721
	Abandoned	T13S, R15E, Sec. 30, SW Long: -95.7933, Lat: 38.88718

	Abandoned	T13S, R16E, Sec. 10, SE Long: -95.61816, Lat: 38.93166
	Abandoned	T13S, R16E, Sec. 20, SW Long: -95.66411, Lat: 38.90266
P.H.Netherland	Abandoned	T10S, R15E, Sec. 26, NE Long: -95.70546, Lat: 39.15476

Sand & Gravel

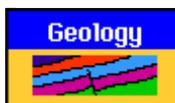
Company	Type	Location
Holliday Sand & Gravel 6811 W 63rd Street Overland Park Ks 66202 913-236-5920	Pit Active	T11S, R16E, Sec. 23, W2S2 Long: -95.60766, Lat: 39.07708
Victory Sand & Gravel Inc 10820 W. 64th St. Shawnee, Ks 66203 913-962-1711	River Dredge Active	T11S, R15E, Sec. 24, SW Long: -95.70128, Lat: 39.07713
Kansas Sand And Concrete 531 N. Tyler Topeka, Kansas 66608 913-235-6284	River Dredge Active	T11S, R15E, Sec. 30, NE Long: -95.78445, Lat: 39.06879
Page	Abandoned	T11S, R13E, Sec. 10, SE Long: -95.95129, Lat: 39.1054
Consumers Sand Co.	Abandoned	T11S, R16E, Sec. 30, NW Long: -95.68288, Lat: 39.06995
Fufe Sand	Abandoned	T11S, R14E, Sec. 21, Long: -95.86261, Lat: 39.07989
Victory Sand Company 4919 Lamar Mission, Kansas 66022 913-233-3285	River Dredge Active	T11S, R15E, Sec. 25, NW Long: -95.70129, Lat: 39.06986
Consumers Sand Company, Inc. 924 West Railroad Street N. Topeka, Kansas 66608 913-232-5117	River Dredge Abandoned	T11S, R15E, Sec. 26, N2 Long: -95.7151, Lat: 39.06971

Meier Ready Mix	Abandoned	T11S, R16E, Sec. 26, Long: -95.60336, Lat: 39.06617
Miere Ready Mix	Abandoned	T11S, R16E, Sec. 32, Long: -95.65987, Lat: 39.05156
Martin Marietta	Abandoned	T12S, R17E, Sec. 19, Long: -95.5666, Lat: 38.99341
Kansas Sand Co.	Abandoned	T11S, R16E, Sec. 29, Long: -95.65971, Lat: 39.06622
	Abandoned	T11S, R16E, Sec. 30, NW Long: -95.68288, Lat: 39.06995
Kansas Sand & Concrete Inc Po Box 656 Topeka, Ks 66608 785-235-6284	River Dredge Active	T11S, R16E, Sec. 30, NW Long: -95.68288, Lat: 39.06995
Meier'S Ready Mix Inc Po Box 8477 Topeka, Ks 66608 785-233-2423	River Dredge Active	T11S, R15E, Sec. 29, NW Long: -95.77536, Lat: 39.06885
	Pit Active	T11S, R16E, Sec. 23, E2 Long: -95.59874, Lat: 39.08073
	Pit Active	T11S, R16E, Sec. 23, E2 Long: -95.59874, Lat: 39.08073
Kansas Sand & Concrete 531 N. Tyler Topeka, Ks 66608 913-235-6284	River Dredge Active	T11S, R15E, Sec. 30, NW Long: -95.7933, Lat: 39.06875
A.V.Adkins	Abandoned	T10S, R13E, Sec. 24, SW Long: -95.91914, Lat: 39.16231
	Abandoned	T10S, R13E, Sec. 24, SE Long: -95.90985, Lat: 39.16228
(Nels Olson)	Abandoned	T11S, R16E, Sec. 16, SW Long: -95.64526, Lat: 39.09145
Martin Marietta Aggregates 1303 W 42nd Street Topeka, Kansas 66609 913-267-5230	Abandoned	T11S, R15E, Sec. 25, NW Long: -95.70129, Lat: 39.06986
	Abandoned	T11S, R15E, Sec. 25, NW Long: -95.70129, Lat: 39.06986
	Abandoned	T12S, R17E, Sec. 19, ALL Long: -95.5666, Lat: 38.99341

	Surface Abandoned	T12S, R17E, Sec. 19, ALL Long: -95.5666, Lat: 38.99341
Shawnee County	Abandoned	T10S, R14E, Sec. 9, SE Long: -95.85439, Lat: 39.1913
	Abandoned	T11S, R15E, Sec. 9, SW Long: -95.75734, Lat: 39.10527
Topeka Sand Company Route 4 Topeka, Kansas 66603 913-233-9849	Surface Active	T11S, R16E, Sec. 23, SE Long: -95.59872, Lat: 39.07709
	Surface Active	T11S, R16E, Sec. 23, E2 Long: -95.59874, Lat: 39.08073
Name Unknown	Abandoned	T10S, R13E, Sec. 35, NE Long: -95.92861, Lat: 39.14062
	Abandoned	T10S, R13E, Sec. 36, SW Long: -95.91933, Lat: 39.13334
	Abandoned	T10S, R14E, Sec. 31, NE Long: -95.89143, Lat: 39.14059
	Abandoned	T10S, R14E, Sec. 31, NW Long: -95.90067, Lat: 39.14059
	Abandoned	T11S, R13E, Sec. 1, Long: -95.91866, Lat: 39.12292
	Abandoned	T11S, R13E, Sec. 1, NE Long: -95.91396, Lat: 39.12628
	Abandoned	T11S, R13E, Sec. 23, SW Long: -95.94182, Lat: 39.0766
	Abandoned	T11S, R14E, Sec. 1, NE Long: -95.80215, Lat: 39.12616
	Abandoned	T11S, R15E, Sec. 14, SW Long: -95.71992, Lat: 39.09127
	Abandoned	T11S, R15E, Sec. 30, NE Long: -95.78445, Lat: 39.06879
	Abandoned	T11S, R16E, Sec. 7, NE Long: -95.67355, Lat: 39.11305
	Abandoned	T11S, R16E, Sec. 9, NW Long: -95.64553, Lat: 39.11334
	Abandoned	T11S, R16E, Sec. 34, NW Long: -95.62695, Lat: 39.05522
	Abandoned	T12S, R13E, Sec. 23, NW Long: -95.94189, Lat: 38.99722
	Abandoned	T13S, R16E, Sec. 23, SE Long: -95.59912, Lat: 38.90249
	Abandoned	T13S, R16E, Sec. 24, NW Long: -95.59, Lat: 38.90971

	Abandoned	T13S, R16E, Sec. 24, NE Long: -95.58073, Lat: 38.90972
	Abandoned	T13S, R17E, Sec. 17, NW Long: -95.55177, Lat: 38.92408
Victory Sand & Concrete	Abandoned	T11S, R15E, Sec. 25, Long: -95.69665, Lat: 39.06618
Consumers Sand Co., Inc	Abandoned	T11S, R15E, Sec. 26, N2 Long: -95.7151, Lat: 39.06971
Meier'S Ready Mix, Inc. P. O. Box 8477 Topeka, Kansas 66608 913-233-2423	Active	T11S, R15E, Sec. 29, NE Long: -95.76604, Lat: 39.06893
	River Dredge Active	T11S, R16E, Sec. 23, SW Long: -95.60766, Lat: 39.07708
	Active	T11S, R16E, Sec. 26, ALL Long: -95.60336, Lat: 39.06617
	Active	T11S, R16E, Sec. 32, ALL Long: -95.65987, Lat: 39.05156
River Sand Co.	Abandoned	T11S, R15E, Sec. 26, N2 Long: -95.7151, Lat: 39.06971
Shoffner Sand	Abandoned	T11S, R16E, Sec. 23, NE Long: -95.59877, Lat: 39.08438

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Industrial Minerals--Jefferson County; Both Active and Abandoned Quarries

112 records returned. You may also choose to [save this data to a file.](#)

[Show Active Quarries](#) || [Show Abandoned Quarries](#) || **Both Active and Abandoned Quarries Shown**

Coal

Company	Type	Location
Name Unknown	Abandoned	T7S, R17E, Sec. 36, SWNE Long: -95.46716, Lat: 39.40085
	Abandoned	T8S, R18E, Sec. 18, E2 Long: -95.44636, Lat: 39.355
	Abandoned	T9S, R18E, Sec. 10, NW Long: -95.39934, Lat: 39.2848

Limestone

Company	Type	Location
(Mrs Cora Barnes)	Abandoned	T9S, R17E, Sec. 19, SW Long: -95.56628, Lat: 39.24881
Jefferson County	Abandoned	T9S, R19E, Sec. 10, Long: -95.28297, Lat: 39.28142
	Abandoned	T10S, R18E, Sec. 18, NE Long: -95.44526, Lat: 39.18355
	Abandoned	T10S, R19E, Sec. 5, NW Long: -95.32468, Lat: 39.21237
	Abandoned	T11S, R19E, Sec. 12, NE Long: -95.24753, Lat: 39.11317
Perry Jones	Abandoned	T10S, R18E, Sec. 6, SE Long: -95.44542, Lat: 39.20528
Grossman & Peterson	Abandoned	T7S, R20E, Sec. 32, E2SW Long: -95.21002, Lat: 39.39378

Meiers'S Ready Mix, Inc. P. O. Box 8477 Topeka, Kansas 66608 913-233-2423	Surface Active	T10S, R16E, Sec. 25, N2SW Long: -95.58456, Lat: 39.14921
	Surface Active	T10S, R16E, Sec. 25, Long: -95.57988, Lat: 39.15101
Roy Baker Quarries	Abandoned	T8S, R18E, Sec. 20, NW Long: -95.43672, Lat: 39.34393
	Abandoned	T8S, R18E, Sec. 20, NE Long: -95.42747, Lat: 39.34398
	Abandoned	T9S, R17E, Sec. 36, NW Long: -95.47372, Lat: 39.2269
N. R. Hamm	Abandoned	T9S, R18E, Sec. 5, Long: -95.43234, Lat: 39.29624
	Abandoned	T11S, R17E, Sec. 16, Long: -95.5294, Lat: 39.09477
Ebert Const. Co.	Abandoned	T10S, R16E, Sec. 25, SW Long: -95.58454, Lat: 39.1474
Martin Marietta	Abandoned	T11S, R18E, Sec. 11, NW Long: -95.3867, Lat: 39.11274
(F.A Champion)	Abandoned	T11S, R19E, Sec. 12, SE Long: -95.24743, Lat: 39.1059
(Gerald Dorman)	Abandoned	T8S, R20E, Sec. 5, NE Long: -95.20305, Lat: 39.38654
Hamm, N.R., Quarry, Inc	Abandoned	T9S, R18E, Sec. 4, NE Long: -95.40887, Lat: 39.30005
	Abandoned	T9S, R18E, Sec. 5, ALL Long: -95.43234, Lat: 39.29624
	Abandoned	T11S, R17E, Sec. 15, NW Long: -95.51542, Lat: 39.09833
	Abandoned	T11S, R17E, Sec. 15, NW Long: -95.51542, Lat: 39.09833
	Abandoned	T11S, R17E, Sec. 15, ALL Long: -95.51074, Lat: 39.09471
	Abandoned	T11S, R17E, Sec. 15, NW Long: -95.51542, Lat: 39.09833

	Abandoned	T11S, R19E, Sec. 36, ALL Long: -95.2515, Lat: 39.05143
N.R. Hamm	Abandoned	T11S, R19E, Sec. 29, W2NE Long: -95.32381, Lat: 39.06925
Baker, Roy, Quarry, Inc. P. O. Box 100 Valley Falls, Kansas 66088 913-945-3213	Surface	T7S, R20E, Sec. 32, ALL
	Active	Long: -95.2077, Lat: 39.39739
	Surface	T8S, R18E, Sec. 20, NE
	Active	Long: -95.42747, Lat: 39.34398
	Surface	T8S, R18E, Sec. 20, NE
	Active	Long: -95.42747, Lat: 39.34398
N.R.Hamm	Surface	T8S, R18E, Sec. 20, NE
	Active	Long: -95.42747, Lat: 39.34398
	Surface	T8S, R18E, Sec. 20, NE
	Active	Long: -95.42747, Lat: 39.34398
	Surface	T9S, R18E, Sec. 4, NE
	Abandoned	Long: -95.40887, Lat: 39.30005
	Surface	T9S, R19E, Sec. 1, SW
	Abandoned	Long: -95.24983, Lat: 39.29247
	Surface	T9S, R19E, Sec. 4, SE
	Abandoned	Long: -95.29689, Lat: 39.29242
	Surface	T9S, R19E, Sec. 21, SW
	Abandoned	Long: -95.30614, Lat: 39.24868
	Surface	T11S, R17E, Sec. 15, NW
	Abandoned	Long: -95.51542, Lat: 39.09833
	Surface	T11S, R18E, Sec. 2, SW
Abandoned	Long: -95.3867, Lat: 39.11951	
Surface	T11S, R18E, Sec. 3, SE	
Abandoned	Long: -95.39601, Lat: 39.1195	
Surface	T11S, R18E, Sec. 3, SW	
Abandoned	Long: -95.40534, Lat: 39.11945	
Surface	T11S, R19E, Sec. 29, NW	
Abandoned	Long: -95.33083, Lat: 39.06924	
Surface	T11S, R19E, Sec. 30, NW	
Abandoned	Long: -95.34927, Lat: 39.06923	
Surface	T11S, R19E, Sec. 35, SW	
Abandoned	Long: -95.2746, Lat: 39.0477	
Surface	T11S, R19E, Sec. 36,	
Abandoned	Long: -95.2515, Lat: 39.05143	
(Percy Mousey)	Abandoned	T9S, R18E, Sec. 20, SE Long: -95.42708, Lat: 39.24822
(B.W. Nevin)	Abandoned	T11S, R19E, Sec. 20, SW Long: -95.3309, Lat: 39.07648

Martin Marietta Aggregates P. O. Box 5904 Topeka, Kansas 66605 913-267-5230	Surface Active	T9S, R18E, Sec. 24, SW Long: -95.36172, Lat: 39.2486
	Abandoned	T11S, R18E, Sec. 11, NW Long: -95.3867, Lat: 39.11274
	Surface Abandoned	T11S, R18E, Sec. 11, NW Long: -95.3867, Lat: 39.11274
Hamm, N. R., Quarry, Inc. P. O. Box17 Perry, Kansas 66073 913-597-5111	Surface Active	T11S, R19E, Sec. 29, NW Long: -95.33083, Lat: 39.06924
Name Unknown	Abandoned	T7S, R16E, Sec. 25, SE Long: -95.57484, Lat: 39.40826
	Abandoned	T7S, R20E, Sec. 33, NWNW Long: -95.19611, Lat: 39.4028
	Abandoned	T8S, R17E, Sec. 12, SE Long: -95.46523, Lat: 39.36612
	Abandoned	T8S, R17E, Sec. 22, NWSW Long: -95.51422, Lat: 39.3383
	Abandoned	T8S, R19E, Sec. 2, SWSW Long: -95.27052, Lat: 39.37794
	Abandoned	T8S, R19E, Sec. 10, SESW Long: -95.28476, Lat: 39.36359
	Abandoned	T8S, R20E, Sec. 29, NWSE Long: -95.20538, Lat: 39.3231
	Abandoned	T9S, R18E, Sec. 20, NW Long: -95.43651, Lat: 39.25548
	Abandoned	T9S, R19E, Sec. 20, SWSE Long: -95.31792, Lat: 39.24681
	Abandoned	T9S, R19E, Sec. 32, SW Long: -95.32474, Lat: 39.2196
	Abandoned	T9S, R19E, Sec. 34, NW Long: -95.28724, Lat: 39.22688
	Abandoned	T10S, R18E, Sec. 5, Long: -95.4315, Lat: 39.20875
	Abandoned	T10S, R19E, Sec. 4, SE Long: -95.29669, Lat: 39.20507
	Abandoned	T10S, R19E, Sec. 11, SW Long: -95.26839, Lat: 39.19051
	Abandoned	T10S, R19E, Sec. 22, NW Long: -95.28706, Lat: 39.16875

	Abandoned	T11S, R17E, Sec. 6, SWSE Long: -95.56427, Lat: 39.1183
	Abandoned	T11S, R17E, Sec. 7, NWNE Long: -95.5643, Lat: 39.11494
	Abandoned	T11S, R19E, Sec. 1, S2 Long: -95.25213, Lat: 39.1198
	Abandoned	T11S, R19E, Sec. 10, SE Long: -95.28437, Lat: 39.1057
	Abandoned	T11S, R19E, Sec. 12, N2 Long: -95.25208, Lat: 39.11311
	Abandoned	T11S, R20E, Sec. 32, NE Long: -95.21045, Lat: 39.05498
Martin Marietta Materials Inc 11252 Aurora Street Des Moines, Ia 50322 515-254-0050	Surface Active	T9S, R18E, Sec. 24, E2 Long: -95.35229, Lat: 39.2522
N.R. Hamm Quarries, Inc. P. O. Box 17 One Perry Plaza Perry, KS 66073-0017 785-597-5111	Surface Active	T7S, R20E, Sec. 32, ALL Long: -95.2077, Lat: 39.39739
	Surface Active	T7S, R20E, Sec. 32, E2SW Long: -95.21002, Lat: 39.39378
	Surface Active	T8S, R16E, Sec. 25, NW Long: -95.5842, Lat: 39.32843
	Surface Active	T8S, R16E, Sec. 25, NW Long: -95.5842, Lat: 39.32843
	Surface Abandoned	T9S, R18E, Sec. 4, NE Long: -95.40887, Lat: 39.30005
	Surface Abandoned	T9S, R18E, Sec. 5, ALL Long: -95.43234, Lat: 39.29624
	Surface Active	T9S, R19E, Sec. 12, NW Long: -95.24987, Lat: 39.28522
	Surface Active	T9S, R19E, Sec. 12, NW Long: -95.24987, Lat: 39.28522
	Surface Active	T10S, R17E, Sec. 9, N2SW Long: -95.52875, Lat: 39.19286
	Surface Active	T10S, R17E, Sec. 9, SW Long: -95.52873, Lat: 39.19104
	Surface Abandoned	T11S, R17E, Sec. 15, NW Long: -95.51542, Lat: 39.09833
	Surface Abandoned	T11S, R17E, Sec. 15, NW Long: -95.51542, Lat: 39.09833
	Surface Abandoned	T11S, R17E, Sec. 15, NW Long: -95.51542, Lat: 39.09833

	Surface Abandoned	T11S, R17E, Sec. 15, ALL Long: -95.51074, Lat: 39.09471
	Surface Active	T11S, R17E, Sec. 15, W2SW Long: -95.51771, Lat: 39.09109
	Surface Active	T11S, R17E, Sec. 16, ALL Long: -95.5294, Lat: 39.09477
	Surface Active	T11S, R17E, Sec. 16, ALL Long: -95.5294, Lat: 39.09477
	Surface Active	T11S, R17E, Sec. 16, ALL Long: -95.5294, Lat: 39.09477
	Surface Active	T11S, R19E, Sec. 30, N2 Long: -95.34468, Lat: 39.06923
	Surface Active	T11S, R19E, Sec. 35, E2SE Long: -95.26305, Lat: 39.04775
	Surface Active	T11S, R19E, Sec. 35, E2SE Long: -95.26305, Lat: 39.04775
	Surface Active	T11S, R19E, Sec. 35, E2SE Long: -95.26305, Lat: 39.04775
	Surface Active	T11S, R19E, Sec. 35, NW Long: -95.27467, Lat: 39.05496
	Surface Abandoned	T11S, R19E, Sec. 36, ALL Long: -95.2515, Lat: 39.05143
	Concrete Materials	T9S, R17E, Sec. 22, SW Abandoned Long: -95.51151, Lat: 39.24881
	Abandoned	T9S, R18E, Sec. 4, NW Long: -95.4183, Lat: 39.30001
	Abandoned	T9S, R18E, Sec. 6, NW Long: -95.45586, Lat: 39.30014
	Abandoned	T9S, R18E, Sec. 24, SW Long: -95.36172, Lat: 39.2486
	Abandoned	T10S, R16E, Sec. 25, NE Long: -95.57523, Lat: 39.15463
	Abandoned	T10S, R17E, Sec. 34, SE Long: -95.5007, Lat: 39.13275
	Abandoned	T11S, R17E, Sec. 9, SW Long: -95.53412, Lat: 39.10567
	Abandoned	T11S, R18E, Sec. 10, NE Long: -95.39599, Lat: 39.11272
Ebert Construction Company	Surface	T10S, R16E, Sec. 25, N2SW
P. O. Box 198	Active	Long: -95.58456, Lat: 39.14921
Wamego, Kansas 66547	Surface	T10S, R16E, Sec. 25,
913-456-2455	Active	Long: -95.57988, Lat: 39.15101

Reno Construction Co.	Abandoned	T9S, R18E, Sec. 32, NW Long: -95.4363, Lat: 39.2265
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Sand & Gravel

Company	Type	Location
Name Unknown	Abandoned	T10S, R17E, Sec. 15, NE Long: -95.5008, Lat: 39.18372
	Abandoned	T11S, R17E, Sec. 18, NE Long: -95.56209, Lat: 39.09861
Fyfe Sand Co.	Abandoned	T11S, R16E, Sec. 25, NW Long: -95.58958, Lat: 39.06977
Holliday S & G	Abandoned	T11S, R18E, Sec. 28, N2 Long: -95.41869, Lat: 39.06921

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