

# Final Work Plan for Targeted Investigation at Inman, Kansas

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Environmental Science Division



United States Department of Agriculture

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# Final Work Plan for Targeted Investigation at Inman, Kansas

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by  
Applied Geosciences and Environmental Management Section  
Environmental Science Division, Argonne National Laboratory

October 2007



**United States Department of Agriculture**

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## Notation

AGEM	Applied Geosciences and Environmental Management
AMSL	above mean sea level
AOC	administrative order on consent
ASCS	Agricultural Stabilization and Conservation Service
BGL	below ground level
°C	degree(s) Celsius
CCC	Commodity Credit Corporation
CPT	cone penetrometer
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
gal	gallon(s)
gpm	gallon(s) per minute
h	hour
I.D.	inner diameter
IDW	investigation-derived waste
in.	inch(es)
KDHE	Kansas Department of Health and Environment
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
MCL	maximum contaminant level
mg/L	milligram(s) per liter
mi	mile(s)
NAIP	National Agricultural Imagery Program
pg/g	picogram(s) per gram
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
USDA	U.S. Department of Agriculture
VOC	volatile organic compound

## Final Work Plan for Targeted Investigation at Inman, Kansas

### 1 Introduction

In 1997, low levels of carbon tetrachloride (below the maximum contaminant level [MCL] of 5 µg/L) were detected in groundwater at Inman, Kansas, by the Kansas Department of Health and Environment (KDHE). The 1997 KDHE sampling was conducted under the U.S. Department of Agriculture (USDA) private well sampling program. The Commodity Credit Corporation (CCC), a USDA agency, operated a grain storage facility in Inman from 1954 to 1965. Carbon tetrachloride is the contaminant of primary concern at sites associated with former CCC/USDA grain storage operations.

Inman is located in southwest McPherson County, approximately 10 mi southwest of the city of McPherson (Figure 1.1). To determine whether the former CCC/USDA facility at Inman is a potential contaminant source and its possible relationship to the contamination in groundwater, the CCC/USDA has agreed to conduct an investigation at Inman, in accordance with the Intergovernmental Agreement between the KDHE and the Farm Service Agency of the USDA.

For this work plan, Argonne compiled historical data related to the previous investigations and grain storage operations at Inman. Through a review of documents acquired from all available sources, other potential contaminant source areas (in addition to the former CCC/USDA facility) have been identified as (1) the commercial grain storage structures northwest of Inman, along the railroad right-of-way, and (2) small former private grain storage facilities west of Main Street and near the former CCC/USDA facility at the southern edge of Inman (Figure 1.2). Previous investigations and the potential source areas are discussed in Section 2.

On the basis of the analyses of historical data, the following specific technical objectives are proposed for the targeted investigation at Inman:

- Evaluate the potential source of carbon tetrachloride at the former CCC/USDA facility.

- Determine the relationship of potential contamination at the former CCC/USDA facility to contamination identified in 1997 in groundwater samples from four private wells to the west and southwest.
- Delineate the extent of potential contamination associated with the former CCC/USDA facility.

The detailed scope of work is outlined in Section 3. The results of the proposed work will provide the basis for recommending future actions, with the ultimate goal of classifying the Inman site at *no further action* status.

The proposed activities are to be performed on behalf of the CCC/USDA by the Environmental Science Division of Argonne National Laboratory, a nonprofit, multidisciplinary research center operated by the UChicago Argonne, LLC, for the U.S. Department of Energy. Argonne provides technical assistance to the CCC/USDA concerning environmental site characterization and remediation at former grain storage facilities.

Argonne issued a *Master Work Plan* (Argonne 2002) that has been approved by the KDHE. The *Master Work Plan* describes the general scope of all investigations at former CCC/USDA facilities in Kansas and provides guidance for these investigations. That document should be consulted for the complete details of plans for work associated with the former CCC/USDA facility at Inman, Kansas.

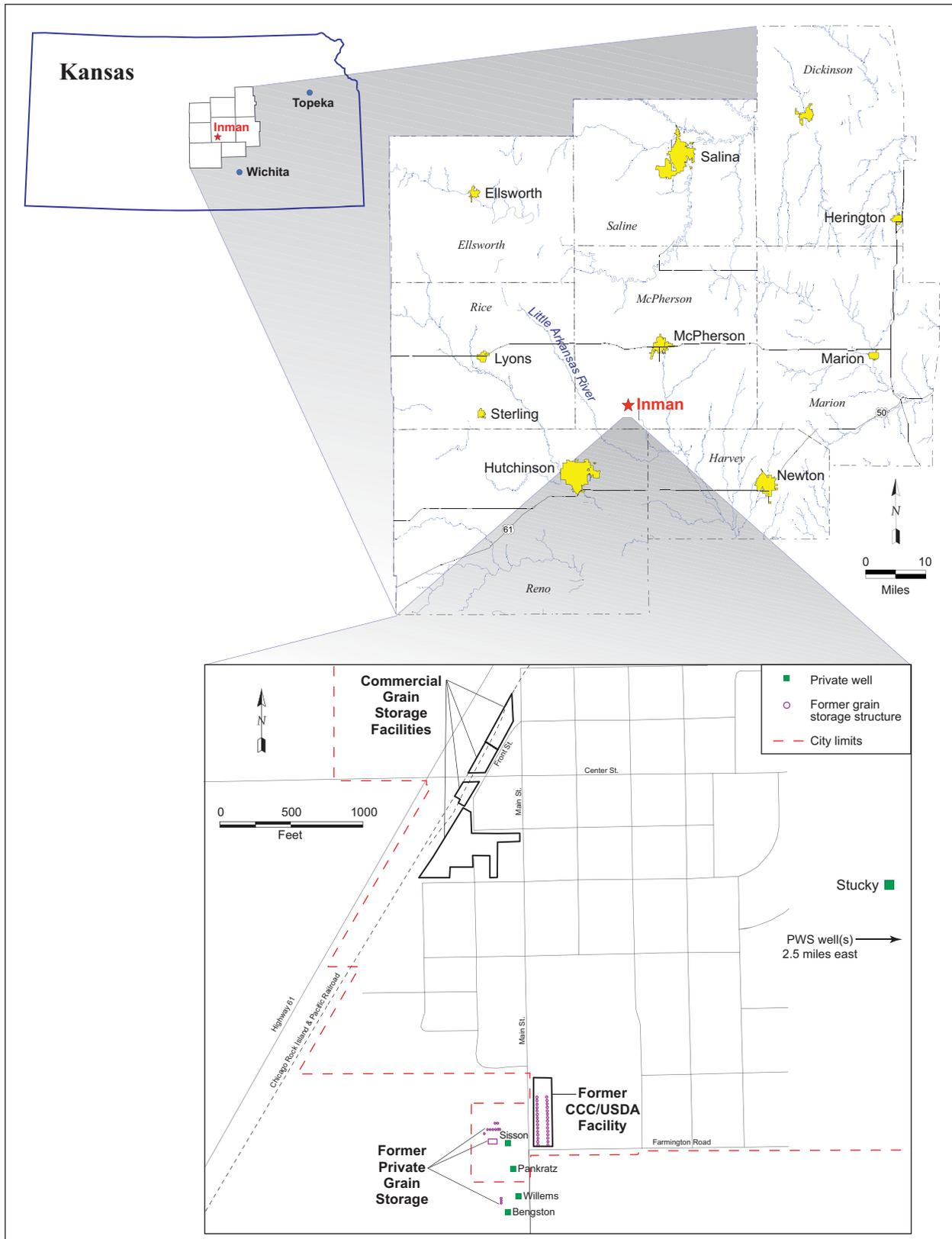


FIGURE 1.1 Location of Inman, Kansas.

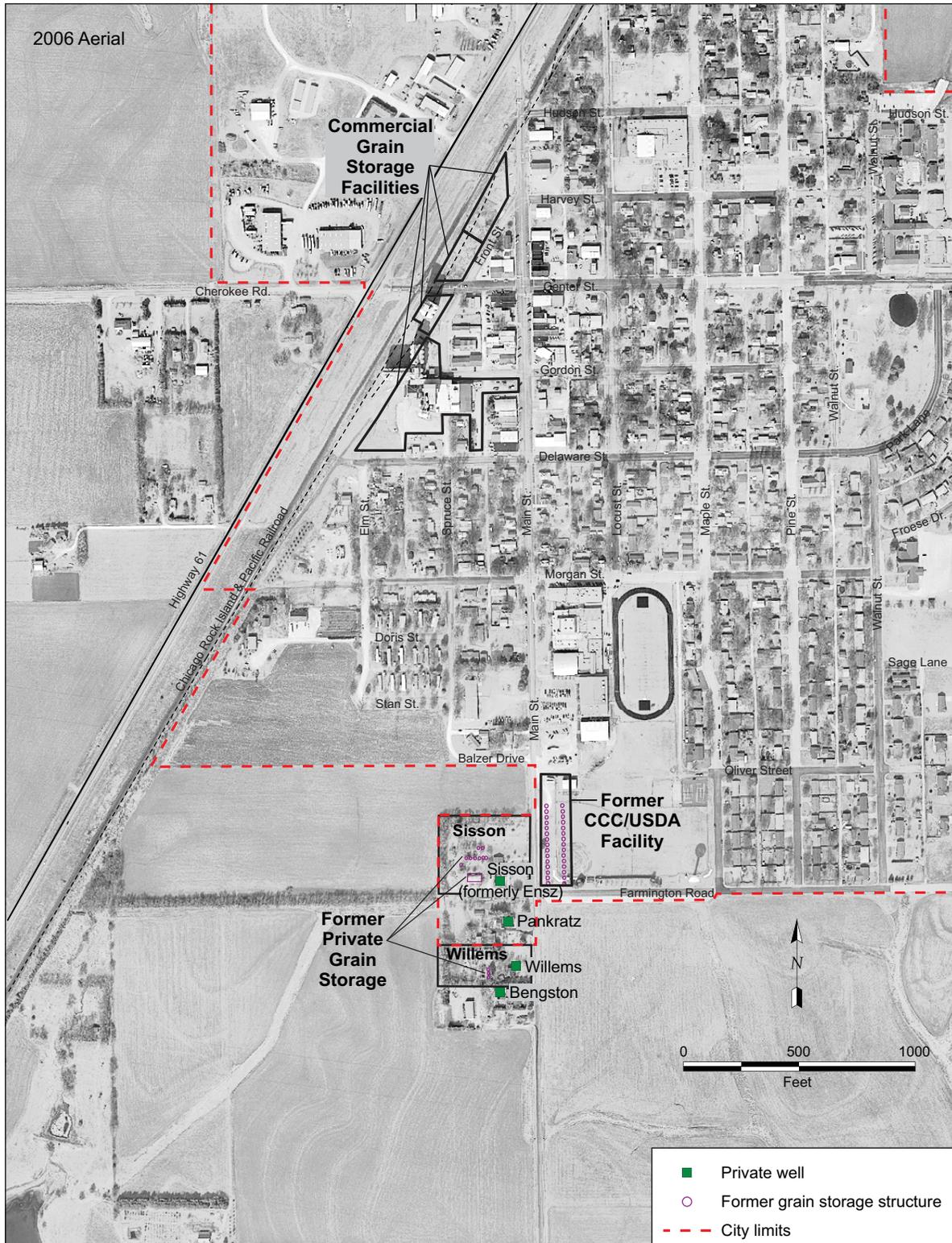


FIGURE 1.2 Locations of the former CCC/USDA facility, the former small private grain storage facilities and adjacent contaminated wells west of Main Street, the Stucky private well to the northeast, and commercial grain storage facilities northwest of Inman.

## **2 Background and Previous Studies**

Inman, Kansas, is a small rural city located in southwest McPherson County, in Sections 8, 9, 16, and 17; Township 21 South; Range 4 West. The 2000 Census recorded 1,142 people in 518 housing units in the city of Inman. The residents of the city are served by a public water supply system that obtains water from wells located 2.5 mi east of Inman.

Small private grain storage facilities were operated prior to 1970 by residents at two locations near the southern edge of the town (on the present Sisson and Willems properties), west and southwest of the former CCC/USDA facility. In addition, commercial grain storage facilities are located along the railroad right-of-way northwest of Inman (Figure 1.2). This section summarizes the results of previous investigations, geologic/hydrogeologic conditions, and potential sources for contamination at Inman.

### **2.1 Previous Investigations**

The limited investigations of the carbon tetrachloride contamination at Inman conducted to date include the following KDHE investigations:

- Private well sampling in 1997 and 1998
- Pre-CERLIS Site Reconnaissance and Evaluation in 1998
- Private well sampling in 2005

These prior investigations, as well as an action in 2006 to provide an alternate drinking water supply for two residences, are discussed below.

#### **2.1.1 Private Well Sampling in 1997 and 1998**

In October 1997, four private wells were sampled by the KDHE as part of the state-wide USDA private well sampling program conducted to identify potentially contaminated sites (Table 2.1 and Figure 2.1). Two of the sampled wells (Sisson/Ensz and Pankratz) were inside the

TABLE 2.1 Analytical results from prior investigations at the former CCC/USDA facility in Inman, Kansas. Sources of data: KDHE (1998a,b, 2005a).

Location	Depth (ft BGL)	Date	Concentration ( $\mu\text{g/L}$ in water; $\mu\text{g/kg}$ in soil)			
			Field Analysis	Off-Site Laboratory Analysis		
			Carbon Tetrachloride	Carbon Tetrachloride	Chloroform	Methylene Chloride
<i>Sampling by the KDHE for the USDA Private Well Sampling Program in October 1997 and January 1998</i>						
Sisson (formerly Ensz) <sup>a</sup>	Unknown	10/17/97	– <sup>b</sup>	3.2	0.9	ND (0.5) <sup>c</sup>
Pankratz <sup>a</sup>	Unknown	10/17/97	–	4.3	1.6	ND (0.5)
Willems <sup>d,e</sup>	Unknown					
Bengston <sup>d</sup>	Unknown	10/17/97	–	4.1	1.2	ND (0.5)
Stucky	Unknown	10/17/97	–	ND (0.5)	ND (0.5)	ND (0.5)
Pankratz <sup>a</sup>	Unknown	1/28/98	–	3.9	0.7	ND (0.5)
Bengston	Unknown	1/28/98	–	4.1	0.8	ND (0.5)
<i>Soil sampling by the KDHE in April 1998</i>						
SP-1	11.5	4/29/98	ND (0.2)	–	–	–
SP-1	21.5	4/29/98	0.4	–	–	–
SP-2	11.5	4/29/98	0.3	–	–	–
SP-2	21.5	4/29/98	2.5	ND (1)	ND (1)	2.6 B <sup>f</sup>
SP-3	11.5	4/29/98	ND (0.2)	–	–	–
SP-3	21.5	4/29/98	0.5	ND (1)	ND (1)	2.6 B
SP-4	11.5	4/30/98	ND (0.2)	–	–	–
SP-4	21.5	4/30/98	ND (0.2)	–	–	–
SP-5	11.5	4/30/98	ND (0.2)	–	–	–
SP-5	21.5	4/30/98	0.3	–	–	–
<i>Private well sampling by the KDHE in September 2005</i>						
Pankratz <sup>a</sup>	Unknown	9/14/05	–	7.4	1.8	ND (0.5)
Bengston <sup>d</sup>	Unknown	9/14/05	–	6.4	1.4	ND (0.5)
Pankratz <sup>a</sup>	Unknown	9/26/05	–	4.5	1.3	ND (0.9)
Willems <sup>d</sup>	Unknown	9/26/05	–	1.1	ND (0.5)	ND (0.9)
Bengston <sup>d</sup>	Unknown	9/26/05	–	3	1.1	ND (0.9)

TABLE 2.1 Footnotes

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- <sup>a</sup> Identified by the KDHE in 1997 as a lawn and garden well.
- <sup>b</sup> Not analyzed.
- <sup>c</sup> ND, not detected at the indicated reporting limit.
- <sup>d</sup> Used for drinking water supply until February-March 2005, when the CCC/USDA provided a connection to the Inman public water system (Section 2.1.3).
- <sup>e</sup> Willems drinking water well not sampled in 1997, because the owner could not be contacted.
- <sup>f</sup> Qualifier B indicates that the contaminant was present in the laboratory method blank.

city limits, while the other two (Willems and Bengston) were not. Carbon tetrachloride and chloroform were detected at levels below the MCL in lawn and garden wells at the Sisson (formerly Ensz) and Pankratz residences, as well as in the drinking water well at the Bengston residence (KDHE 1998a). These three wells lie less than 500 ft to the west and southwest of the former CCC/USDA grain storage facility, near the southern edge of Inman. Even closer to these three wells (less than 200 ft away) were former grain storage structures on the Sisson (formerly Ensz) and Willems properties.

Contamination was not detected in the fourth well tested in October 1997, the Stucky lawn and garden well, which lies 2,800 ft northeast of the former CCC/USDA facility (Figure 1.1). A fifth private well (Willems) near the former private grain storage structures and the three contaminated private wells could not be sampled in October 1997, because the owner could not be contacted. Residents interviewed by the KDHE during the 1997 field event were unsure whether the Willems residence was occupied at the time (KDHE 1998b).

The well locations shown in Figure 2.1 were estimated on the basis of the description on the KDHE's sampling data sheet (KDHE 1998a). The locations will be surveyed in the proposed investigation.

In January 1998, the Pankratz lawn and garden well and the Bengston drinking water well (Figure 2.1) were resampled. The results confirmed carbon tetrachloride and chloroform concentrations below their respective MCLs. Additional groundwater sampling in 2005 and an action in 2006 to provide an alternate water supply are discussed in Section 2.1.3.

### **2.1.2 Pre-CERLIS Site Reconnaissance and Evaluation in 1998**

To determine whether the former CCC/USDA facility could be a possible source for the carbon tetrachloride in the Sisson (Ensz), Pankratz, and Bengston wells, the KDHE Site Assessment Unit attempted to collect groundwater samples with a Geoprobe unit at the former CCC/USDA facility in March 1998. Sampling met with little success because of refusal to penetrate at 38 ft BGL (below ground level), before groundwater was encountered.

In April 1998, the KDHE used a Geoprobe unit for soil sampling beneath the former CCC/USDA facility. Subsurface soil samples were collected at depths of 11.5 ft BGL and 21.5 ft BGL at five locations across the former facility (Figure 2.2). The samples were analyzed in the field by using a gas chromatograph with an electron capture detector. Carbon tetrachloride was detected by the field laboratory in five of the ten samples collected, at concentrations ranging from 0.3 µg/kg to 2.5 µg/kg (Table 2.1). The two samples with highest concentrations of carbon tetrachloride as analyzed by the field laboratory were submitted to an off-site laboratory for verification analysis. The off-site analyses detected no carbon tetrachloride or chloroform in either sample, at a reporting limit of 1.0 µg/kg (KDHE 1998b).

A KDHE survey in 1998 indicated that no public wells were located within 1 mi of the former CCC/USDA facility. The Inman public water supply wells are located 2.75 mi east of the former facility.

### **2.1.3 Private Well Sampling in 2005 and Removal Action in 2006**

In September 2005, the KDHE sampled private wells near the former CCC/USDA facility in two separate events (Table 2.1 and Figure 2.1). Analysis was performed by an off-site laboratory. The samples collected on September 14, 2005, from the Pankratz lawn and garden well and the Bengston drinking water well contained carbon tetrachloride at 7.4 µg/L and 6.4 µg/L, respectively, both above the MCL. After permission to sample the drinking water well at the Willems residence was obtained, the Pankratz, Bengston, and Willems wells were sampled in a second event on September 26, 2005. On this second occasion, carbon tetrachloride was detected at concentrations below the MCL in all three wells (KDHE 2005a; Table 2.1).

As a result of the September 2005 sampling, the CCC/USDA provided connections for the Bengston and Willems residences to the Inman public water supply. The connections were

completed in February-March 2006. No water wells near the former CCC/USDA facility are currently used for drinking water supply, though the wells may still be used for lawn and garden purposes.

#### **2.1.4 Additional Investigations Related to Groundwater Contamination**

Since 1989, multiple fuel releases have occurred on the Mid-Kansas Coop and ADM Milling properties in northwest Inman. These sites are about 2,300 ft north of the former CCC/USDA facility. The releases resulted in contamination of soil and groundwater by petroleum constituents.

In 1996-1997, GeoCore Services, Inc., conducted an environmental site assessment on behalf of the Mid-Kansas Coop Association. The assessment included ten soil borings and the installation of eight monitoring wells around the property. Groundwater was encountered in the Permian Ninnescah bedrock (red to red-brown shale) at approximately 25-35 ft BGL. GeoCore (1997) reported groundwater flow generally toward the east, with a gradient of approximately 0.008 ft/ft. The GeoCore (1997) report provided detailed results regarding the distribution of petroleum products in soil and groundwater at and around the Mid-Kansas Coop property. No analytical results for carbon tetrachloride or chloroform were reported. Additional investigations of the fuel releases may have been conducted subsequently, but no such documentation is currently available to Argonne.

## **2.2 Geologic and Hydrogeologic Setting**

Inman lies within the Wellington-McPherson lowland physiographic province. The bedrock surface elevations near Inman are illustrated in Figure 2.3. Inman lies on a bedrock high at nearly 1,500 ft AMSL.

The Inman area is generally flat to very gently rolling. The land surface elevations in the city of Inman and at the former grain storage facilities to the south are approximately 1,520 ft above mean sea level (AMSL). A low local surface drainage divide extends roughly south-north across the city of Inman and passes near the former CCC/USDA facility. The headwaters of several intermittent creeks dissect the surface to the northeast, southeast, and west of Inman,

creating local relief of 50-70 ft (Figure 2.4). The intermittent creeks drain the Inman area and generally flow southeastward, toward the Little Arkansas River, 10 mi southeast of Inman.

The subsurface at and near Inman consists of a thin layer of Pleistocene eolian sediment overlying the Permian Ninnescah Shale Formation. The eolian sediments are mostly tan to brown wind-blown silts and slope-wash materials, derived by erosion of the underlying Ninnescah shale. The Permian Ninnescah shale is composed largely of brick-red shale, but it locally contains some thin beds of gray and green shale and thin argillaceous limestone. The weathered zone at the top of the shale forms a regional water-bearing unit that yields small quantities of hard water (Williams and Lohman 1949). A generalized geologic column for McPherson County is in Table 2.2.

The thickness of the weathered zone at the top of the Permian Ninnescah shale unit is currently unknown, on the basis of available data. The degree of weathering of this unit most likely decreases gradually with increasing depth. Thus, the capability of the shale unit to store or transmit water is also expected to decrease generally with depth.

Geologic and hydrogeologic information for the local Inman area was obtained from KDHE water well registration records. In an area within 1 mi of the contaminated private wells, 49 water well records were found, including records for 29 private water wells and 20 monitoring wells (Figure 2.4). All of these water wells penetrate the Permian bedrock and have open (uncased) intervals or occasionally screens to obtain groundwater from the Ninnescah shale. Water well data for the area within 1 mi of the contaminated private wells (Sisson, Pankratz, Willems, and Bengston) indicate that the depths of private wells range from 77 ft BGL to 151 ft BGL, averaging 110 ft BGL. Water is apparently produced mainly from the uppermost portion of the Permian Ninnescah shale unit. The monitoring wells are usually shallower than the private wells, with typical depths of 30-40 ft BGL. Many of the monitoring wells were constructed for the investigation of the fuel releases at the Mid-Kansas Coop Association property.

No well records were found for the four contaminated private wells near the former CCC/USDA facility, and their depths are unknown.

TABLE 2.2 Generalized geologic column for McPherson County, Kansas, with the series present at Inman underlined. Source of data: Williams and Lohman (1949).

System	Series	Formation	Thickness (ft)	Physical Character	Water Supply
<u>Quaternary</u>	Recent	Alluvium <i>unconformable on older formations</i>	0–75 ±	Silt, clay, and cross-bedded coarse-grained sand and gravel containing silt and clay.	Yields large to very large supplies of relatively hard water to wells in the Arkansas and Little Arkansas valleys. Smaller quantities are obtainable from the Smoky Hill valley.
		Younger dune sand <i>unconformable on older dune sand</i>	0–50 ±	Fine- to medium-grained eolian quartz sand. These younger, higher dunes are subject to shifting and blowout and are devoid of vegetation.	The higher dunes are above the water table in most places but constitute a valuable intake area.
	<u>Recent and Pleistocene</u>	Older dune sand <i>unconformable on older formations</i>	0–100 ±	<u>Fine- to medium-grained, rounded eolian quartz sand</u> , cross-bedded. Several cycles of deposition are set off by soil zones. In general, these dunes have a cover of vegetation and are subdued in form.	Yields small quantities of soft water to domestic and stock wells. Water contains considerable iron. Forms an important catchment area for rainfall.
	<u>Pleistocene</u>	<u>McPherson Formation</u> <i>unconformable on older formations</i>	0–260	Buff to brown silt, clay, sand, and gravel. <u>Channel deposits</u> composed of coarse-grained sand and gravel. Contains volcanic ash.	Yields large to very large supplies of moderately hard to hard water, especially from channel deposits, to municipal, industrial, and farm wells. A few contact springs occur at base.
Tertiary	Pliocene	Delmore Formation <i>unconformable on older formations</i>	0–75	Gray to buff silt, clay, and carbonate; fine- to medium-grained sand; small amount of gravel. Material largely derived from Cretaceous and Permian rocks in and near the area of outcrop.	Yields small supplies of relatively hard water to stock and domestic wells.
Cretaceous	Comanchean <sup>a</sup>	Kiowa shale <i>unconformable on older formations</i>	0–120	Dark gray to black, gypsiferous shale; gray to buff, sandy shale; soft, cross-bedded sandstone; hard, limonitic sandstone; "quartzite"; and thin fossiliferous limestone.	Yields small supplies of hard water to farm and stock wells and to small springs.
<u>Permian</u>	<u>Leonardian<sup>a</sup></u>	Stone Corral dolomite	0–8	Gray, cellular, thin-bedded dolomite on outcrop in McPherson County. Contains anhydrite and gypsum in subsurface westward.	Yields no water to wells in this area.
		<u>Ninnescah shale</u>	0–275	Soft to hard, <u>brick-red shale</u> . Contains some <u>thin beds of gray</u> and green shale, thin <u>argillaceous limestone and gypsum</u> .	Yields meager supplies of highly mineralized water to farm wells.
		Wellington Formation	550 ±	Soft, gray, calcareous shale contain+ing gypsum, anhydrite, salt, and thin beds of argillaceous limestone.	Yields meager supplies of highly mineralized water to farm wells from weathered surface zones and crevices in unweathered beds of shale and limestone.

<sup>a</sup> Classification of the State Geological Survey of Kansas.

The water well records used to construct geologic/hydrogeologic cross sections for this document are in Appendix A. These records are summarized in Table A.1, Appendix A.

The locations of the interpretive geologic/hydrogeologic cross sections are shown in Figure 2.4. Cross section A-A' extends from northwest to southeast, along the surface drainage divide near the contaminated private wells (Figure 2.5). Cross section B-B' lies along the surface drainage divide in its southwest segment and then extends to an intermittent creek in its northeast segment (Figure 2.6).

The interpretations presented in cross sections A-A' (Figure 2.5) and B-B' (Figure 2.6) indicate that the weathered Permian Ninnescah shale unit is the *uppermost continuous* water-bearing unit; this unit apparently hosts the contaminated groundwater at and near the locations of the contaminated private wells. The anticipated depth of the shale at the former CCC/USDA facility is estimated at 30-45 ft BGL. Approximately the top 20 ft of the shale unit identified in the northwestern part of Inman was characterized as red to red-brown and silty with some green mottling (GeoCore 1997). In general, the unconsolidated Pleistocene material unconformably overlying the water-bearing Permian Ninnescah shale is mainly silty clay, with abundant calcareous nodules near the base of the overlying unit. This overlying unit is mostly unsaturated. During the KDHE investigations in 1998, attempts to collect groundwater above the Permian shale failed (GeoCore 1997).

Extension of the geologic interpretation depicted in the cross sections to the area within 1 mi of the contaminated private wells (see Figures 2.4, 2.5, and 2.6) indicated that coarse lenses overlying the water-bearing Permian Ninnescah shale are present at only two locations. One of these locations (Hull well) is 2,000 ft south of the contaminated private wells and the former grain storage facilities (Figure 2.6). The other location is 4,000 ft southwest of Inman (not illustrated in the cross sections). This interpretation is based on the available lithology data from 49 water wells and monitoring wells. No available data indicate whether the coarse lenses are saturated or hydraulically disconnected (if saturated) from the bedrock aquifer and thus can be considered a second aquifer. (The coarse lens at the location of the Hull well is only 5 ft above the bedrock.)

The groundwater flow pattern in the water-bearing Permian Ninnescah shale unit appears to mimic the surface drainage pattern. Groundwater east of the surface drainage divide probably flows toward the east-southeast; groundwater west of the surface divide probably flows toward

the west (Figures 2.4 and 2.5). GeoCore (1997) identified generally eastward groundwater flow in the area 2,000 ft north of the former CCC/USDA facility. More detailed groundwater measurements are essential to confirm the direction of groundwater flow at the former CCC/USDA facility, which is near the surface divide.

The permeability of the weathered Permian shale zone was reported by GeoCore (1997) to be very low. The hydraulic conductivity of the upper water-bearing zone in the shale was estimated, on the basis of slug test results during the GeoCore (1997) investigation, at only approximately 0.001 ft/day.

### **2.3 Identification of Potential Contaminant Source Areas**

To identify potential source areas for the carbon tetrachloride contamination at Inman, as inferred from previous KDHE investigations, Argonne conducted a property document search and an analysis of historical aerial photos for the Inman site. This section presents the results of combined analyses of all available documents.

Through a review of historical aerial photos taken in 1956, 1963, 1970, 1979, 1985, and 2006 (Figures B.1-B.6 in Appendix B), three types of grain storage facilities were identified at Inman. These are (1) the former CCC/USDA grain bin facility near the southern edge of Inman, (2) former small private grain storage facilities to the west and southwest of the former CCC/USDA facility (and closer to the contaminated private wells), and (3) commercial grain storage facilities northwest of Inman. The former CCC/USDA facility and the nearby former private grain storage facilities are illustrated in a series of historical photographs in Figure 2.7.

The historical ownership of the properties related to the grain storage facilities at Inman was determined on the basis of property documents acquired from the McPherson County Courthouse. The summary of historical ownership and property records is in Appendix B, Table B.1. The property records are also reproduced in Appendix B. Figure B.7 shows the original plat of Inman.

### **2.3.1 Former CCC/USDA Grain Bin Facility**

The former CCC/USDA facility was located on the northeast corner of Main Street and Farmington Road, at the southern edge of the city of Inman (Figure 2.1). A strip of land (485 ft by 128 ft) was leased to the CCC/USDA by Pankratz in 1954-1956 and by Froese in 1957-1965. The property ownership changed in 1956 from Pankratz to Froese (Appendix B, Table B.1). The historical aerial photos show grain storage activities on the former CCC/USDA facility that are consistent with the lease terms to the CCC/USDA. The 1956 and 1963 aerial photos show 30 metal circular bins on the former facility (Figure 2.7). By 1970, all traces of the former CCC/USDA facility had been removed (Figure 2.7).

The property leased to the CCC/USDA in 1954-1965 was simultaneously leased to various oil and gas companies for oil and gas exploration in 1954-1956 and 1957-1960. In 1967, the property was conveyed from Froese to the local school district (USD 448). Currently, the Inman school district owns the property. The former CCC/USDA property is now part of the school's baseball field (Figure 2.8).

The former CCC/USDA grain bin facility is approximately 200 ft to 500 ft east or northeast of the four contaminated private water wells (Figure 2.8). In April 1998, carbon tetrachloride was identified at trace levels in soil on the former facility through analyses by a field laboratory, but the contamination was not confirmed upon verification analysis in an off-site laboratory (Table 2.1 and KDHE 1998b). The KDHE's attempts to collect groundwater samples at three locations on the former CCC/USDA facility failed because of refusal by the Geoprobe unit, probably at the top of the Permian shale (KDHE 1998b). No additional investigations have been performed at the former facility to date.

### **2.3.2 Former Small Private Grain Storage Facilities**

Two small private grain storage facilities (on properties currently owned by Sisson and Willems) can be identified in historical aerial photographs (Figure 2.7). These two former facilities were near the southern edge of Inman, west of Main Street (across Main Street from the former CCC/USDA facility). The northern small facility (Sisson) consisted of nine circular storage structures and one Quonset, all of which are visible on the 1956 aerial photo. By 1963, all of these storage structures had been removed, except for the Quonset. The southern facility (Willems) was much smaller and included only three circular bins. The grain storage structures

on the southern facility appear on the 1956 and 1963 photographs but not on the 1970 photograph.

The northern small private grain storage facility appears to have been active during the 1950s. The property was owned by Enns at that time; it was subsequently conveyed through other owners (Martens and Ensz) to the current owner, Sisson (Appendix B, Table B.1). The former grain storage structures on the current Sisson property were located approximately 80-180 ft from the contaminated well on that property (Figure 2.7).

The southern small private grain storage facility appears to have been active in the 1950s and 1960s. The two owners from 1944 to 1966 were both named Balzer. The current owner (Willems) purchased the property in 1966. The contaminated wells on the Willems and Bengston properties were located only 100-130 ft from the former southern small grain storage facility on the Willems property (Figure 2.7).

The two former grain storage facilities on the Sisson and Willems properties were the grain storage operations closest to the four contaminated wells. These storage facilities were probably within the radius of influence of the contaminated private wells when the wells were pumping. No investigation for potential carbon tetrachloride contamination in soil and groundwater has been performed to date at these two former private grain storage facilities.

### **2.3.3 Commercial Grain Storage Facilities**

Commercial grain storage facilities are located northwest of Inman, along the railroad right-of-way (southeast side of railroad track) and Front Street. These facilities occupy most of Block 11 and part of Block 12 on the original plat of Inman (Appendix B, Figure B.7). The commercial facilities consisted of three main grain elevators. The northern and southern elevators were erected before 1956 (Figure 2.9). The middle elevator was built after 1956 and appears on aerial photos taken in 1963 and subsequently (through 2006). The three elevators connected 37 tall bins/silos and 1 additional building. The southern and middle elevators remain to the present; the northern elevator was removed some time after 1985.

The commercial grain storage facilities northwest of Inman were constructed on properties owned, from the 1950s to the early 1980s, in part by the Union Pacific Railroad

Company (formerly the Chicago, Rock Island, and Pacific Railroad Company) and in part by several milling and grain companies, including Enns Milling Company, Buhler Mill and Elevator Company, Chase Grain Company, and Nabisco, Inc. Most of the property was conveyed to ADM Milling Company in 1984 and to Inman Industrial in 2002 (Figure 2.8 and Appendix B, Table B.1).

The four contaminated private wells identified south of Inman are located about 2,200 ft southeast of the commercial grain storage facilities (Figure 1.2). The investigation of a gasoline release a few blocks east of the commercial facilities indicated that local groundwater flow was generally in an easterly direction (GeoCore 1997). No investigation for carbon tetrachloride contamination has been conducted at the commercial facilities or between these facilities and the contaminated private wells. In addition, the local hydrogeologic data collected to date are not adequate to rule out the commercial grain storage facilities as a potential source area.

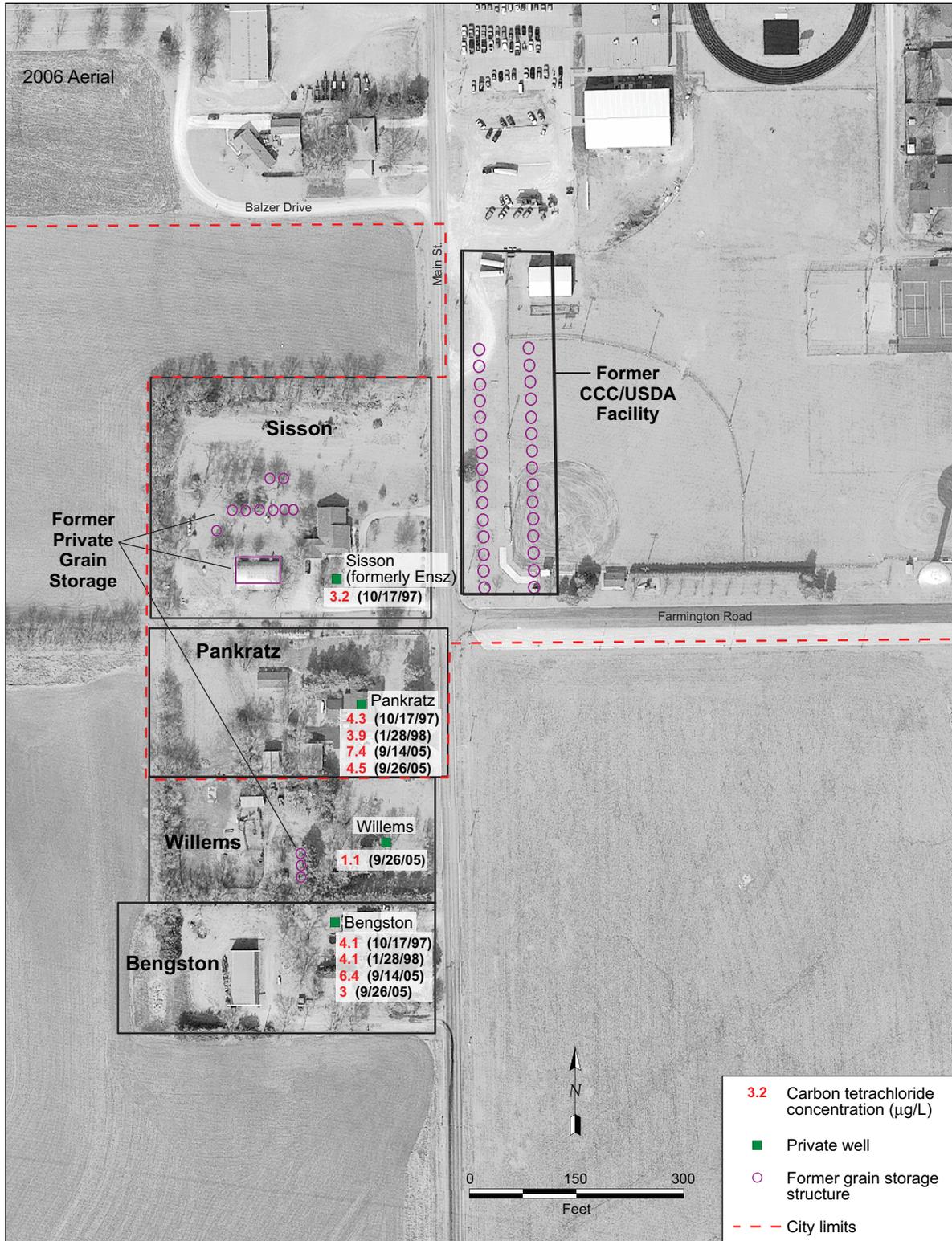


FIGURE 2.1 Historical results of carbon tetrachloride analyses on groundwater samples collected by the KDHE in 1997-2005 from private wells near the former private grain storage facilities and across Main Street from the former CCC/USDA facility. Source of photograph: McPherson Mapping Department (2006).

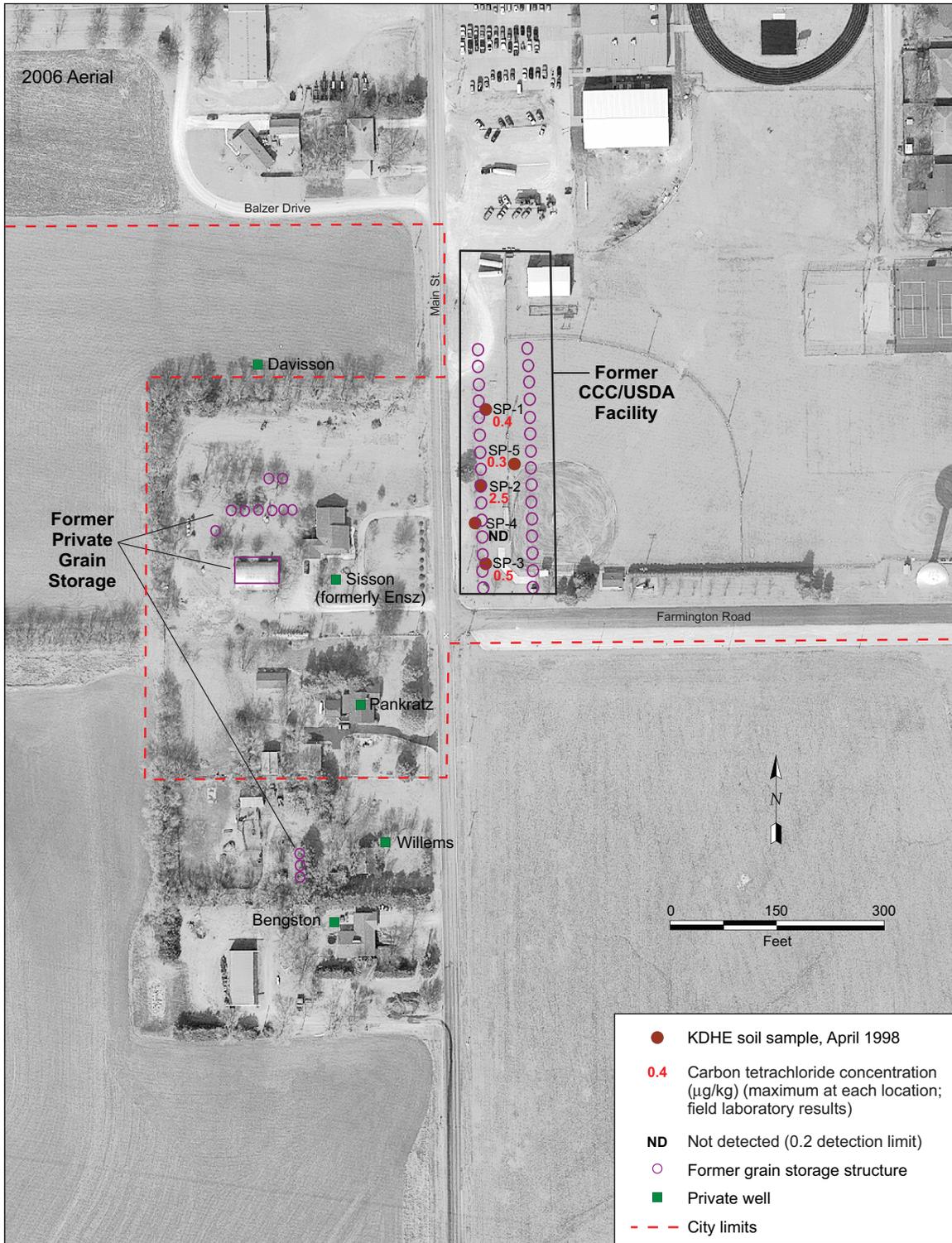


FIGURE 2.2 Field laboratory analytical results for soil samples (maximum at each location) collected by the KDHE in April 1998 at the former CCC/USDA facility. Locations are estimated from the KDHE (1998b) investigation report. Samples were collected at 11.5 ft BGL and at 21.5 ft BGL at each location. The maximum concentrations consistently occurred in the samples collected at 21.5 ft BGL. Source of photograph: McPherson Mapping Department (2006).

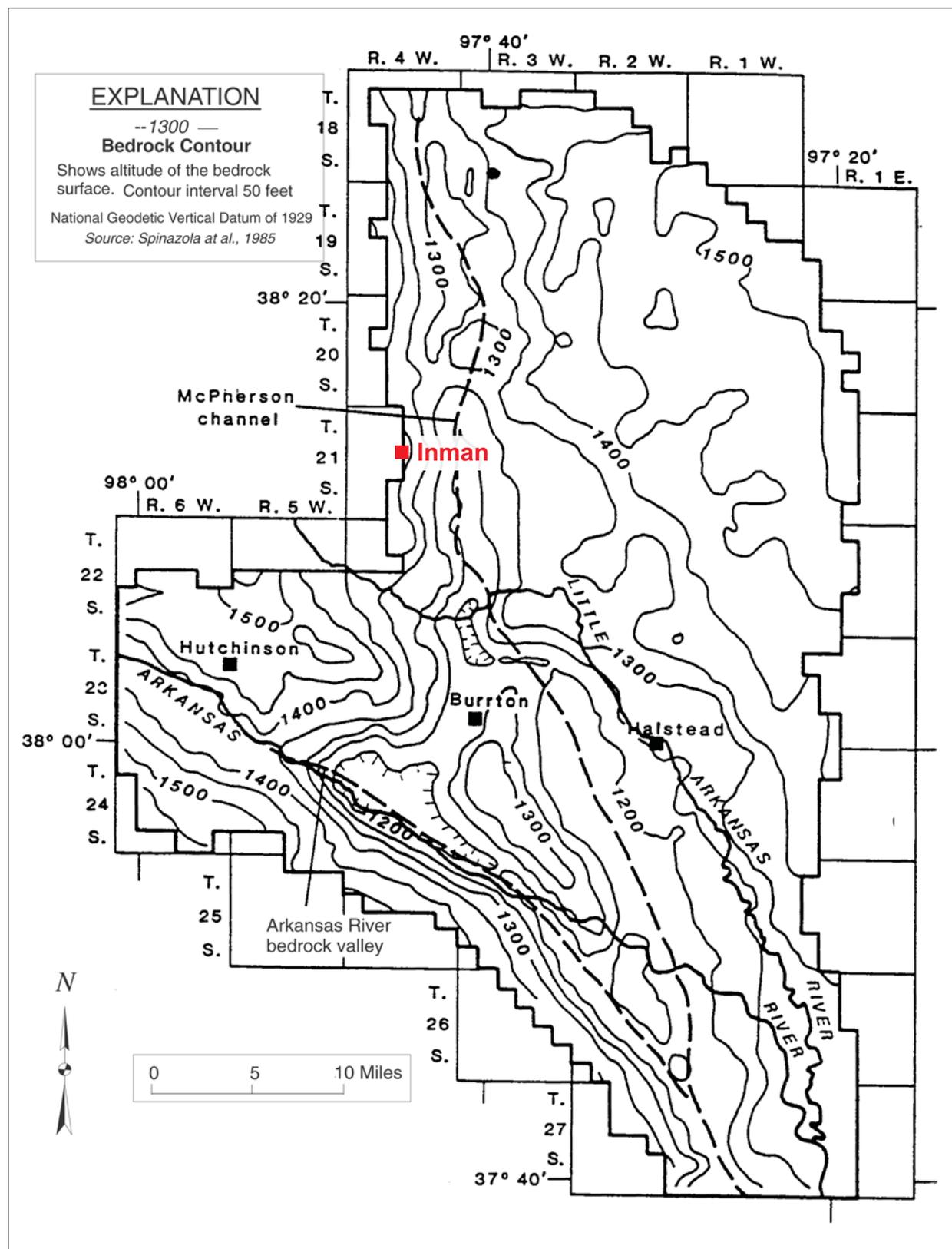


FIGURE 2.3 Elevations of the bedrock surface (ft AMSL) near Inman, which lies on a bedrock high at nearly 1,500 ft AMSL. Source of map: Spinazola et al., 1985.

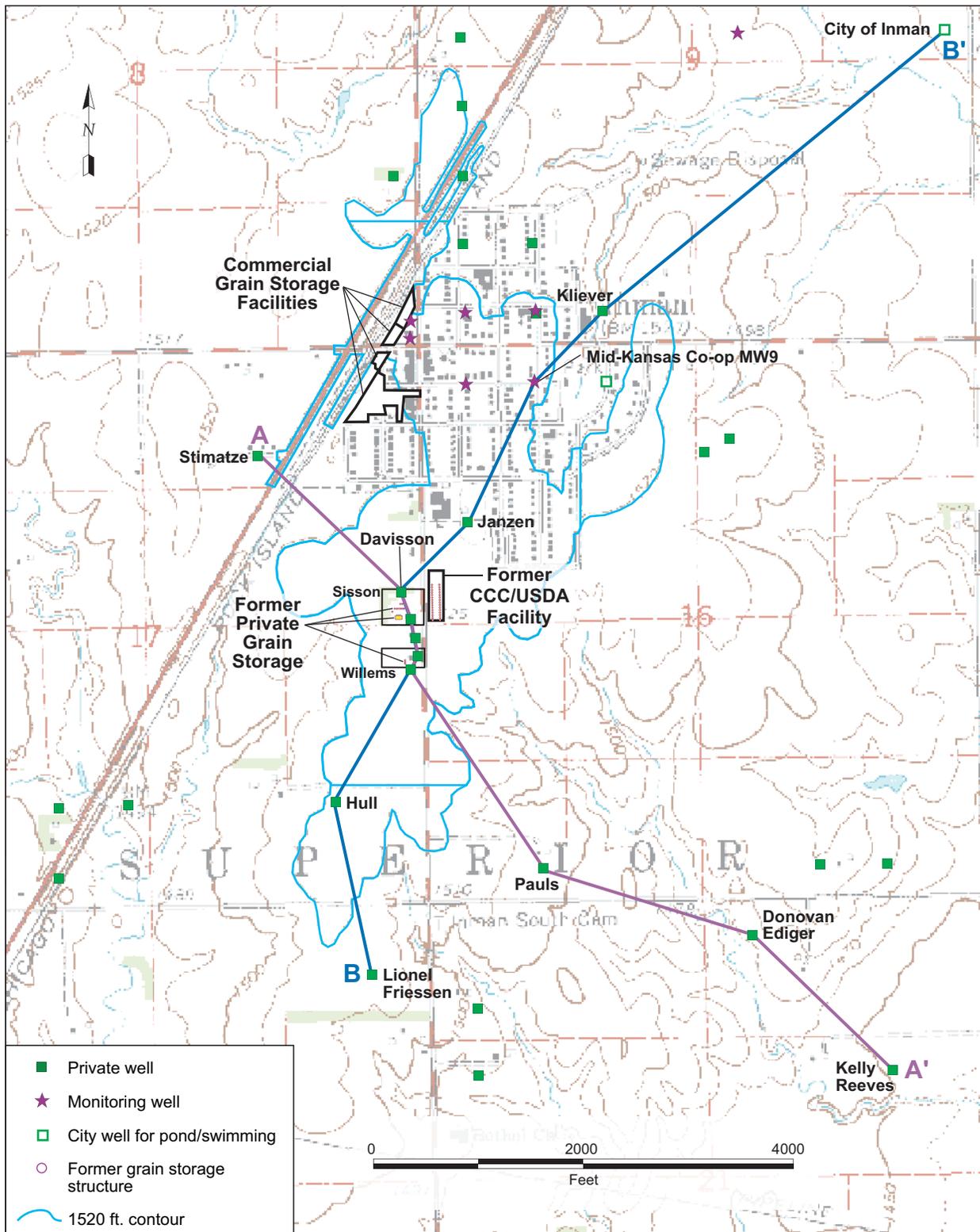


FIGURE 2.4 Locations of water wells within 1 mi of the former CCC/USDA facility that have been registered with the state, with locations of hydrogeologic cross sections A-A' and B-B'. Source of this 1982 topographic map: USGS (1997).

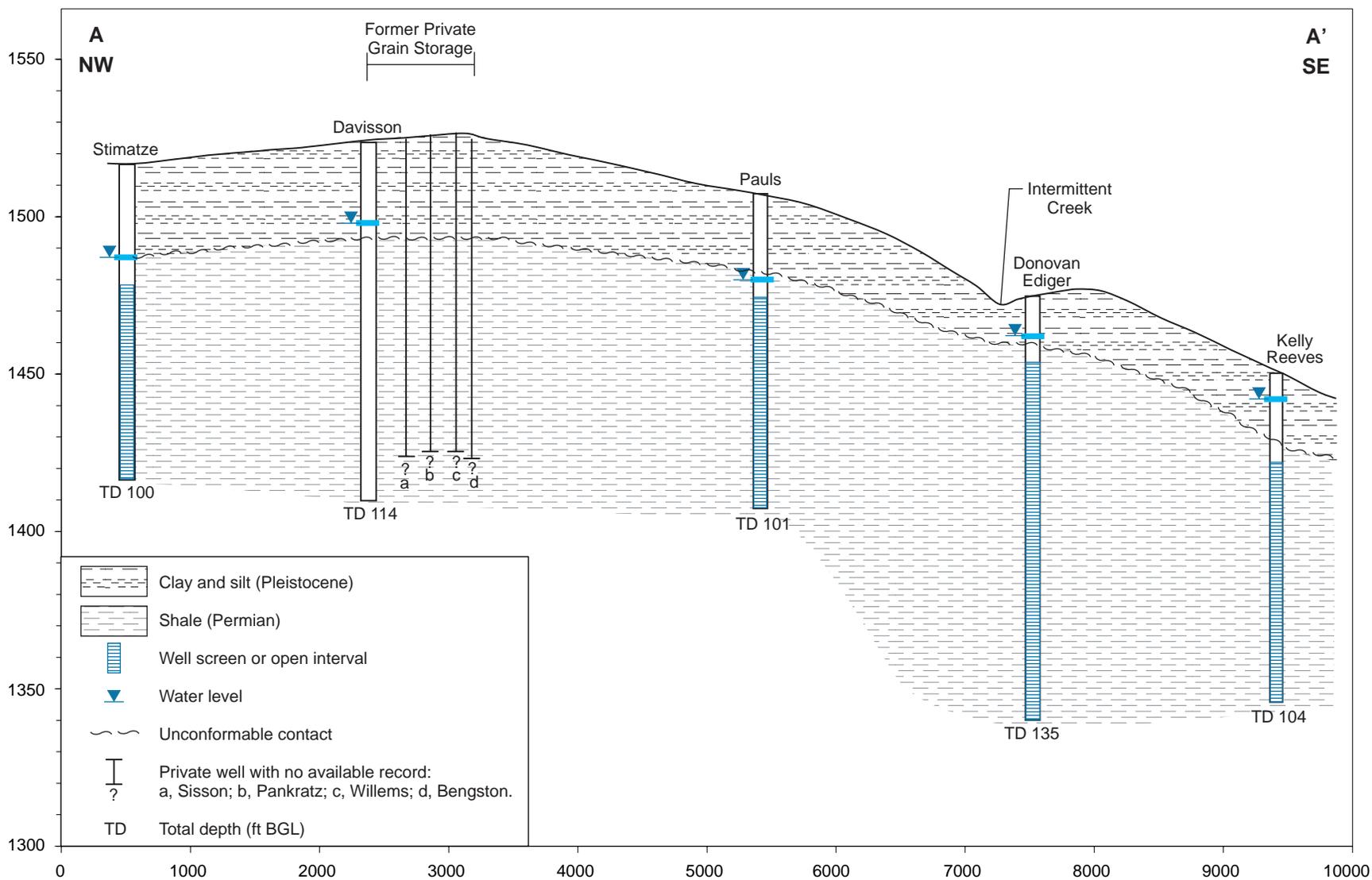


FIGURE 2.5 Northwest-to-southeast hydrogeologic cross section A-A' (vertically exaggerated), illustrating the stratigraphic relationships and water levels slightly west of the former CCC/USDA facility and near the former private grain storage facilities and adjacent contaminated private wells at Inman.

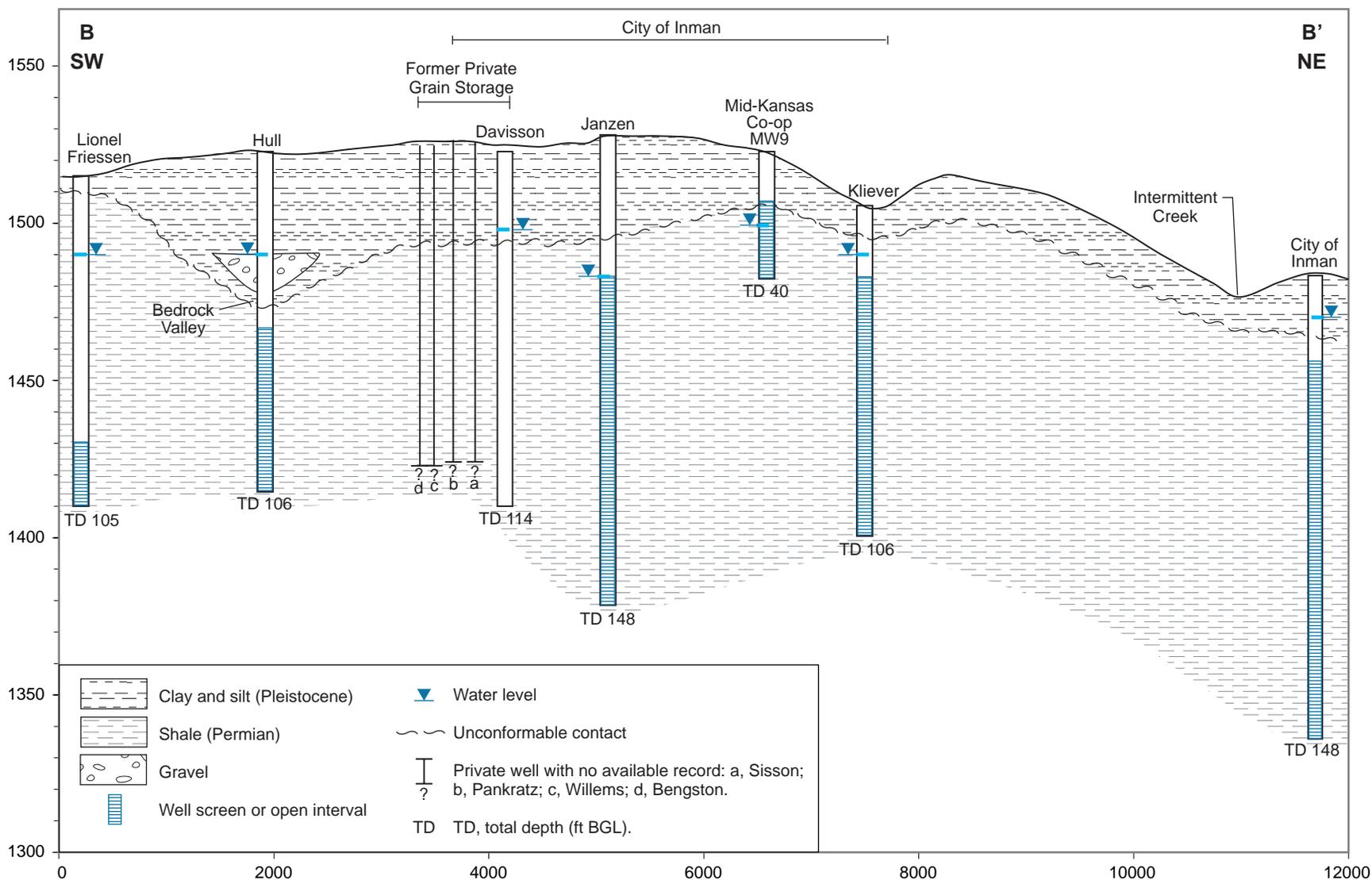


FIGURE 2.6 Southwest-to-northeast hydrogeologic cross section B-B' (vertically exaggerated), illustrating the stratigraphic relationships and water levels slightly west of the former CCC/USDA facility and near the former private grain storage facilities and adjacent contaminated private wells at Inman.



FIGURE 2.7 Locations of the former CCC/USDA and private grain storage facilities near the south edge of Inman, as interpreted from aerial photographs taken in 1956, 1963, 1970, and 2006, as well as property documents. Sources of photographs: USDA (1956, 1963, 1970); McPherson Mapping Department (2006).

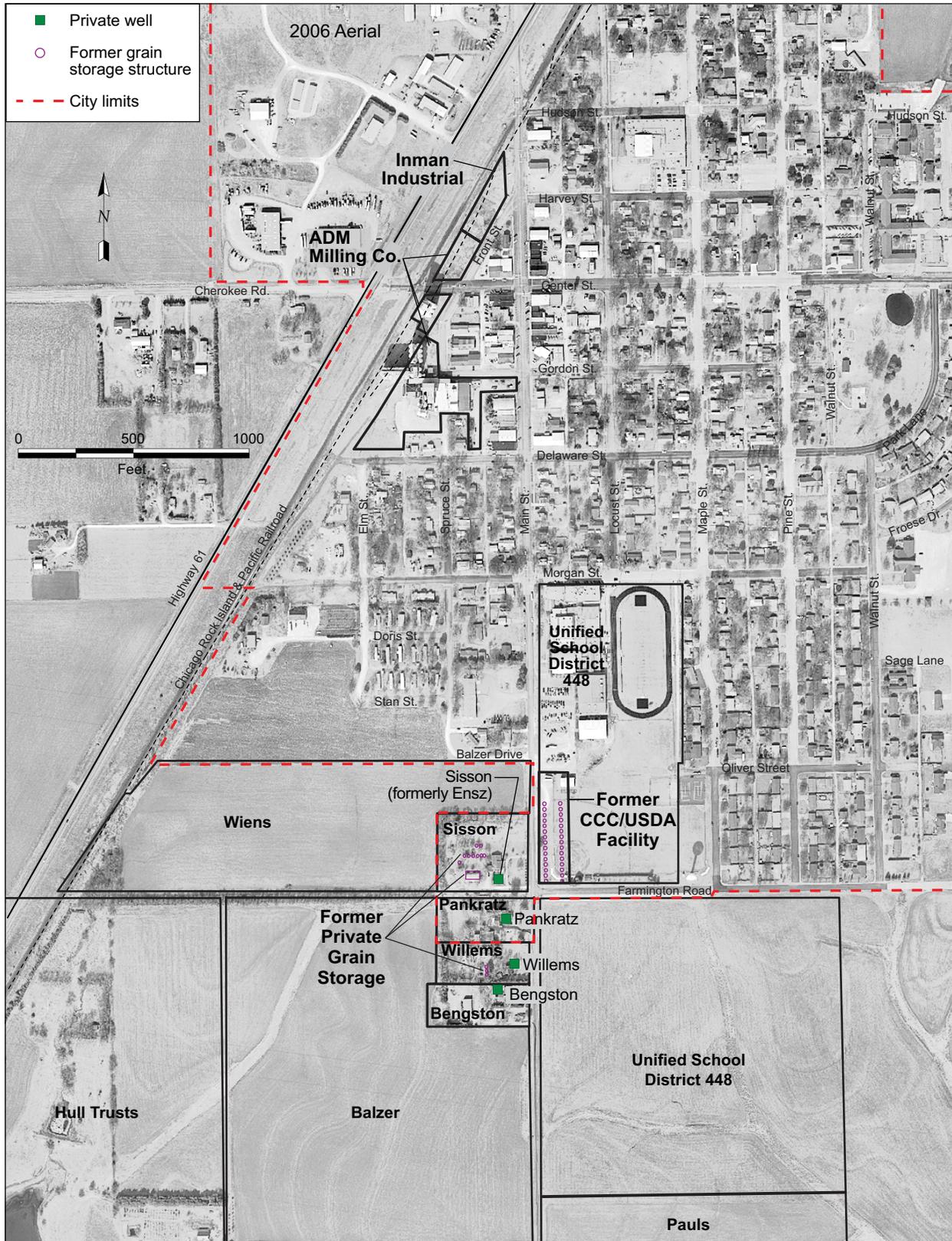


FIGURE 2.8 Current property boundaries and current ownership for properties related to grain storage operations at Inman. Source of photograph: McPherson Mapping Department (2006).



FIGURE 2.9 Locations of commercial grain storage facilities at Inman, Kansas, as interpreted from aerial photographs taken in 1956, 1963, 1985, and 2006, as well as property records. Sources of photographs: USDA (1956, 1963, 1985); McPherson Mapping Department (2006).

### **3 Proposed Technical Program for the Investigation**

The investigative program outlined here focuses on the potential relationship of the former CCC/USDA facility at Inman to carbon tetrachloride contamination in four private wells west and southwest of the former facility. A phased approach is proposed to optimize the field investigation by incorporating new results from the each previous phase and input from the CCC/USDA and KDHE project managers.

*The goal of the proposed program* is to identify and characterize any subsurface contamination associated with the former CCC/USDA facility and its relationship to the groundwater contamination found in the four private wells. The results of the proposed investigation will provide the basis of recommendations for future action, with the ultimate goal of classifying the Inman site at *no further action* status.

#### **3.1 Technical Objectives and Phases of the Investigation**

To achieve the investigational goal, the following detailed technical objectives are proposed:

- Evaluate the potential source of carbon tetrachloride at the former CCC/USDA facility.
- Determine the relationship of potential contamination at the former CCC/USDA facility to contamination identified in 1997 and 1998 in groundwater at four private wells to the west and southwest.
- Delineate the extent of any identified contamination potentially associated with the former CCC/USDA facility.

The proposed investigation is guided by these objectives and is divided into five phases for implementation. Data acquired during the earlier phases will be evaluated to determine whether subsequent phases are necessary and will also be used to optimize the work in the subsequent phases. The CCC/USDA and KDHE project managers will be contacted during each

phase and kept apprised of the results. The implementation of each phase of work will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers.

The proposed phases of the investigation are as follows:

- *Phase 1:* To identify potential contaminant source areas on the former CCC/USDA property, use the cone penetrometer (CPT) unit to collect soil samples in vertical profiles through the vadose zone, for analysis for volatile organic compounds (VOCs). If saturated soil is encountered above the bedrock unit, use the CPT to collect groundwater samples for VOCs analyses.
- *Phase 2:* Collect groundwater samples (for VOCs analyses) from the bedrock unit, both on and near the former CCC/USDA property, as well as from nearby private wells.
  - *Phase 2a:* On the former CCC/USDA property, use a drilling rig (or the CPT, if feasible) to collect groundwater samples within the bedrock unit at a subset of Phase 1 investigation locations, selected on the basis of Phase 1 analytical results.
  - *Phase 2b:* Collect groundwater samples from the Sisson (formerly Ensz), Pankratz, Willems, and Bengston private wells.
  - *Phase 2c:* Use a drilling rig (or the CPT, if feasible) to collect groundwater samples at selected locations along Main Street, between the former CCC/USDA facility and the four private wells sampled in Phase 2b.
- *Phase 3:* Install water level monitoring wells, as possible and appropriate, to establish the local groundwater flow direction and determine the relationship of potential contamination at the former CCC/USDA facility to contamination previously identified in the four private wells to the west and southwest.
- *Phase 4:* If data from the initial phases of the investigation suggest that contaminants associated with the former CCC/USDA facility have migrated

off the property, delineate the lateral and vertical extent of the groundwater plume emanating from the property.

- *Phase 5:* If a groundwater plume and a source area associated with the former CCC/USDA facility are identified, establish a groundwater monitoring network and measure hydraulic properties that affect migration of the plume.

## 3.2 Investigation Tasks

### 3.2.1 Phase 1: Vertical Soil Profiling in the Vadose Zone on the Former CCC/USDA Property, with Groundwater Sampling if Saturated Soil Is Encountered

*Phase 1: Use the CPT unit to conduct vertical soil profiling through the vadose zone for VOCs analyses, to identify potential contaminant source areas on the former CCC/USDA property. If saturated soil is encountered above the bedrock unit, use the CPT to collect groundwater samples for VOCs analyses.*

Soil samples will be collected from the ground surface and through the vadose zone to bedrock, by using a CPT unit. Soil sampling is the initial focus of the proposed investigation, because what is currently known of the geologic setting at Inman (Section 2.2) indicates that soil sampling with the CPT should be successful in the vadose zone. Groundwater sampling is not proposed as the initial focus, because groundwater sampling from the water-bearing bedrock unit (Ninnescah shale) is expected to require the use of a drilling rig. The relatively large number of soil sampling locations proposed (11) is considered necessary to generate sufficient data to determine whether the former CCC/USDA facility at Inman is a contaminant source. If groundwater sampling were the initial focus, fewer sampling locations would be necessary to accomplish the same objective.

Sampling will be performed according to procedures in the *Master Work Plan* (Argonne 2002) and methods specified in Section 3.3. This phase of the investigation will proceed as follows:

- Vertical soil profiles will be collected at 11 locations on the former CCC/USDA property. Of these, 8 locations are along the former grain bins,

and 3 locations are along the former driveway between the bins (Figure 3.1). These locations are expected to have been the most vulnerable to potential releases of carbon tetrachloride during the former grain storage operations. For each profile, soil samples will be collected at intervals of 4 ft or at significant changes in lithology, from the ground surface to the top of the bedrock (Ninnescah shale). The depth to bedrock is expected, on the basis of records for existing wells in the area (Figures 2.5 and 2.6 and Table A.1 in Appendix A), to range from 30 ft to 45 ft BGL. A bedrock depth of approximately 40 ft BGL is considered most probable.

- Analyses for VOCs will be conducted immediately for all soil samples collected to identify any soil contaminated with carbon tetrachloride and chloroform.
- All soil samples will be analyzed visually for lithologic evaluation and description. Hydrogeologic testing, grain size analysis, and other chemical analyses may be performed, as necessary, for selected samples.
- If saturated soil is found, groundwater samples will be collected with the CPT unit (if possible) for VOCs analyses.

The goal of the vertical soil profiling in Phase 1 is to establish whether a soil source of carbon tetrachloride and the potential for a soil-to-groundwater migration pathway exist at the former CCC/USDA facility.

### **3.2.2 Phase 2: Groundwater Sampling from the Bedrock Unit on and near the Former CCC/USDA Property and from Four nearby Private Wells**

The target interval for groundwater sampling in Phase 2 will be the water-bearing unit in the Ninnescah shale bedrock. A sonic drilling rig will be used for the sampling from selected boreholes, unless sampling with the CPT is possible. Boreholes will be selected for groundwater sampling in consultation with the CCC/USDA and the KDHE project managers, on the basis of soil sampling results in Phase 1. In addition, four private wells will be sampled. All groundwater sampling will be conducted according to procedures in the *Master Work Plan* (Argonne 2002)

and methods specified in Sections 3.3.3 and 3.3.4. All groundwater samples will be analyzed for VOCs to identify the presence and concentrations of carbon tetrachloride and chloroform.

As results are evaluated in the field, adjustments to the number of sampling points, the sample locations, and sampling intervals might be necessary. The CCC/USDA and KDHE project managers will be contacted during field activities and kept apprised of results. Any proposed changes to the work plan will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers before the plan is modified.

The Phase 2 work will proceed in as indicated below.

*Phase 2a: On the former CCC/USDA property, use the drilling rig (or the CPT, if possible) to collect groundwater samples within the bedrock unit at a subset of Phase 1 investigation locations, selected on the basis of Phase 1 results.*

- On the basis of the results of the Phase 1 vertical soil profiling, locations associated with potential source areas identified on the former CCC/USDA property will be selected, in consultation with the KDHE and CCC/USDA project managers, for the collection of groundwater samples from the water-bearing bedrock unit.
- At each sampling location, 2-4 water samples will be collected at intervals of 10 ft or less, from the top of the Permian shale unit to approximately 60-80 ft BGL, to verify potential soil-to-groundwater pathways and to further delineate the concentration and vertical extent of contamination near the source.

*Phase 2b: Collect groundwater samples from the Sisson (formerly Ensz), Pankratz, Willems, and Bengston private wells.*

- Groundwater samples will be collected from the four private wells (Sisson, Pankratz, Willems, and Bengston; Figure 3.1) previously found to be contaminated with carbon tetrachloride. Sampling will depend on access. None of these four wells has been registered with state of Kansas, and therefore well construction information will be acquired from the residents or through direct measurement, again depending on access.

*Phase 2c: Use the drilling rig (or the CPT, if possible) to collect groundwater samples at selected locations along Main Street, between the former CCC/USDA facility and the four private wells sampled in Phase 2b.*

- Additional groundwater sampling will be conducted at three locations along Main Street, between the former CCC/USDA property and the four private wells being investigated (Figure 3.1). Groundwater samples will be collected at intervals of 10 ft or less from the top of the shale to about 90 ft BGL. Sampling to this depth should cover most of the stratigraphic interval that has the greater potential to produce water in the contaminated private wells (Figures 2.5 and 2.6).

### **3.2.3 Phase 3: Determination of the Local Groundwater Flow Pattern and Contaminant Migration Pathways**

*Phase 3: Install water level monitoring wells, as possible and appropriate, to establish the local groundwater flow direction and determine the relationship of potential contamination at the former CCC/USDA facility to contamination previously identified in the four private wells to the west and southwest.*

Any wells installed in drilled boreholes will be completed as permanent monitoring wells. This phase of the investigation will proceed as follows:

- Monitoring wells will be installed at selected drilled boreholes or CPT installations that were used in Phase 2 to collect groundwater samples. The drilling rig will be used for well installation as discussed in Section 3.3. Additional wells might be installed outside the former CCC/USDA property, if necessary, to adequately configure the local groundwater flow pattern.
- Groundwater levels will be measured in all wells at least 24 h after well completion (and after the wells have stabilized). Location coordinates will be estimated by Argonne personnel during the investigative phases through use of a global positioning system.

- During the site-wide water level measurements (after the wells have stabilized), changes in groundwater levels will be monitored continuously at one or more locations for at least 24 h to identify any immediate nearby pumping effects that might distort the flow pattern.
- Data loggers will be installed in selected wells for long-term groundwater level monitoring. Monitoring will continue for at least one year to identify effects on the flow pattern of seasonal variations and agricultural/irrigation water use.
- Results from the VOCs analyses on soil and groundwater samples generated in Phase 1 and Phase 2, together with the groundwater flow pattern identified in Phase 3, will be compiled to determine the configuration of the contaminant plume and the primary direction of groundwater flow and contaminant migration.
- If a causal relationship is confirmed between potential carbon tetrachloride contamination at the former CCC/USDA facility and the four private wells west of Main Street, indoor air quality will be assessed in the four associated residences.

Upon completion of Phases 1-3 of the proposed investigation, the presence of contamination in soil and groundwater beneath the former CCC/USDA facility and its potential relationship to contamination previously identified in the four private wells west of Main Street will be evaluated as the main criterion for determining whether the activities in the subsequent phases are appropriate and necessary. Evaluation will include the following activities and others as appropriate:

- Analysis of the groundwater flow pattern
- Comparison of contamination levels at the former CCC/USDA facility, at the four private wells west of Main Street, and in the area between
- Consideration of other factors related to local hydrogeologic conditions and additional potential sources

Any decision to terminate or expand the investigation at the end of Phase 3 will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers.

#### **3.2.4 Phase 4: Delineation of the Lateral and Vertical Extent of Any Groundwater Plume Found to Be Emanating from the Former CCC/USDA Facility**

*Phase 4: If data from the initial phases of the investigation suggest that contaminants associated with the former CCC/USDA facility have migrated off the property, delineate the lateral and vertical extent of the groundwater plume emanating from the property.*

Most of sampling points in Phase 4 will be located outside the former CCC/USDA property. Figure 2.8 shows the current ownership of all properties near the former CCC/USDA facility and the four private wells under study. Requests for access to the Sisson, Pankratz, Willems, and Bengston properties and other nearby properties, as necessary, will be made prior to or during the investigation. This phase of the investigation will proceed as follows:

- Additional borehole locations for groundwater sampling will be selected, on the basis of results from Phases 1-3, to characterize the lateral and vertical extent of any groundwater plume emanating from the former CCC/USDA facility. Most of the borehole locations will be in or near identified potential contaminant migration pathways downgradient from any source identified at the former CCC/USDA facility. A few boreholes might also be located upgradient from any soil source identified in Phase 1a on the CCC/USDA facility, to rule out potential contributions from other sources. The exact number and locations of boreholes will be determined at the end of Phase 3 or the beginning of Phase 4, in consultation with the CCC/USDA and KDHE project managers. The drilling rig will be used for advancing the boreholes.
- Groundwater samples will be collected at intervals of 10 ft or less, from the top of the Permian Ninnescah shale and through the vertical extent of the contaminant plume.
- If any off-site plume emanating from the former CCC/USDA facility has migrated to the locations of the former private and commercial grain storage

facilities discussed in Section 2.3, soil samples will be taken with the CPT unit at interval of 4 ft or less from the ground surface to the top of the Permian Ninnescah bedrock (shale). The results will provide information on contributions to the groundwater plume from additional potential soil contaminant sources.

- All groundwater samples will be analyzed for VOCs to determine the presence and identify the concentrations of carbon tetrachloride and chloroform.
- All soil samples will be analyzed for VOCs to identify the presence and concentrations of carbon tetrachloride and chloroform. The samples will also be examined visually for lithologic evaluation and description. Hydrogeologic testing, grain size analysis, and other chemical analyses might be performed, if necessary, for selected samples.

### **3.2.5 Phase 5: Establishment of a Groundwater Monitoring Network and Measurement of Hydraulic Properties**

*Phase 5: If a groundwater plume and a source area associated with the former CCC/USDA facility are identified, establish a groundwater monitoring network and measure hydraulic properties that affect migration of the plume.*

On the basis of an overall data evaluation after completion of Phases 1-4, a monitoring network will be established in Phase 5. The proposed number and locations of wells will be discussed with the CCC/USDA and KDHE project managers. The activities may include the following:

- Additional wells may be installed by using a drilling rig at selected locations. Two-inch well casings will be advanced to the desired depths, with appropriate screen intervals. Completions of wells will be in accordance with KDHE regulations, the procedures in the *Master Work Plan* (Argonne 2002), and methods discussed in Section 3.3.

- A groundwater sample will be collected for VOCs analysis — and other chemical analyses as necessary — from each well, after installation is complete and the well is stable.
- The locations of all monitoring wells will be determined by a professional, licensed surveyor, in relation to state coordinates. The surveyor will determine the elevation of the top of each well and the designated reference point in each well for water level measurement.
- Slug testing may be conducted at selected wells to generate data on the range and distribution of aquifer hydraulic conductivity values across the area associated with contaminant sources and migration pathways. Results can help to estimate the potential migration rate of the groundwater plume and the feasibility of various corrective actions. The testing will be performed according to the procedures in Section 6.7 of the *Master Work Plan* (Argonne 2002).

### **3.3 Investigation Methods**

#### **3.3.1 Methods for Sampling of Existing Wells**

Water level measurement and sampling in existing wells will be conducted in accordance with the procedures described in the *Master Work Plan* (Argonne 2002), as follows:

1. The well number, the well owner's name, or both will be documented in the site field notebook.
2. If possible, the static groundwater level and then the total depth will be measured and documented for each well.
3. The groundwater from each well will be purged until field parameters of pH, temperature, and conductivity are stable. The field parameters and volume purged will be documented. Each well will be purged before it is sampled.

4. The wells will be sampled after adequate recharge has occurred, but no more than 24 h after purging.
5. Groundwater samples for analysis of VOCs (including carbon tetrachloride and chloroform) will be collected in laboratory-approved containers and immediately placed in a cooler at 4°C. These samples will be shipped for overnight delivery to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne for off-site analysis.
6. Any unavoidable deviations from these procedures will be documented in the field notebook.

### **3.3.2 Methods for Vertical-Profile Soil Sampling with the Cone Penetrometer**

Soil sampling will be performed by using the CPT to obtain cores from a depth of 10 ft BGL to the top of the bedrock. Soil samples will be taken every 8 ft and/or at changes in lithology. The soil samples recovered will be placed in jars, sealed, preserved on dry ice in the field, and shipped to the AGEM Laboratory for preparation and analysis, in accordance with procedures in the *Master Work Plan* (Argonne 2002).

### **3.3.3 Methods for Groundwater Sampling with the Cone Penetrometer**

Groundwater samples collected with the CPT will be submitted to the AGEM Laboratory for rapid-turnaround (24-h) analyses, to facilitate review of the investigation results by Argonne and by the CCC/USDA and KDHE project managers during the field program.

At each location investigated, CPT logs of tip pressure, sleeve friction, and conductance will first be acquired to determine the basic lithostratigraphy and hydrostratigraphy of the site in the context of the local hydrogeologic setting. On the basis of these logs, selected depth intervals (to be determined in the field) may be chosen for coring, to provide sediment samples for lithologic confirmation and correlation of the CPT log responses.

At each location investigated, depth intervals will be chosen in the field for groundwater sampling on the basis of available site-specific lithologic and hydrostratigraphic information.

The groundwater sampling will be performed in accordance with the procedures described in the *Master Work Plan* (Argonne 2002), by first using the CPT rods to push a sacrificial tip and 0.5-in.-I.D. polyvinyl chloride (PVC) filter screen and riser to the desired maximum sampling depth. The rods will then be partially withdrawn to the desired minimum sampling depth, to expose the screen to the formation waters. Samples will be collected from the PVC casing by using a bailer, without purging, for preservation and analysis as described in Section 3.3.1 and Section 3.3.6.

The screen and riser used for CPT sampling at selected locations will be left in place temporarily, to permit the periodic measurement of static groundwater levels during the field program. These temporary observation points will be abandoned in accordance with KDHE requirements upon completion of the field investigation. At the discretion of the CCC/USDA and KDHE project managers — and if access is granted — permanent piezometers or monitoring wells can be installed at these locations in accordance with procedures described in the *Master Work Plan* (Argonne 2002).

### **3.3.4 Methods for Soil and Groundwater Sampling with the Sonic Drilling Rig**

Groundwater samples collected with the drilling rig will be submitted to the AGEM Laboratory for rapid-turnaround (24-h) analyses. The rapid analyses will facilitate review of the results by Argonne and by the CCC/USDA and KDHE project managers during the field program and will support decision making that will drive the direction of the investigation.

At each location investigated, an inner drill string with core barrel will be advanced — without drilling fluid — 10 ft at a time. Next, an outer sonic casing will be advanced. Some potable water will be used for lubrication; the amount of water added for each interval will be monitored. The inner barrel will then be pulled, and the soil core will be extracted for lithologic confirmation. After this, the stainless steel screen will be installed and set at the bottom of the borehole with the lead rod and a K-packer or other device that forms a seal between the screen and casing. The outer casing will then be vibrated back 5 ft or another desired interval, exposing the screen to the formation. An inflatable packer will be installed to isolate the screened zone. After purging of the volume of water added during advancement of the outer casing, plus five times the volume of the isolated sampling zone, the groundwater sample will be collected by using a bailer. Samples will be preserved and analyzed as described in Section 3.3.1 and Section 3.3.6.

### 3.3.5 Methods for Installing Monitoring Wells

Monitoring wells will be installed according to the general procedures in Section 6.4.3 of the *Master Work Plan* (Argonne 2002). The boreholes will be drilled by using a sonic rig. The wells will consist of 2-in. PVC casing installed in 8.25-in.-diameter boreholes. Screens will be 0.010-in. mill slot (unless grain size analyses dictate otherwise), PVC, at the appropriate length for the desired depth. A 10/20 (or #20) filter pack will be used. The filter pack will extend from 1 ft below the screen to 2 ft above the screened interval. A 2-ft to 5-ft bentonite pellet seal will be installed above the filter pack. A grout mixture of Portland cement with 5% bentonite will be placed, through a tremie pipe, in the annular space between the well casing and the borehole, from the top of bentonite seal to the ground surface.

All wells will be constructed in accordance with KDHE guidelines. Any variances required will be obtained from the appropriate agency prior to installation. All investigation-derived wastes will be managed as described in Section 3.3.8. Surface completions will consist of KDHE-approved flush mounts, as shown in the specifications for 2-in. casing in Figure F.4, Appendix F, of the *Master Work Plan* (Argonne 2002). After installation, each well will be pumped and developed for a minimum of 2 h, or as determined by the attendant drilling engineer to be necessary.

### 3.3.6 Methods for Analyses of Soil and Groundwater Samples

Soil and groundwater samples will be collected in laboratory-approved containers and shipped overnight to the AGEM Laboratory at Argonne. The soil samples will be analyzed at the AGEM Laboratory for carbon tetrachloride and chloroform by using a gas chromatograph–mass spectrometer, according to U.S. Environmental Protection Agency (EPA) Methods 5030B and 8260B (EPA 1998). Groundwater samples will be analyzed at the AGEM Laboratory according to EPA Method 524.2 (EPA 1995). In addition, selected groundwater samples will be analyzed for cations and anions at a certified reference laboratory, and selected soil samples will be tested for soil properties. Proposed tests for soil may include porosity, water content, dry bulk density, total organic carbon, and grain size.

### **3.3.7 Methods for Handling and Disposal of Investigation-Derived Waste**

The approach to handling and disposal of soil and water investigation-derived waste (IDW) is discussed in detail in Appendix C. Briefly, the approach is as follows:

- Soil cores collected during sampling will be retained in core boxes for lithologic description and research. The cores will be transported to and stored at an Argonne facility for further reference.
- Soil IDW from drilling activities will be stored on-site in 55-gal drums or a roll-off container. A representative sample will be collected and analyzed by a KDHE-certified laboratory.
- A Solid Waste Disposal Authorization will be obtained from the KDHE for disposal of soil in a permitted landfill. If analytical data indicate that the soils cannot be disposed of in a permitted landfill, alternative disposal methods will be proposed to the KDHE for review.
- Water IDW will be stored on-site in 55-gal drums or polyurethane containers. If acceptable to the KDHE, the wastewater may be aerated prior to sampling. Then the wastewater will be analyzed for VOCs and nitrate.
- The results of the wastewater analyses will be discussed with the KDHE project manager, and an appropriate disposal method will be determined.

### **3.4 Sampling and Reporting Schedule**

The proposed investigation is scheduled for 2007, pending successful negotiation of access. The CCC/USDA and Argonne will notify the KDHE a minimum of two weeks before the proposed field activities begin.

A report will be completed and submitted to the KDHE within four months after Argonne completes its quality review of the investigational data. The report will follow the guidelines for

site monitoring established by KDHE Policy BER-RS-018 (KDHE 2005b). Accordingly, the report will include, at a minimum, the following:

- A narrative of work conducted
- Recommendations for further action(s) at this site, if warranted
- Maps depicting sample locations, groundwater flow direction, and contaminant levels
- Tables that include all analytical and field data
- Laboratory analytical data reports
- Field documentation
- Quality assurance and quality control data

### **3.5 Quality Assurance and Quality Control**

The procedures necessary to maintain the quality of data will be implemented during all phases of the proposed investigation. Descriptions of the quality assurance and quality control methods are in Section 4 of the *Master Work Plan* (Argonne 2002). That document should be consulted for a more detailed narrative of these procedures.

### **3.6 Health and Safety**

A site-specific health and safety plan is in Appendix D. This plan has been approved by the Argonne field safety coordinator. It is to be brought to the site for reference during the investigation.

An Argonne health-safety-environmental protection representative will visit the site during field activities to observe, monitor, and report on operations.

The general health and safety plan for use during this project is in Section 3 of the *Master Work Plan* (Argonne 2002), which addresses all anticipated safety issues for activities at the Inman site. Specific emergency information for use at the site is given below.

**Inman has emergency 911 service.** All emergency calls, including police, fire, and ambulance calls, will be directed for an appropriate response from this number. No emergency medical facilities exist at Inman. The nearest hospital with emergency medical facilities is in McPherson, Kansas. Driving directions to the hospital and the map showing the route are in Figure D.1, Appendix D. Additional emergency information is in Table D.1, Appendix D.

### 3.7 Inman Contacts

John D. O'Brien, Mayor  
104 North Main Street  
Inman, KS 67546  
620-585-2122 (office)  
620-585-6526 (home)

Post Office  
210 South Main Street  
Inman, KS 67546  
620-585-6868

Eva Friesen, City Clerk  
104 North Main Street  
Inman, KS 67546  
620-585-2122 (office)  
620-585-2346 (home)

Inman USD 448 High School  
404 South Main Street  
Inman, KS 67546  
620-585-6441 or  
620-585-6442

Bill Maurer, City Superintendent  
108 East Center Street  
Inman, KS 67546  
620-585-6467 (office)  
620-585-2524 (home)

Linda K. Paul, Register of Deeds  
McPherson Courthouse  
117 North Maple Street  
McPherson, KS 67460  
620-241-505

### 3.8 Argonne Contacts

Lorraine M. LaFreniere, Ph.D.  
Manager, Applied Geosciences and  
Environmental Management Section  
Environmental Science Division  
9700 South Cass Avenue  
Argonne, IL 60439-4843  
630-252-7969  
[lafreniere@anl.gov](mailto:lafreniere@anl.gov)

James Hansen  
Community Relations Representative  
Environmental Science Division  
Argonne National Laboratory  
955 L'Enfant Plaza SW, Suite 6000  
Washington, DC 20024  
202-488-2453  
[hansenj@anl.gov](mailto:hansenj@anl.gov)

Y. Eugene Yan, Ph.D.  
Inman Technical Project Manager  
Environmental Science Division  
9700 South Cass Avenue  
Argonne, IL 60439-4843  
630-252-6322  
[eyan@anl.gov](mailto:eyan@anl.gov)

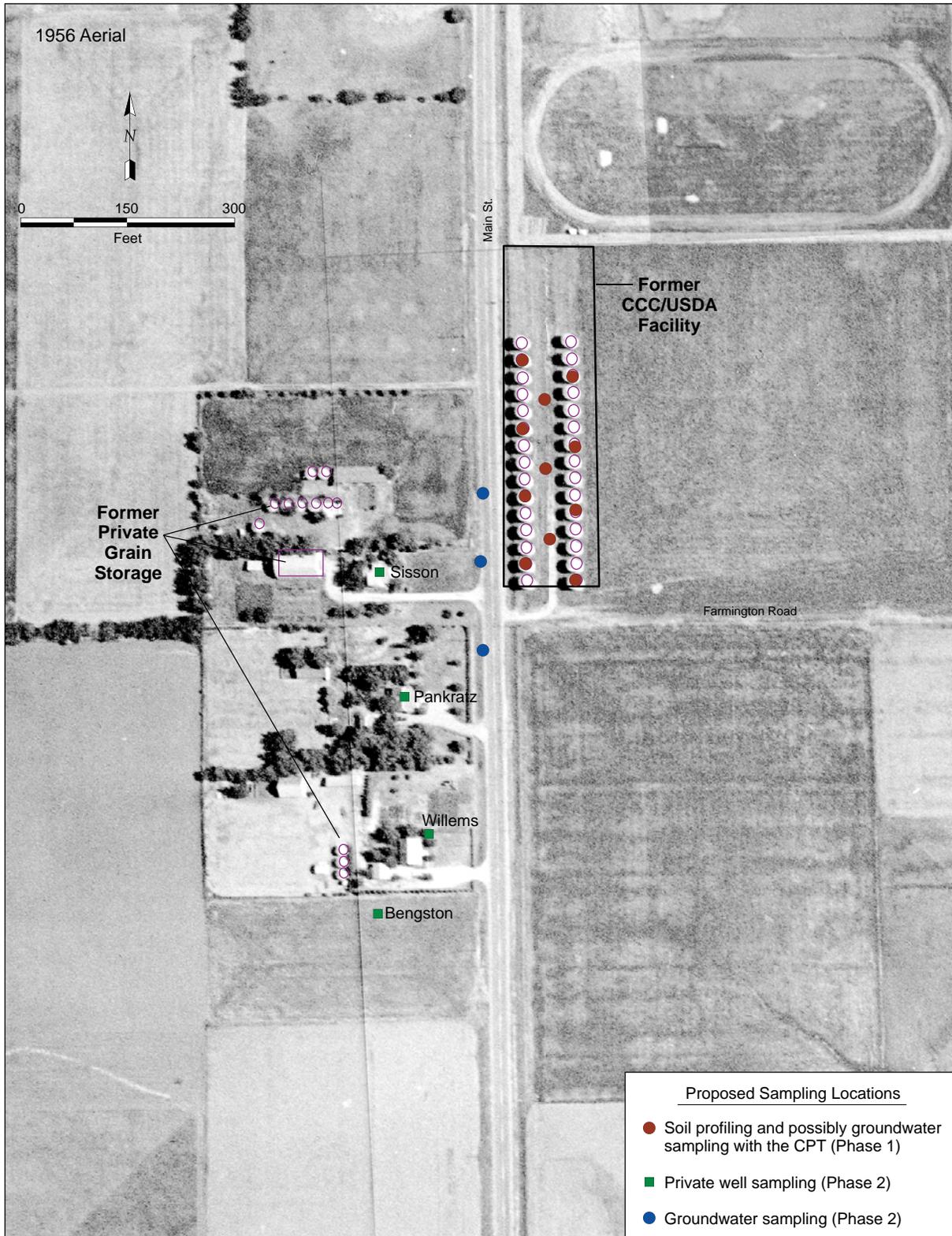


FIGURE 3.1 Proposed soil and groundwater sampling locations at Inman. Locations for Phase 2 groundwater sampling on the former CCC/USDA property will be selected in areas identified in Phase 1 as potential soil sources or migration routes.

## 4 References

Argonne, 2002, *Final Master Work Plan: Environmental Investigations at Former CCC/USDA Facilities in Kansas, 2002 Revision*, ANL/ER/TR-02/004, prepared for the Commodity Credit Corporation, U.S. Department of Agriculture, by Argonne National Laboratory, Argonne, Illinois, December.

EPA, 1995, *Method 524.2: Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry, Revision 4.1*, edited by J.W. Munch, National Exposure Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio.

EPA, 1998, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, EPA SW-846, 3rd edition, Draft Update IVA, U.S. Environmental Protection Agency, January.

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KDHE, 1998a, *Data Sheet for USDA/CCC Private Well Sampling Program*, Bureau of Environmental Remediation, Kansas Department of Health and Environment, Topeka, Kansas, July.

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KDHE, 2005a, letter from C. Carey (Bureau of Environmental Remediation, Kansas Department of Health and Environment, Topeka, Kansas) to C. Roe (Commodity Credit Corporation, U.S. Department of Agriculture, Washington, D.C.), regarding sampling of private wells near Inman, Kansas, on September 14, 2005, October 3.

KDHE, 2005b, *Scope of Work (SOW) for a Comprehensive Investigation*, BER Policy #BER-RS-018, Bureau of Environmental Remediation/Remedial Section Guidance, Kansas Department

of Health and Environment, Topeka, Kansas, revised 2005 ([http://www.kdheks.gov/ber/policies/BER\\_RS\\_018\\_SOW.pdf](http://www.kdheks.gov/ber/policies/BER_RS_018_SOW.pdf)).

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Spinazola, J., J. Gillespie, and R. Hart, 1985, *Groundwater Flow and Solute Transport in the Equus Beds Area, South-Central Kansas, 1940-1979*, U.S. Geological Survey Water Resources Investigations Report 85-4336.

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USDA, 1963, Aerial Photograph AYL-2DD-179L, U.S. Department of Agriculture, Washington, D.C., July 15.

USDA, 1970, Aerial Photograph AYL-ILL-88EC, U.S. Department of Agriculture, Washington, D.C., June 27.

USDA, 1979, Aerial Photograph 20113-179-51EC, U.S. Department of Agriculture, Washington, D.C., August 4.

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Williams, C.C, and S.W. Lohman, 1949, *Geology and Groundwater Resources of a Part of South-Central Kansas*, State Geological Survey of Kansas Bulletin 79, State Geological Survey of Kansas, Topeka, Kansas.

**Appendix A:**

**Water Well Registration Data Used in Construction  
of Hydrogeologic Cross Sections A-A' and B-B'**

## Contents

TABLE A.1 Summary of water well records used to construct hydrogeologic cross sections A-A' and B-B'

### Water Well Records Used for Section A-A':

- Stimatze
- Davisson
- Pauls
- Donovan Ediger
- Kelly Reeves

### Water Well Records Used for Section B-B':

- Lionel Friessen
- Hull
- Davisson
- Janzen
- Mid-Kansas Coop
- Kliever
- City of Inman

TABLE A.1 Summary of water well logs used to construct hydrogeologic cross sections A-A' and B-B'. Source of data: KDHE water well database.

Owner	Easting	Northing	Depth (ft BGL)						Well Use	Date of Completion
			Well Depth	Static Water Level	Screen/Open Interval	Clay and Silt	Gravel	Shale Penetrated		
<i>Cross Section A-A' (NW-SE)</i>										
Stimatze	-97.78135	38.22910	100	29	Open 38-100	0-30		30-100	Domestic	04/29/89
Davisson	-97.77671	38.22549	114	26	Unknown	Unknown			Plugged	05/01/93
Pauls	-97.77208	38.21823	101	27	Open 33-101	0-25		25-101	Domestic	01/24/06
Donovan Ediger	-97.76516	38.21642	135	12	Open 20-135	0-15		15-135	Domestic	07/14/02
Kelly Reeves	-97.76048	38.21281	104	7	Open 27-104	0-21		21-104	Domestic	08/27/92
<i>Cross Section B-B' (SW-NE)</i>										
Lionel Friessen	-97.77780	38.21549	105	25	Screen 85-105	0-5		5-105	Domestic	10/19/77
Hull	-97.77899	38.22002	106	31	Open 54-106	0-48	32-43	48-106	Domestic	03/16/93
Davisson	-97.77671	38.22549	114	26	Unknown	Unknown			Plugged	05/01/93
Janzen	-97.77442	38.22731	148	44	Open 40-148	0-32		32-148	Domestic	07/07/95
Mid-Kansas Co-op	-97.77213	38.23095	40	22.76	Screen 15-40	0-17		17-40	Monitoring-MW9	11/23/04
Kliever	-97.76984	38.23276	106	15	Open 22-106	0-11		11-106	Lawn/garden	03/02/99
City of Inman	-97.75833	38.24002	148	14	Open 28-148	0-20		20-148	Pond/swimming pool	12/28/01

**Water Well Records Used for Section A-A'**



WATER WELL RECORD Form WWC-5 KSA 82a-1212 PLUGGING REPORT

1 LOCATION OF WATER WELL: County: McPherson Fraction: SE 1/4 SE 1/4 NE 1/4 Section Number: 17 Township Number: T 21 S Range Number: R 4 W  
 Distance and direction from nearest town or city street address of well if located within city:  
509 S. Main, Inman, Kansas 67546

2 WATER WELL OWNER: Judy Davisson  
 RR#, St. Address, Box #: 509 S. Main Board of Agriculture, Division of Water Resources:  
 City, State, ZIP Code: Inman KS 67546 Application Number:

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:

NW	NE
SW	SE

X

4 DEPTH OF COMPLETED WELL: 114 ft. ELEVATION:  
 Depth(s) Groundwater Encountered 1. .... ft. 2. .... ft. 3. .... ft.  
 WELL'S STATIC WATER LEVEL: 26 ft. below land surface measured on mo/day/yr 5/1/93  
 Pump test data: Well water was ..... ft. after ..... hours pumping ..... gpm  
 Est. Yield ..... gpm: Well water was ..... ft. after ..... hours pumping ..... gpm  
 Bore Hole Diameter ..... in. to ..... ft., and ..... in. to ..... ft.  
 WELL WATER TO BE USED AS:  
1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)  
 2 Irrigation 4 Industrial 7 Lawn and garden only 10 Observation well  
 Was a chemical/bacteriological sample submitted to Department? Yes ..... No X: If yes, mo/day/yr sample was submitted ..... Water Well Disinfected? Yes X No

5 TYPE OF BLANK CASING USED:  
 1 Steel 3 RMP (SR) 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued ..... Clamped .....  
 2 PVC 4 ABS 6 Asbestos-Cement XX 9 Other (specify below) Welded .....  
 7 Fiberglass Galvanized Threaded .....  
 Blank casing diameter 5 in. to ..... ft. Dia. .... in. to ..... ft. Dia. .... in. to ..... ft.  
 Casing height above land surface 72" below ..... in. weight ..... lbs./ft. Wall thickness or gauge No. ....  
 TYPE OF SCREEN OR PERFORATION MATERIAL:  
 1 Steel 3 Stainless steel 5 Fiberglass 8 RMP (SR) 10 Asbestos-cement  
 2 Brass 4 Galvanized steel 6 Concrete tile 9 ABS 11 Other (specify) N/A  
 12 None used (open hole)  
 SCREEN OR PERFORATION OPENINGS ARE:  
 1 Continuous slot 3 Mill slot 5 Gauzed wrapped 8 Saw cut 11 None (open hole)  
 2 Louvered shutter 4 Key punched 6 Wire wrapped 9 Drilled holes  
 7 Torch cut 10 Other (specify) .....  
 SCREEN-PERFORATED INTERVALS: From N/A ft. to N/A ft., From ..... ft. to ..... ft.  
 From ..... ft. to ..... ft., From ..... ft. to ..... ft.  
 GRAVEL PACK INTERVALS: From N/A ft. to N/A ft., From ..... ft. to ..... ft.  
 From ..... ft. to ..... ft., From ..... ft. to ..... ft.

6 GROUT MATERIAL: 1 Neat cement X 2 Cement grout and X 3 Bentonite 4 Other  
 Grout intervals: From 26 ft. to 6 ft., From ..... ft. to ..... ft., From ..... ft. to ..... ft.  
 What is the nearest source of possible contamination:  
 1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well  
 2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/Gas well  
 3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage X 16 Other (specify below)  
 13 Insecticide storage HOUSE  
 Direction from well? north How many feet?

FROM		TO		LITHOLOGIC LOG	FROM		TO		LITHOLOGIC LOG
114'	26'	26'	6'4"	Chlorinated sand					
26'	6'4"	6'4"	6'	Bentonite					
6'4"	6'	6'	0	Cement					
6'	0	0		Basement					

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was ~~plugged~~ plugged under my jurisdiction and was completed on (mo/day/year) 5/1/93 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. .... This Water Well Record was completed on (mo/day/yr) 5/3/93 under the business name of ADVANCE TERMITE & PEST CONTROL, INC. by (signature) At Wells  
 INSTRUCTIONS: Use typewriter or ball point pen, PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Division of Environment, Environmental Geology Section, Topeka, KS 66620. Send one to WATER WELL OWNER and retain one for your records.

**WATER WELL RECORD**

**Form WWC-5**

Division of Water Resources; App. No.  

<b>1 LOCATION OF WATER WELL:</b>		Fraction	Section Number	Township Number	Range Number																
County: <u>McPherson</u>		<u>SE 1/4 SW 1/4 SW 1/4</u>	<u>16</u>	T <u>21 S</u>	R <u>4 E</u>																
Distance and direction from nearest town or city street address of well if located within city? <u>1/2 mi S of Inman</u> <u>310 8th Ave</u>		Global Positioning Systems (decimal degrees, min. of 4 digits)																			
<b>2 WATER WELL OWNER:</b> <u>Dennis Pauls</u>		Latitude: _____																			
RR#, St. Address, Box #: <u>310 8th Ave</u>		Longitude: _____																			
City, State, ZIP Code: <u>Inman, KS 67546</u>		Elevation: _____																			
		Datum: _____																			
		Data Collection Method: _____																			
<b>3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:</b>	<b>4 DEPTH OF COMPLETED WELL</b> ..... <u>101</u> ..... ft.																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="text-align: center;">NW</td> <td style="text-align: center;">NE</td> <td style="text-align: center;">E</td> <td style="text-align: center;">SE</td> </tr> <tr> <td style="text-align: center;">SW</td> <td style="text-align: center;">SE</td> <td style="text-align: center;">S</td> <td style="text-align: center;">E</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>					NW	NE	E	SE	SW	SE	S	E	X				Depth(s) Groundwater Encountered (1)..... ft. (2)..... ft. (3)..... ft. WELL'S STATIC WATER LEVEL <u>27</u> ..... ft. below land surface measured on mo/day/yr. <u>1-24-06</u> Pump test data: Well water was..... <u>53</u> ..... ft. after..... <u>3</u> ..... hours pumping..... <u>20</u> ..... gpm Est. Yield <u>25</u> ..... gpm: Well water was..... ft. after..... hours pumping..... gpm WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well <input checked="" type="radio"/> Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below) 2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well				
	NW	NE	E	SE																	
	SW	SE	S	E																	
X																					
Was a chemical/bacteriological sample submitted to Department? Yes..... No <u>X</u> .....; If yes, mo/day/yr Sample was submitted..... Water well disinfected? Yes <u>X</u> ..... No.....																					
<b>5 TYPE OF CASING USED:</b>																					
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) CASING JOINTS: Glued..... <u>X</u> ..... Clamped..... <input checked="" type="radio"/> PVC 4 ABS 7 Fiberglass ..... Welded..... Blank casing diameter <u>6</u> ..... in. to <u>33</u> ..... ft., Diameter..... in. to..... ft., Diameter..... in. to..... ft. Casing height above land surface..... <u>12</u> ..... in., Weight..... <u>3.22</u> ..... lbs./ft. Wall thickness or gauge No. .... <u>16.5</u> ..... TYPE OF SCREEN OR PERFORATION MATERIAL: 1 Steel 3 Stainless Steel 5 Fiberglass 7 PVC 9 ABS 11 Other (Specify)..... 2 Brass 4 Galvanized Steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement <input checked="" type="radio"/> None used (open hole) SCREEN OR PERFORATION OPENINGS ARE: 1 Continuous slot 3 Mill slot 5 Gauzed wrapped 7 Torch cut 9 Drilled holes <input checked="" type="radio"/> None (open hole) 2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify)..... SCREEN-PERFORATED INTERVALS: From..... ft. to..... ft., From..... ft. to..... ft. GRAVEL PACK INTERVALS: From..... ft. to..... ft., From..... ft. to..... ft.																					
<b>6 GROUT MATERIAL:</b> 1 Neat cement 2 Cement grout <input checked="" type="radio"/> Bentonite 4 Other.....																					
Grout Intervals: From <u>3</u> ..... ft. to <u>23</u> ..... ft., From <u>28</u> ..... ft. to <u>23</u> ..... ft., From..... ft. to..... ft.																					
What is the nearest source of possible contamination:																					
1 Septic tank 4 Lateral lines 7 Pit privy <u>proposed</u> 10 Livestock pens 13 Insecticide Storage 16 Other (specify below) 2 Sewer lines 5 Cess pool <input checked="" type="radio"/> Sewage lagoon 11 Fuel storage 14 Abandoned water well 3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer Storage 15 Oil well/gas well																					
Direction from well? <u>SE</u> ..... How many feet? <u>200</u> .....																					
<b>FROM</b>		<b>TO</b>		<b>LITHOLOGIC LOG</b>																	
				<b>FROM</b>																	
				<b>TO</b>																	
				<b>PLUGGING INTERVALS</b>																	
<u>0</u>	<u>2</u>	<u>Top Soil</u>																			
<u>2</u>	<u>6</u>	<u>Clay</u>																			
<u>6</u>	<u>25</u>	<u>Br Clay</u>																			
<u>25</u>	<u>28</u>	<u>Shale-Rubble</u>																			
<u>28</u>	<u>101</u>	<u>Red shale</u>																			
<b>7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION:</b> This water well was <input checked="" type="radio"/> constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) <u>1-24-06</u> , and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. <u>447</u> ..... This Water Well Record was completed on (mo/day/year) <u>2-2-06</u> ..... under the business name of <u>Miller Drilling</u> by (signature) <u>[Signature]</u>																					
INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one to WATER WELL OWNER and retain one for your records. Fee of \$3.00 for each constructed well. Visit us at <a href="http://www.kdhe.state.ks.us/geo/waterwells">http://www.kdhe.state.ks.us/geo/waterwells</a> .																					

WATER WELL RECORD Form WWG-5 KSA 82a-1212 ID No.

1 LOCATION OF WATER WELL: Fraction <u>NW</u> <u>NE</u> <u>SE</u> <u>SW</u> Section Number <u>21</u> Township Number <u>T 21 S</u> Range Number <u>R 9 E</u>			
County: <u>McPherson</u> Distance and direction from nearest town or city street address of well if located within city:			
2 WATER WELL OWNER: <u>Dorwin Eckert</u> RR#, St. Address, Box # : <u>369 Buckhart</u> Board of Agriculture, Division of Water Resources City, State, ZIP Code : <u>Inman, KS</u> Application Number:			
3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:	4 DEPTH OF COMPLETED WELL: <u>135</u> ft. ELEVATION: _____		
	Depth(s) Groundwater Encountered: 1. _____ ft. 2. _____ ft. 3. _____ ft. WELL'S STATIC WATER LEVEL: <u>12</u> ft. below land surface measured on mo/day/yr Pump test data: Well water was _____ ft. after _____ hours pumping _____ gpm Est. Yield _____ gpm: Well water was _____ ft. after _____ hours pumping _____ gpm Bore Hole Diameter: <u>12</u> in. to <u>20</u> in. and _____ in. to <u>135</u> ft. WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well <input checked="" type="checkbox"/> Domestic 3 Foodlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below) 2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well Was a chemical/bacteriological sample submitted to Department? Yes. _____ No. _____ If yes, mo/day/yr sample was submitted _____ Water Well Disinfected? Yes _____ No _____		
5 TYPE OF BLANK CASING USED:			
1 Steel <input checked="" type="checkbox"/> 2 PVC 3 RMP (SR) 4 ABS Blank casing diameter _____ in. to _____ in. Dia. _____ in. to _____ in. Dia. Casing height above land surface: <u>14</u> in. weight <u>50R 26</u> lbs./ft. Wall thickness or gauge No. _____	6 Wrought iron 7 Fiberglass 8 Concrete tile 9 Other (specify below) 10 Asbestos-cement 11 Other (specify) 12 None used (open hole)		
TYPE OF SCREEN OR PERFORATION MATERIAL:			
1 Steel 2 Brass 3 Stainless steel 4 Galvanized steel SCREEN OR PERFORATION OPENINGS ARE: 1 Continuous slot <input checked="" type="checkbox"/> 2 Slotted 3 Mill slot 4 Key punched 5 Gauzed wrapped 6 Concrete tile 7 PVC 8 RMP (SR) 9 ABS 10 Asbestos-cement 11 Other (specify)	8 Saw cut 9 Drilled holes 10 Other (specify)		
SCREEN-PERFORATED INTERVALS: From _____ ft. to _____ ft. From _____ ft. to _____ ft. GRAVEL PACK INTERVALS: From _____ ft. to _____ ft. From _____ ft. to _____ ft.			
6 GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 Bentonite 4 Other _____			
Grout intervals: From _____ ft. to _____ ft. From _____ ft. to _____ ft. From _____ ft. to _____ ft.			
What is the nearest source of possible contamination: <input checked="" type="checkbox"/> 1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well 2 Sewer lines 5 Coes pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/Gas well 3 Watertight sewer lines 6 Steepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below) Direction from well? <u>SW</u> How many feet? <u>500</u>			
FROM TO LITHOLOGIC LOG FROM TO PLUGGING INTERVALS			
0 13	Clay (Red)		
15 135	Shale		
7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) <u>7-14-02</u> and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. <u>440</u> This Water Well Record was completed on (mo/day/yr) <u>7-7-02</u> under the business name of <u>Carl Vincent Surr</u> by (signature) <u>[Signature]</u>			
INSTRUCTIONS: Use typewriter or ball point pen. <u>DO NOT</u> use blue ink and <u>DO NOT</u> write in pencil. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66605-0001. Telephone 785-295-2324. Send one to WATERWELL.OWNERS and retain one for your records. Fee of \$5.00 for each additional well.			



**Water Well Records Used for Section B-B'**

DRILLING

IRRIGATION SUPPLIES

# PETERSON IRRIGATION, INC.

330 HARRISON

PHONE 913-227-3520



LINDSBORG, KANSAS 67456

## WATER WELL RECORD

### DRILLERS LOG OF WELL

FROM (FT.)	TO (FT.)	KIND OF MATERIAL, COLOR, ETC. (NOTE WATER ZONES, AMOUNT, QUALITY)
0	5	Topsoil
5	10	Light gray shale
10	25	Red shale
25	40	Red & gray shale
40	50	blue shale
50	75	Red shale
75	105	Red shale some soft layers
Cased 95' bet 4" PVC		
nobody dug that far of this locality		

Well Owner Lionel Friesen

Address R.R. Inman 20.

Drilling Contractor \_\_\_\_\_

Date Drilled Oct 19-1977

Method of Drilling Rotary  
(Cable tool, auger, reverse rotary, etc.)

Casing Schedule 75' 4" PVC  
(Amount, Size, Setting—New, Used—Steel, Galv.—Gage or Weight)

Screen Data (if any): 20' 4" PVC  
(Length, Diameter, Slot Size, Setting)

Measured depth to water on completed well (Static Level) is 25 ft. below land  
(Land Surface, Top of Casing, Etc.)

TESTED YIELD: 1-3 gallons per MIN  
(Min, Hour)

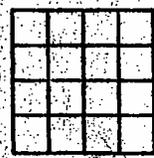
as determined by Bailing  
(Bailing, Test Pumping, Etc.)

DRAWDOWN: 85 ft. after 2 hrs.  
Bailing pumping at 6 gal. per minute.

REMARKS:

*Billed and  
10-20-77  
7119*

LOCATION OF WELL Topographic Sheet \_\_\_\_\_  
(Show location in Section Plot) Elev. \_\_\_\_\_



NE X NE X Sec. 20  
T. 21 S. R. 4 W.  
County McPherson



WATER WELL RECORD Form WW-5 KSA 82a-1212 PLUGGING REPORT

1 LOCATION OF WATER WELL: County: <b>McPherson</b>		Fraction <b>SE 1/4 SE 1/4 NE 1/4</b>	Section Number <b>17</b>	Township Number <b>T 21 S</b>	Range Number <b>R 4 W</b>
---	--	---	-----------------------------	----------------------------------	------------------------------

Distance and direction from nearest town or city street address of well if located within city?  
**509 S. Main, Inman, Kansas 67546**

2 WATER WELL OWNER: <b>Judy Davisson</b> RR#, St. Address, Box #: <b>509 S. Main</b> City, State, ZIP Code: <b>Inman KS 67546</b>		Board of Agriculture, Division of Water Resources: Application Number:
---	--	---

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX: 	4 DEPTH OF COMPLETED WELL... <b>114</b> ... ft. ELEVATION: ..... Depth(s) Groundwater Encountered 1. .... ft. 2. .... ft. 3. .... ft. WELL'S STATIC WATER LEVEL... <b>26</b> ... ft. below land surface measured on mo/day/yr... <b>5/1/93</b> Pump test data: Well water was ..... ft. after ..... hours pumping ..... gpm Est. Yield ..... gpm: Well water was ..... ft. after ..... hours pumping ..... gpm Bore Hole Diameter..... in. to ..... ft., and..... in. to ..... ft. WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well 1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below) 2 Irrigation 4 Industrial 7 Lawn and garden only 10 Observation well Was a chemical/bacteriological sample submitted to Department? Yes..... No..... If yes, mo/day/yr sample was submitted ..... Water Well Disinfected? Yes <input checked="" type="checkbox"/> No
--	---

5 TYPE OF BLANK CASING USED:		5 Wrought iron	8 Concrete tile	CASING JOINTS: Glued ..... Clamped .....
1 Steel	3 RMP (SR)	6 Asbestos-Cement	9 Other (specify below)	Welded .....
2 PVC	4 ABS	7 Fiberglass	Galvanized	Threaded .....
Blank casing diameter... <b>5</b> ... in. to ..... ft., Dia..... in. to ..... ft., Dia..... in. to ..... ft.		Casing height above land surface... <b>72"</b> below..... in., weight..... lbs./ft. Wall thickness or gauge No. ....		
TYPE OF SCREEN OR PERFORATION MATERIAL:		7 PVC	10 Asbestos-cement	
1 Steel	3 Stainless steel	5 Fiberglass	8 RMP (SR)	11 Other (specify)..... <b>N/A</b>
2 Brass	4 Galvanized steel	6 Concrete tile	9 ABS	12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:		5 Gauzed wrapped	8 Saw cut	11 None (open hole)
1 Continuous slot	3 Mill slot	6 Wire wrapped	9 Drilled holes	
2 Louvered shutter	4 Key punched	7 Torch cut	10 Other (specify) .....	
SCREEN-PERFORATED INTERVALS: From... <b>N/A</b> ... ft. to... <b>N/A</b> ... ft., From..... ft. to..... ft.		GRAVEL PACK INTERVALS: From... <b>N/A</b> ... ft. to... <b>N/A</b> ... ft., From..... ft. to..... ft.		

6 GROUT MATERIAL:		1 Neat cement	X 2 Cement grout and	X 3 Bentonite	4 Other .....
Grout intervals: From..... <b>26</b> ... ft. to..... <b>6</b> ... ft., From..... ft. to..... ft.		What is the nearest source of possible contamination:			
1 Septic tank	4 Lateral lines	7 Pit privy	11 Fuel storage	14 Abandoned water well	
2 Sewer lines	5 Cess pool	8 Sewage lagoon	12 Fertilizer storage	X 16 Other (specify below)	
3 Watertight sewer lines	6 Seepage pit	9 Feedyard	13 Insecticide storage	house	
Direction from well? <b>north</b>		How many feet?			

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHOLOGIC LOG
114'	26'	Chlorinated sand			
26'	6'4"	Bentonite			
6'4"	6'	Cement			
6'	0	Basement			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) <b>5/1/93</b> and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. .... This Water Well Record was completed on (mo/day/yr) <b>5/3/93</b> under the business name of <b>ADVANCE TERMITE &amp; PEST CONTROL, INC.</b> by (signature) <i>[Signature]</i> <b>Al Wells</b>	
--	--

INSTRUCTIONS: Use typewriter or ball point pen, PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Division of Environment, Environmental Geology Section, Topeka, KS 66620. Send one to WATER WELL OWNER and retain one for your records.









**Appendix B:**

**Property Records**

## **Contents**

Figure B.1 1956 aerial photograph

Figure B.2 1963 aerial photograph

Figure B.3 1970 aerial photograph

Figure B.4 1979 aerial photograph

Figure B.5 1985 aerial photograph

Figure B.6 2006 aerial photograph

Figure B.7 1987 plat of Inman, Kansas

Table B.1 Summary of property documentation related to former and current grain storage facilities at Inman

Reproduced property documents

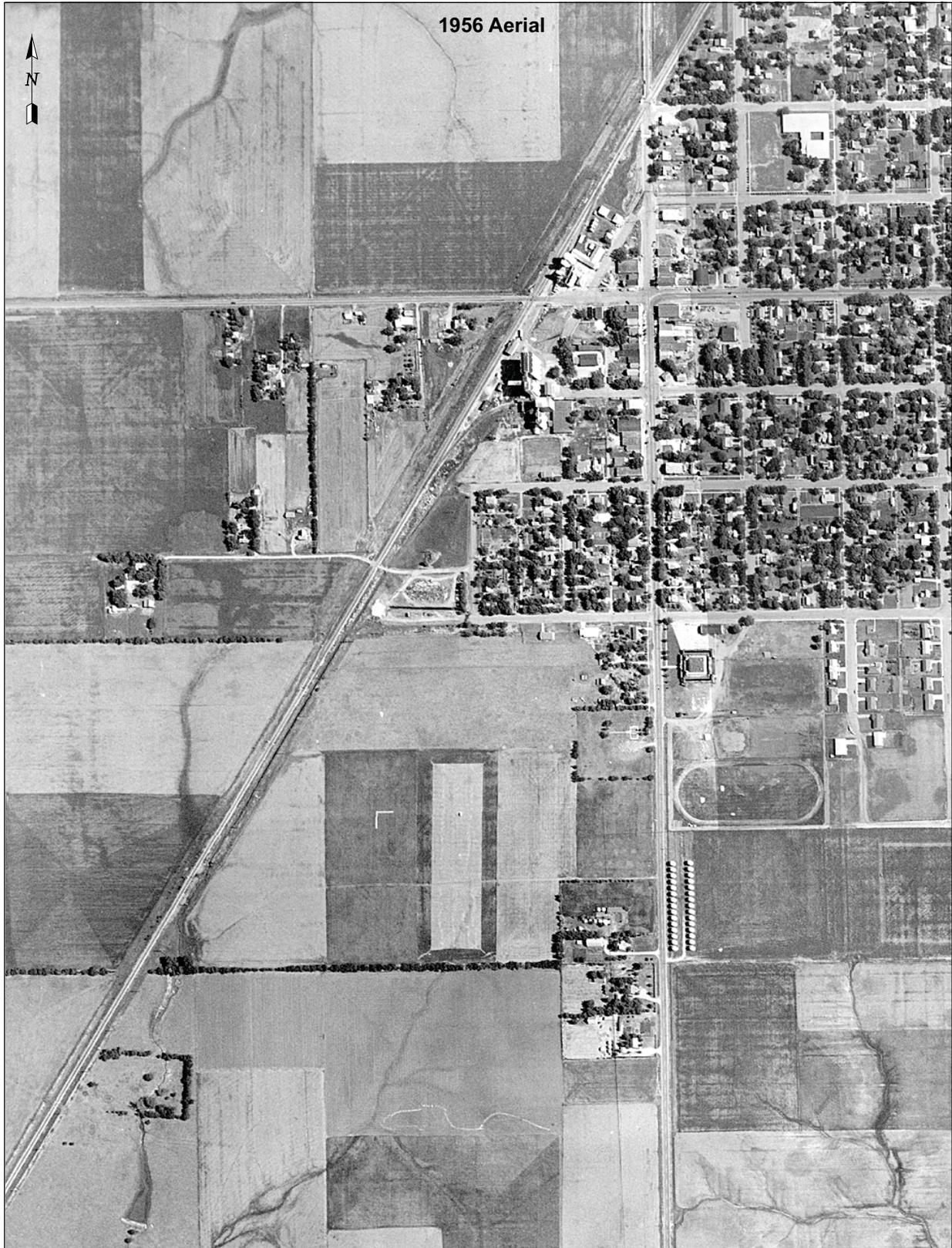


FIGURE B.1 1956 aerial photograph. Source: USDA (1956).



FIGURE B.2 1963 aerial photograph. Source: USDA (1963).



FIGURE B.3 1970 aerial photograph. Source: USDA (1970).

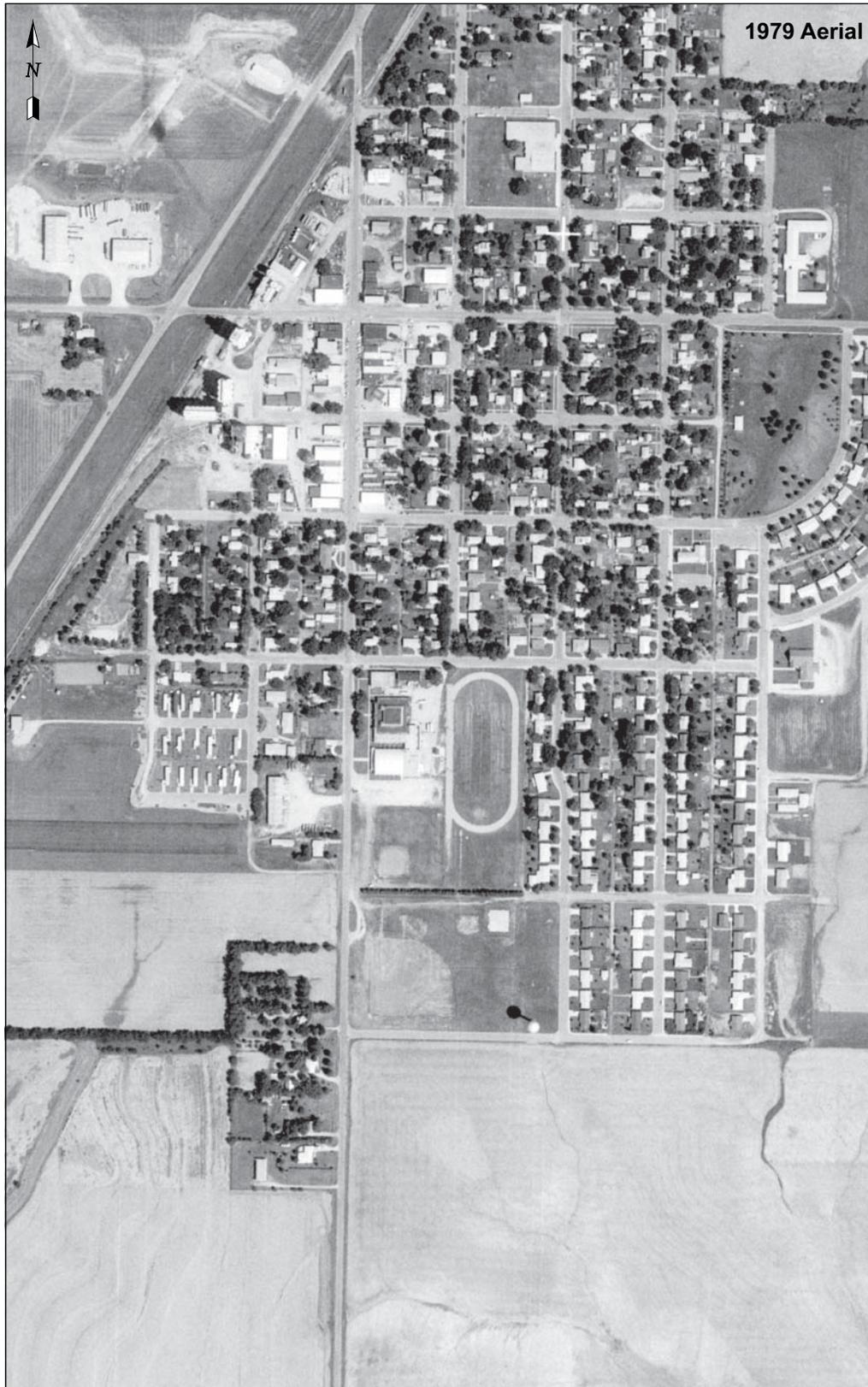


FIGURE B.4 1979 aerial photograph. Source: USDA (1979).



FIGURE B.5 1985 aerial photograph. Source: USDA (1985).



FIGURE B.6 2006 aerial photograph. Source: McPherson Mapping Department (2006).

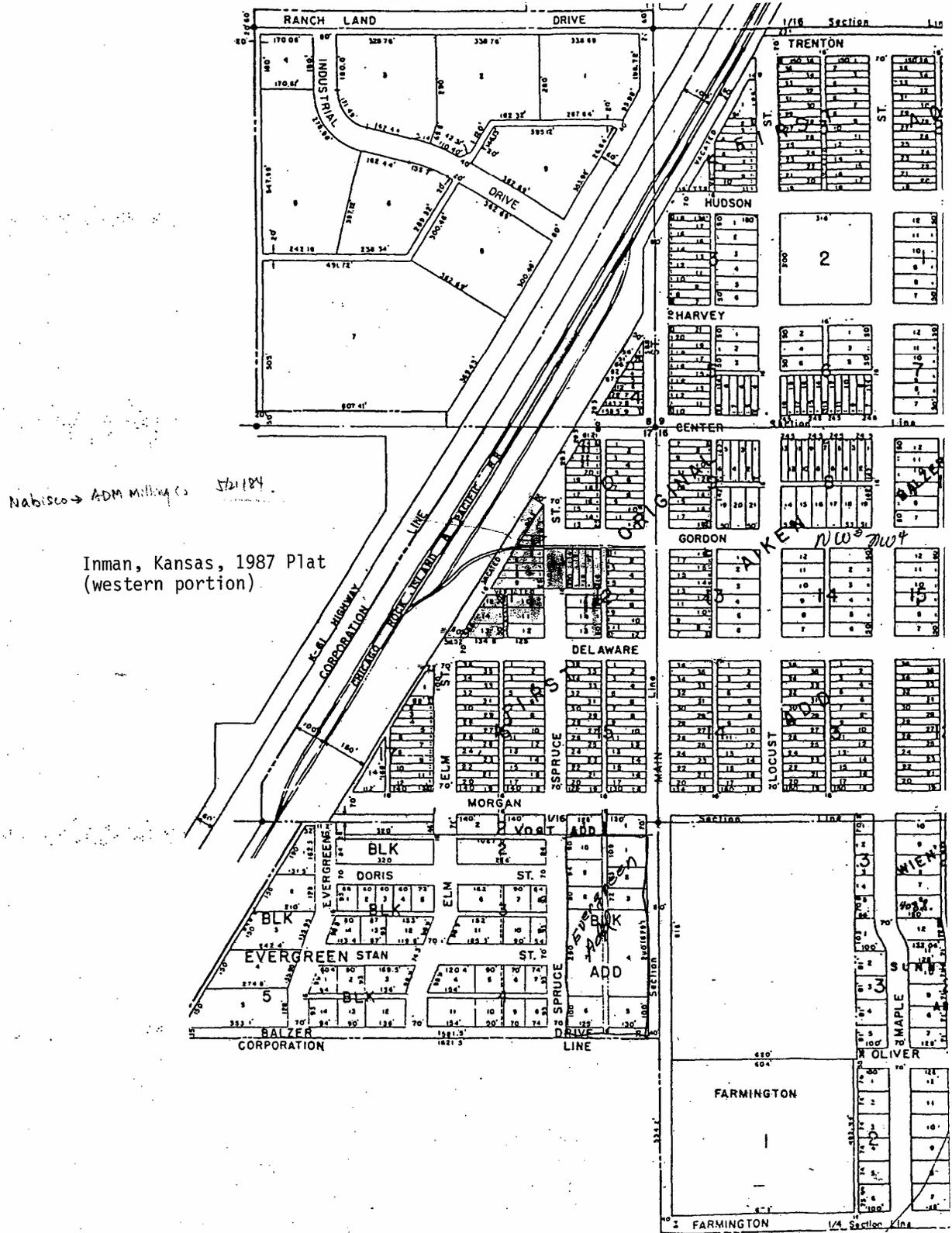


FIGURE B.7 1987 plat of Inman, Kansas.



TABLE B.1 Summary of property documentation related to grain storage facilities at Inman.

Date	Transaction	Property Description	Pages
<b>Properties associated with the former private grain storage facilities (from 1940s to present)<sup>a</sup></b>			
<i>Property containing the northern private grain storage structures</i>			
08/14/1941	Toews to Enns	Commencing at the SE corner of the SE quarter of the NE quarter of 17-T21S-R4W, then due west 24 rods (396 ft), then 20 rods north (330 ft), then 24 rods (396 ft) east, then 20 rods (330 ft) south, to the point of beginning.	1
05/07/1964	Enns to Martens	Same as above.	2
03/14/1997	Martens to Ensz	Same as above.	1
06/27/2005	Ensz to Sisson	Same as above.	1
<i>Property containing the southern private grain storage bins</i>			
12/06/1944	Balzer to Balzer	Commencing at a point 195 ft south of the NE corner of SE quarter of 17-T21S-R4W, then due west 400 ft, then 180 ft south, then 400 ft east, then 180 ft north, to the point of beginning.	1
12/29/1966	Balzer to Willems	Same as above.	1
<b>Property associated with the former CCC/USDA grain storage facility (from 1940s to present)</b>			
12/09/1947	Pankratz to Pankratz	The east half of the NW quarter and SW quarter of the NW quarter of 16-T21S-R4W, less 5 acres for school purpose in the northwest corner (115 acres).	2
05/01/1954	Pankratz lease to CCC/USDA	This land is the southwest part of the property described above. Beginning 50 ft due north of the SW corner of the SW quarter of the NW quarter of 16-T21S-R4W, then 485 ft north, then 128 ft east, then 485 ft south, then 128 ft west, to the point of beginning.	2
07/30/1955	Pankratz lease to Sinclair oil and gas company	Beginning at a point on section line 2,116 ft south of the common corner to sections 8, 9, 16, 17 in T21S-R4W, then 660 ft east, then 816 ft north to the south line of Morgan St., then 660 ft west, then 816 ft south on the section line, to the point of beginning.	4
07/31/1956	Release of oil and gas lease from Sinclair	Same as above.	2
06/25/1956	Plankratz to Froese	Same as above (96 acres).	2
05/01/1957	Froese lease to CCC/USDA	Beginning 50 ft due north of the SW corner of the SW quarter of the NW quarter tr of 16-T21S-R4W, then 485 ft north, then 128 ft east, then 485 ft south, then 128 ft west, to the point of beginning (1957-1959).	2

TABLE B.1 (Cont.)

Date	Transaction	Property Description	Pages
<b><i>Property associated with the former CCC/USDA grain storage facility (from 1940s to present) (cont.)</i></b>			
10/24/1957	Froese lease to Burry Oil and Gas Corp.	Beginning at a point on section line 1,654 ft south of the common corner to sections 8, 9, 16, 17 in T21S-R4W, then 660 ft east, then 462 ft south, then 660 ft west, then 462 ft north, to the point of beginning. Includes the leased property above.	2
02/18/1960	Release of oil and gas lease	Same as above.	1
05/01/1958	Froese lease to CCC/USDA	Beginning 50 ft due north of the SW corner of the SW quarter of the NW quarter of 16-T21S-R4W, then 485 ft north, then 128 ft east, then 485 ft south, then 128 ft west, to the point of beginning. Known by reference in 06/28/1963 lease.	–
06/28/1963	Froese lease to CCC/USDA	Same as above (1964-1969).	2
04/30/1965	Discharge of lease	Same as above.	1
02/08/1967	Froese to Unified School #448	Beginning at a point on section line 2,116 ft south of the common corner to sections 8, 9, 16, 17 in T21S-R4W, then 534.2 south, then 660 ft east, then 536.99 ft north, then 660 ft west, to the point of beginning (includes the land leased to the CCC/USDA).	1
<b><i>Properties associated with the commercial grain storage facilities (from 1940s to present)</i></b>			
<i>Property containing the southern grain elevator</i>			
01/02/1947	Enns Milling Company to Buhler Mill and Elevator Company	Includes Block 11 in Original Town of Inman.	1
01/20/1956 <sup>b</sup>	Buhler Mill and Elevator lease to Rohesh Mills	Known by reference in 05/21/1984 lease.	–
05/21/1984	Nabisco Brands, Inc., to ADM Milling Co.	Block 11; lots 1-2, partial 13-15, 16-20 in Block 12; vacated Spruce St. between Blocks 11 and 12; Front St. west of Block 11 in Original Town of Inman.	2
<i>Property containing the middle and northern grain elevators</i>			
11/14/1968	Chicago, Rock Island and Pacific RR Co. to Chase Grain Co.	Parcels #1 and #2, RR right-of-way, east side of the RR track.	4
03/08/1982	The Chase Grain Co. to Nabisco Brands, Inc.	Same as above.	3
05/21/1984	Nabisco, Inc., to ADM Milling Co.	Parcels #1 and #2, plus lots 8 and 9, block 4; lots 23 and 24, block 10.	2

TABLE B.1 (Cont.)

Date	Transaction	Property Description	Pages
<b><i>Properties associated with the commercial grain storage facilities (from 1940s to present) (cont.)</i></b>			
<i>Property containing other grain operation structures, north of the elevators</i>			
07/24/2002	Union Pacific RR Co. to City of Inman	RR right-of-way north of parcel #1.	4
09/09/2002	City of Inman to Inman Industrial, Inc.	Same as above.	2

- a These properties were leased to Burry Oil and Gas Corp. from 1957 to 1960 and to Walker Oil Co. from 1982 to an unrecorded time.
- b No Information available on when the property was conveyed to Nabisco from Buhler Mill and Elevator, or through other entities.

DEED RECORD NO. 116 p9509  
GENERAL WARRANTY

I Herby Certify, That this instrument was filed for record the 22<sup>nd</sup> day of May, 1944,  
at 8<sup>12</sup> o'clock A. M. Luella Hoffmann Register of Deeds.

THIS INDENTURE, Made this 14<sup>th</sup> day of August, A. D. 1941,  
between Henry E. Jozewski and Mary E. Jozewski, Husband and wife  
of McPherson County, in the State of Kansas, of the first part, and  
Jacob B. Ennsel  
of McPherson County, in the State of Kansas, of the second part:

WITNESSETH, That said parties of the first part, in consideration of the sum of  
Two thousand Five Hundred and no/100 and no/100 DOLLARS,  
the receipt whereof is hereby acknowledged, do by these presents, Grant, Bargain, Sell and Convey unto said party of the second  
part, his heirs and assigns, all the following described Real Estate, situated in the County of McPherson, and State of  
Kansas, to-wit:

Commencing at the Southeast corner of the Southeast Quarter of the  
Northwest Quarter (SE 1/4 NE 1/4) of Section Seventeen (17), Township Twenty-one  
(21) North, Range Four (4) West of the Sixth Principal Meridian, thence south  
Twenty-Four (24) rods, thence south Twenty (20) rods, thence East Twenty (20)  
(20) rods to the east line of said Southeast Quarter of the Northwest Quarter of  
Section Seventeen to the center of the road, thence south Twenty (20) rods to  
place of beginning, containing and conveying three (3) acres of land, more  
or less, land that has been used for State Highway purposes

TO HAVE AND TO HOLD THE SAME, Together with all and singular the tenements, hereditaments and appurtenances thereto  
belonging or in anywise appertaining, forever.  
And said grantees

for themselves & their heirs, executors or administrators, do hereby covenant, promise and agree, to  
and with said party of the second part, that at the delivery of these presents they are lawfully seized  
in their own right, of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular  
the above granted and described premises, with the appurtenances; that the same are free, clear, discharged and unincumbered of and from  
all former and other grants, titles, charges, estates, judgments, taxes, assessments and incumbrances, of what nature or kind soever;  
more

and that they will WARRANT AND FOREVER DEFEND the same unto said party of the second part,  
his heirs and assigns, against said parties of the first part, their heirs, and all and every  
person or persons whomsoever, lawfully claiming or to claim the same.

IN WITNESS WHEREOF, The said parties of the first part have hereunto set their hand at the day  
and year first above written.

(K.S.R. Stamp #2 25 H.E.S 5-14-41)

Henry E. Jozewski  
Mary E. Jozewski

STATE OF KANSAS, McPHERSON COUNTY, ss.  
BE IT REMEMBERED, That on this 1<sup>st</sup> day of October, A. D. 1941



before me, the undersigned \_\_\_\_\_ a Notary Public  
in and for the County and State aforesaid, came Henry E. Jozewski and  
Mary E. Jozewski, Husband and wife

who are personally known to me to be the same persons who executed the within instrument of  
writing, and such persons duly acknowledged the execution of the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial Seal,  
the day and year last above written.

G. J. Jozewski  
Notary Public.

(Term expires December 18 1941)

JOINT TENANCY  
WARRANTY DEED

Individual Form

KNOW ALL MEN BY THESE PRESENTS:

That Jacob B. Enns and Marie M. Enns,  
his wife

of McPherson County,

State of Kansas, parties of the first part, in consideration of the

sum of ~~-----Ten and no/100 Dollars and other valuable considerations-----~~ ~~XXXXXX~~

in hand paid, the receipt of which is hereby acknowledged, does hereby Grant, Bargain, Sell and Convey unto Edward Martens and Billie Jean Martens; his wife

as joint tenants and not as tenants in common with full rights of survivorship, the whole estate to vest in the survivor in the event of the death of either, of McPherson County,

State of Kansas, parties of the second part, the following described real

property and premises situate in McPherson County, State of Kansas to-wit:

Part of the Southeast Quarter of the Northeast Quarter (SE $\frac{1}{4}$  NE $\frac{1}{4}$ ) of Section Seventeen (17), Township Twenty-one (21) South of Range Four (4) West of the Sixth Principal Meridian, described as follows: Commencing at the Southeast corner of the Southeast Quarter of the Northeast Quarter of said Section 17, thence West 24 rods, thence North 20 rods, thence East 24 rods to the East line of said Southeast Quarter of Northeast Quarter of Section 17, to the center of the road, thence South 20 rods to place of beginning

together with all the improvements thereon and the appurtenances thereunto belonging, and warrant the title to the same.

TO HAVE AND TO HOLD said described premises unto the said parties of the second part, as joint tenants, and to the heirs and assigns of the survivor, forever, free, clear and discharged of and from all former grants, charges, taxes, judgments, mortgages and other liens and incumbrances of whatsoever nature.

Signed and delivered this 7th day of May, 1964

Jacob B. Enns  
(Jacob B. Enns)

Marie M. Enns  
(Marie M. Enns)

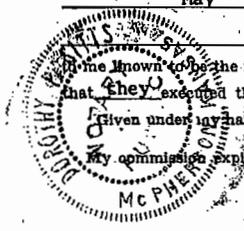
STATE OF Kansas } ss: INDIVIDUAL ACKNOWLEDGMENT

COUNTY OF McPherson }  
Before me, the undersigned, a Notary Public in and for said County and State on this 22nd day of

May, 1964, personally appeared Jacob B. Enns and Marie M. Enns,  
his wife

me known to be the identical person(s) who executed the within and foregoing instrument and acknowledged to me that they executed the same as their free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and seal the day and year last above written.  
My commission expires August 11, 1964



Dorothy P. Sitts Notary Public.  
Dorothy P. Sitts



Before me the undersigned, a Notary Public, in and for said County and State, on this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, personally appeared \_\_\_\_\_ to me known to be the identical person \_\_\_\_\_ who executed the within and foregoing instrument and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

My commission expires \_\_\_\_\_ Notary Public

**ACCEPTANCE OF ESTATE IN JOINT TENANCY**

We hereby accept the following estate in joint tenancy herein created.

(Signed) \_\_\_\_\_

STATE OF \_\_\_\_\_ County of \_\_\_\_\_, ss:

Before me the undersigned, a Notary Public, in and for said County and State, on this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, personally appeared \_\_\_\_\_ to me known to be the identical person \_\_\_\_\_ who executed the within and foregoing instrument and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

My commission expires \_\_\_\_\_ Notary Public

4027 +  
**JOINT TENANCY WARRANTY DEED**  
Standard Form Individual

FROM \_\_\_\_\_

TO \_\_\_\_\_

*Pl. i. Bay 112. 2nd*

STATE OF Kansas } ss:  
Madison County, }

This instrument was filed for record on the \_\_\_\_\_ day of May, 1967 at 10 o'clock AM, and recorded in Book 161 of Series at page 625 Fee \$ 1.50 + 20

*Marybeth Bick*  
 Register of Deeds  
 County Clerk

By Amos Leffert, Deputy

RETURN TO  
 THE KANSAS BLUE PRINT CO.  
 141 NORTH MARKET ST. WICHITA, KANSAS  
 PHOTOGRAPH SERVICES-UPGRADE SIL. MARK

*Amos Leffert*  
*Marybeth Bick*

**NOTARY ACKNOWLEDGMENT of SIGNATURE BY MARK**

STATE OF \_\_\_\_\_ County of \_\_\_\_\_, ss:

Before me, \_\_\_\_\_, a Notary Public in and for said County and State on this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, personally appeared \_\_\_\_\_ to me known to be the identical person \_\_\_\_\_ who executed the within and foregoing instrument by \_\_\_\_\_ mark in my presence and in the presence of \_\_\_\_\_ as witnesses and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth.

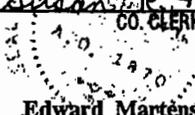
In Witness Whereof, I have hereunto set my hand and official seal the day and year last above written.

My commission expires \_\_\_\_\_ Notary Public

NOTE—The signature by mark of a lessor who cannot write his name must be witnessed by two witnesses, one of whom must write lessor's name.

ENTERED IN TRANSFER RECORD IN  
MY OFFICE THIS 30<sup>th</sup> DAY  
OF April A.D. 19 97 KANSAS WARRANTY DEED  
Susan P. Gray (STATUTORY FORM)  
CO. CLERK

1700  
State of Kansas, McPherson Co., SS: X  
This instrument was filed for record  
on the 25 day of April A.D., 19 97  
at 9:55 o'clock PM, and duly recorded  
in book 246 on page 791  
Linda J. Paul  
Register of Deeds



Edward Martens and Billie Jean Martens, husband and wife  
convey(s) and warrants(s) to  
Alva Ensz and Pearl Y. Ensz, husband and wife  
as joint tenants and not as tenants in common

all of the following-described real estate in McPherson County, KANSAS:

A tract in the Southeast Quarter of the Northeast Quarter (SE 1/4 NE 1/4) of Section  
Seventeen (17), Township Twenty-one (21) South, Range Four (4) West of the Sixth  
Principal Meridian, described as follows:

Commencing at the Southeast corner of the SE 1/4 NE 1/4, said Section 17, thence West  
24 rods, thence North 20 rods, thence East 24 rods to the East line of said SE 1/4 NE  
1/4 of Section 17, to the center of the road, thence South 20 rods to the point of  
beginning, McPherson County, Kansas.

subject to taxes and assessments for the current year, easements, restrictions and  
reservations of record, if any, for the sum of TEN DOLLARS AND 00 CENTS and other  
good and valuable considerations.

DATE: ✓ March 14, 1997

Edward Martens  
Edward Martens

Billie Jean Martens  
Billie Jean Martens

STATE OF KANSAS, County of MCPHERSON, ss:

On this 14th day of March, 19 97, came

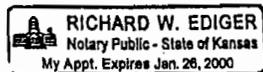
Edward Martens and Billie Jean Martens, husband and wife

to me personally known to be the same person(s) who executed the within and foregoing  
instrument of writing and acknowledged to me that the same was executed as a free and  
voluntary act and deed for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notary Seal the day and year  
last above written.

My Commission Expires: ✓ January 26, 2000

Richard W. Ediger  
Richard W. Ediger



6.00 - abest

20050720  
56414

**GENERAL WARRANTY DEED – JOINT TENANCY**  
(Following Kansas Statutory Warranty Form)

This 27 day of June, 2005

Pearl Y. Ensz, a single person

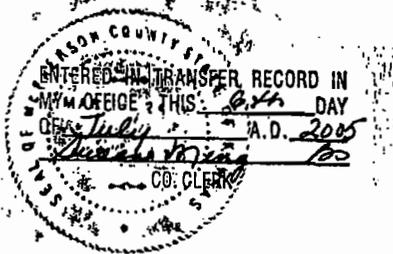
CONVEY(S) AND WARRANT(S) TO

Jerold W. Sisson and Ruth E. Sisson, husband and wife

as JOINT TENANTS and not as tenants in common, with full rights of survivorship, the whole estate to vest in the survivor in the event of the death of either, all the following described REAL ESTATE in the County of McPherson State of Kansas, to-wit:

A tract in the Southeast Quarter of the Northeast Quarter (SE 1/4 NE 1/4) of Section Seventeen (17), Township Twenty-one (21) South, Range Four (4) West of the Sixth Principal Meridian, described as follows:

Commencing at the Southeast corner of the SE 1/4 NE 1/4, said Section 17, thence West 24 rods, thence North 20 rods, thence East 24 rods to the East line of said SE 1/4 NE 1/4 of Section 17, to the center of the road, thence South 20 rods to the point of beginning, McPherson County, Kansas.



3385 X  
State of Kansas, McPherson Co., SS:  
This instrument was filed for record  
on the 30 day of June A.D., 2005  
at 8:25 o'clock A.m, and duly recorded  
in book 628 on page 306

*Linda Paul*  
Register of Deeds

for the sum of One Dollar and other Valuable Consideration

EXCEPT AND SUBJECT TO:

Easements, Restrictions and Reservations of record, in any.

*Pearl Y. Ensz*  
\_\_\_\_\_  
Pearl Y. Ensz

STATE OF KANSAS, McPherson COUNTY, ss.

BE IT REMEMBERED, That on this 27 day of June, A.D. 2005, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came:

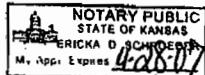
Pearl Y. Ensz, a single person

who is/are personally known to me to be the same person(s) who executed the within instrument of writing and such person(s) acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal, the day and year last above written.

Term Expires: April 28, 2007

*Erica D. Schroeder*  
\_\_\_\_\_  
Erica D. Schroeder Notary Public



ps  
B. Abot

GENERAL WARRANTY

CONSECUTIVE SALES UNIT 12-21

MADE IN KANSAS

I Herely Certify, That this instrument was filed for record the 6<sup>th</sup> day of December 1944, at 8<sup>05</sup> o'clock A.M. Queen Haggard Register of Deeds.

THIS INDENTURE, Made this 6<sup>th</sup> day of November, A. D. 1944, between Albert W. Balgen and Matilda Balgen his wife of McPherson County, in the State of Kansas, of the first part, and Annie D. Balgen of McPherson County, in the State of Kansas, of the second part:

WITNESSETH, That said parties of the first part, in consideration of the sum of \$400.00 the receipt whereof is hereby acknowledged, do by these presents, Grant, Bargain, Sell and Convey unto said party of the second part, his heirs and assigns, all the following described Real Estate, situated in the County of McPherson, and State of Kansas, to-wit:

A part of the Southeast Quarter (SE 1/4) of Section Seventeen (17), in Township Twenty One (21), Range Four (4) West, in McPherson County, State of Kansas, more particularly described as follows, Commencing at a point 195 feet South of the Northeast corner of said Southeast Quarter as the place of beginning, thence run west 400 feet, thence run south 180 feet, thence run east 400 feet, thence run north 180 feet, to the place of beginning.

(McPherson Stamp 554 A.M.B. 11-6-44)

TO HAVE AND TO HOLD THE SAME, Together with all and singular the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, forever.

And said grantee heirs, executors or administrators, do hereby covenant, promise and agree, to and with said party of the second part, that at the delivery of these presents lawfully seized in his own right, of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above granted and described premises, with the appurtenances; that the same are free, clear, discharged and unincumbered of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments and incumbrances, of what nature or kind soever;

and that they will WARRANT AND FOREVER DEFEND the same unto said party of the second part, his heirs and assigns, against said parties of the first part, their heirs, and all and every person or persons whomsoever, lawfully claiming or to claim the same.

IN WITNESS WHEREOF, The said parties of the first part have hereunto set their hand, the day and year first above written, Albert W. Balgen Matilda Balgen

STATE OF KANSAS, McPHERSON COUNTY, ss. McPherson before me, the undersigned, December A. D. 1944 a Notary Public in and for the County and State aforesaid, came Albert W. Balgen and Matilda Balgen his wife



who are personally known to me to be the same persons who executed the within instrument of writing, and such persons have duly acknowledged the execution of the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial Seal, the day and year last above written. Fred M. Baum Notary Public.

Term expires March 3rd 1945

JOINT TENANCY WARRANTY DEED (Following Kansas Statutory Warranty Form)

Arnie D. Balzer and Martha Balzer, his wife

CONVEY AND WARRANT TO

Aaron A. Willems and Emma L. Willems, his wife  
as JOINT TENANTS and not as tenants in common, with full rights of survivorship, the  
whole estate to vest in the survivor in the event of the death of either, all the following  
described REAL ESTATE in the County of McPherson

and the State of Kansas, to-wit: A part of the Southeast Quarter (SE<sup>1/4</sup>)  
of section Seventeen (17), Township Twenty-one (21),  
Range Four (4), McPherson County, Kansas, more particularly  
described as follows: Commencing at a point 195 feet  
South of the Northeast corner of said Southeast Quarter  
as the place of beginning, thence West 400 feet, thence  
due South 180 feet, thence East 400 feet, thence due  
North 180 feet to the place of beginning.

*Arnie D. Balzer  
Martha Balzer  
12/29/66*



for the sum of Ten Dollars and Other Valuable Considerations

EXCEPT AND SUBJECT TO:

Dated December 29, 1966

STATE OF KANSAS, REMO COUNTY, ss

BE IT REMEMBERED, That on this 29th day of December  
A. D. 1966, before me, the undersigned, a Notary Public  
in and for the County and State aforesaid, came

Arnie D. Balzer and Martha Balzer,  
his wife

*Arnie D. Balzer*  
Arnie D. Balzer

*Martha Balzer*  
Martha Balzer

who are personally known to me to be the same persons who  
executed the within instrument of writing and such persons duly  
acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my  
seal, the day and year first above written.

*D. E. Frank*  
D. E. Frank Notary Public.

Term expires October 7, 1970

State of Kansas, McPherson Co., SS:

This instrument was filed for record  
on the 5 day of Dec. 1967  
at 1 o'clock P.M. and duly recorded  
in book 169 on page 319

*Maude Burt*  
Maude Burt  
Register of Deeds  
Deputy

+ 748

125+20 Rev 1325

*Janice*

THIS INDENTURE, Made this 9th day of December A.D. 1947 between Velma L. Spece and Julius H. Spece, her husband; Howard G. PanKrats and Flora Ellen PanKrats, his wife; and Orlando K. PanKrats, a single man, of Stafford County, in the State of Kansas of the first part, and P. J. PanKrats, of Stafford County, in the State of Kansas of the second part;

WITNESSETH, That said parties of the first part, in consideration of the sum of other valuable consideration and one and no/100 DOLLARS, the receipt of which is hereby acknowledged, do by these presents GRANT, BARGAIN, SELL AND CONVEY unto said party of the second part his heirs and assigns, all the following-described REAL ESTATE situated in the County of McPherson and State of Kansas to-wit:

The East Half ( $\frac{1}{2}$ ) of the Northwest Quarter ( $\frac{1}{4}$ ) and the Southwest Quarter ( $\frac{1}{4}$ ) of the Northwest Quarter ( $\frac{1}{4}$ ), Less Five (5) acres out for school purposes in the Northwest corner, described as follows: Beginning at the Northwest corner of said Southwest Quarter ( $\frac{1}{4}$ ) of the Northwest Quarter ( $\frac{1}{4}$ ) and running East Six Hundred Sixty (660) feet, thence South Three hundred thirty feet (330), thence west Six Hundred Sixty (660) feet, thence North Three Hundred Thirty (330) feet to place of beginning. All in Section Sixteen (16) in Township Twenty One (21) South, Range Four (4) West of Sixth (6th) Principal Meridian, containing One Hundred Fifteen (115) acres more or less.

TO HAVE AND TO HOLD THE SAME, Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, forever.

And said Grantors for their heirs, executors, or administrators, do hereby covenant, promise and agree to and with said party of the second part, that at the delivery of these presents, they are lawfully seized in their own right, of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above-granted and described premises, with the appurtenances; that the same are free, clear, discharged, and unincumbered of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments and incumbrances of what nature or kind soever

and that they will WARRANT AND FOREVER DEFEND the same unto said party of the second part his heirs and assigns, against said parties of the first part their heirs, and all and every person or persons whomsoever, lawfully claiming or to claim the same.

IN WITNESS WHEREOF, The said parties of the first part have hereunto set their hands the day and year first above written.

Julius H Spece

Orlando K. PanKrats  
H. G. PanKrats  
Flora Ellen PanKrats  
Velma L. Spece

STATE OF KANSAS, )  
County of BARTON ) ss.

BE IT REMEMBERED, That on this 31st day of December A.D. 1947 before me, the undersigned, a Notary Public in and for the County and State aforesaid, came Velma L. Spece and Julius H. Spece, her husband who are personally known to me to be the same persons who executed the within instrument of writing, and such persons duly acknowledged the execution of the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year last above written.



Melvin O. Ness Notary Public  
Term Expires January 16th, 1950.

ACKNOWLEDGMENT

STATE OF KANSAS, COUNTY OF STAFFORD, SS:

BE IT REMEMBERED, That on this 24 day of December A.D., 1947, before me the undersigned, a Notary Public in and for said County and State, came Howard G. Pankrata and Flora Ellen Pankrats, his wife, who are personally known to me to be the same persons who executed the within instrument of writing, and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal the day and year last above written.

My commission expires Sept 23-1951

A. H. Watson



ACKNOWLEDGEMENT

STATE OF OKLAHOMA, COUNTY OF TULSA, SS:

BE IT REMEMBERED, That on this 16th day of December 1947, before me, the undersigned, a Notary Public in and for said County and State aforesaid, came Orlando K. Pankrats, a single man, who is personally known to me to be the same person who executed the within instrument of writing and such person duly acknowledged the execution of the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year last above written.

My commission expires March 17, 1949

W. E. Howell  
Notary Public  
W. E. Howell  
Tulsa, Oklahoma



STATE OF KANSAS, McPHERSON COUNTY,

A True Copy of Original as Filed on the 16<sup>th</sup> day  
of February 19 48 at 9:00 A. M.

W. M. Anderson  
Register of Deeds

CL Form-58  
(4-2-54)

U. S. DEPARTMENT OF AGRICULTURE  
AGRICULTURE STABILIZATION AND CONSERVATION  
COMMODITY CREDIT CORPORATION

LEASE OF PROPERTY

THIS LEASE, made and entered into this 1st day of May, 1954, by and between P. J. Pankratz of 117 Mincer St., Stafford, Kansas; Lessor, and Commodity Credit Corporation, Lessee.

WITNESSETH THAT:

1. The Lessor leases to the Lessee, and the Lessee hereby leases from the Lessor, upon the terms and conditions hereinafter stated, the following described real estate (hereinafter called "property") situated in the County of McPherson and state of Kansas:

Beginning 50 feet due North of the Southwest corner of the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$ , 15-21-4, 485 feet North; thence 128 feet East; thence 485 feet South; thence 128 feet West to the point of beginning, containing 1.5 acres, more or less.

2. The term of the lease shall be for a period of 5 years, commencing the 1st day of May, 1954, and ending the 1st day of May, 1959, with the right of the Lessee, during such term or any extension thereof, to terminate said lease, and liability for any further rent, on the 1st day of May of any year, by giving 30 days' previous notice in writing to the Lessor.

3. As rent for said property, the Lessee shall pay the Lessor Sixty Dollars (\$60.00) per year, such rent to be payable in advance, but to be apportionable in the event the lease is terminated as provided in paragraph 2 hereof:

4. The Lessor warrants that he is the owner of the property, has the right to give the Lessee possession under this lease, and will, so long as this lease remains in effect, warrant and defend the Lessee's possession against any and all persons whomsoever.

5. The Lessee shall have the right, during this lease, to erect storage structures, or facilities, make alterations, install scales, fences, or signs, in or upon the premises hereby leased and, at the expiration of said lease or any renewal or extension thereof or at any time this lease is in effect, may remove said storage structures, facilities, scales, fences, or signs or any part thereof, whether or not such structures, facilities, scales, fences or signs have become legally a fixture.

6. The Lessee shall not assign this lease without the written consent of the Lessor. The Lessee, may, however, sublet the structures on the premises leased hereunder, or any one or more of them for the term of the lease or any part thereof upon such terms and conditions as Lessee may wish to so sublet.

7. The Lessee, if required by the Lessor, shall upon the expiration of this lease, or renewal thereof, restore the premises to the same condition as that ~~of the premises~~ at the time of entering upon the same under this lease, reasonable and ordinary wear and tear and damages by the elements or by circumstances over which the Lessee has not control excepted: Provided, however, That if the Lessor requires such restoration, the Lessor shall give written notice thereof to the Lessee 60 days before the termination of the lease.

CL Form-58 (Reverse)  
(4-2-54)

LEASE OF PROPERTY

10. In the event any increased tax assessment is made against the Lessor or the property by virtue of the erection of storage structures and facilities thereon by the Lessee, the Lessor agrees to cooperate fully in any contest of such increased assessment which the Lessee feels should be made. The Lessee agrees that the rental hereunder shall be adjusted upward by the amount of any such increased tax assessment which the Lessor and Lessee mutually agree to be proper or which is determined, to be legally valid in court proceedings.

11. No member of or Delegate to Congress or Resident Commissioner, shall be admitted to any share or part of this lease or purchase or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease or purchase if made with a corporation for its general benefit.

12. The Lessor warrants that he has not employed any person to solicit or secure this lease upon any agreement for a commission, percentage, brokerage, or contingent fee and that no such consideration or payment has been or will be made. Breach of this warranty shall give CCC the right to annul the lease, or, in its discretion, to deduct from the rental or purchase price the amount of such commission, percentage, brokerage or contingent fees. This warranty shall not apply to commissions payable by the Lessor if the lease is secured or made through a bona-fide agent maintained by the Lessor for the purpose of leasing or selling his property.

(SEAL) P. J. Pankratz LESSOR

COMMODITY CREDIT CORPORATION, LESSEE

(SEAL) DR. P. J. Pankratz LESSOR  
Stafford, Kansas

By Jacob A. Wedel

(SEAL) LESSOR

Chairman, McPherson County  
ASC Committee

(To be reproduced in ASC State Office)

STATE OF KANSAS, McPHERSON COUNTY,  
A True Copy of Original as Filed on the 26 day  
of May, 1954 at 1:30 P.M.  
Maude Burk  
Register of Deeds

RUF  
B

#359-01 McPherson-Kansas

OIL AND GAS LEASE

18895



AGREEMENT, Made and entered into July 30, 1955, by and between:  
P. J. Pankratz, a single man, of Stafford, Kansas,

Chas. M. Coats of Wichita, Kansas, Party of the first part, hereinafter called lessor (whether one or more) and  
Party of the second part, hereinafter called lessee.

WITNESSETH, That the said lessor, for and in consideration of One and more DOLLARS, cash in hand paid, receipt of which is hereby acknowledged, and of the covenants and agreements hereinafter contained on the part of lessee to be paid, kept and performed, has granted, demised, leased and let and by these presents does grant, demise, lease and let unto said lessee, for the sole and only purpose of mining and operating for oil and gas, and laying pipe lines, and building tanks, power stations and structures thereon to produce, save and take care of said products, all that certain tract of land, together with any reversionary rights therein, situated in the County of McPherson

State of Kansas described as follows, to-wit:

East Half of the Northwest Quarter ( $E\frac{1}{2} NW\frac{1}{4}$ ) and Southwest Quarter of the Northwest Quarter ( $SW\frac{1}{4} NW\frac{1}{4}$ ) of Section Sixteen (16), Township Twenty-one (21) South of Range Four (4) West of Sixth Principal Meridian, excepting therefrom a tract now platted as Wien's Addition to the City of Inman; Also excepting therefrom a tract now platted as Sunnydale Addition to the City of Inman; Also excepting therefrom a tract owned by Rural High School District No. 1, McPherson County, Kansas, described as follows: A part of the W  $1/2$  NW  $1/4$  16-21-4W 6th P.M. described as follows: Beginning at a point on Section line 2116 feet, South of the common corner to sections 5-9-16 and 17 in Township 21 South of Range 4 W 6th P.M. thence East 660 feet, thence North about 816 feet to the South line of Morgan Street in the City of Inman, thence West 660 feet on South line of said Morgan Street to the West line of said Section 16, thence South on Section line about 616 feet to place of beginning

(The last above described tract contains about 20 feet more or less off the North side thereof, which is located in the  $NW\frac{1}{4} NW\frac{1}{4}$  of said section 16)

(The lands covered by this lease is said to contain 99 acres more or less)

This lease is subject to a certain lease to Commodity Credit Corporation dated May 1, 1954 for a term of five years from date covering the lands described as follows: Beginning 50 feet North of the Southwest corner of said  $E\frac{1}{2} NW\frac{1}{4}$  Section 16, thence 400 feet North, thence 125 feet East, thence 400 feet South, thence 125 feet West to point of beginning which last described tract is said to contain 1.5 acres more or less.

of Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ and containing \_\_\_\_\_ acres more or less.

It is agreed that this lease shall remain in full force for a term of Five years from this date, and as long thereafter as oil or gas, or either of them, is produced from said land by the lessee, or the premises are being developed or operated.

In consideration of the premises the said lessee covenants and agrees:

1st. To deliver to the credit of lessor, free of cost, in the pipe line to which he may connect his wells, the equal one-eighth (1/8) part of all oil produced and saved from the leased premises.

2nd. The lessee shall pay to lessor for gas produced from any oil well and used by the lessee for the manufacture of gasoline or any other product as royalty 1/8 of the market value of such gas at the mouth of the well; if said gas is sold by the lessee, then as royalty 1/8 of the proceeds of the sale thereof at the mouth of the well. The lessor shall pay lessor as royalty 1/8 of the proceeds from the sale of gas as such at the mouth of the well where gas only is found and where such gas is not sold or used. Lessee shall pay or tender annually at the end of each yearly period during which such gas is not sold or used as royalty, an amount equal to the delay rental provided in the next succeeding paragraph hereof, and while said royalty is so paid or tendered this lease shall be held as a producing lease under the above term paragraph hereof, the lessor to have gas free of charge from any gas well on the leased premises for street and inside lights in the principal dwelling house on said land by making his own connections with the well, the use of such gas to be at the lessor's sole risk and expense.

If no well be commenced on said land on or before July 30, 1956 this lease shall terminate as to both parties, unless the lessee on or before that date shall pay or tender to the lessor, or to the lessor's credit in the St. John National Bank at St. John, Kansas or its successors, which shall continue as the depository regardless of changes in the ownership of said land, the sum of One hundred and 00/100 DOLLARS, which shall operate as a rental and cover

the expense of determining the commencement of a well for twelve months from said date. In like manner and upon like payments or tenders the commencement of a well may be further deferred for like periods or the same number of months successively. All such payments or tenders of rental may be made by check or draft of lessee or any assignee thereof, mailed or delivered on or before the rental paying date either direct to lessor or assigns or to said depository bank. And it is understood and agreed that the consideration first recited herein, the down payment, covers not only the privileges granted to the date when said first rental is payable as aforesaid, but also the lessor's option of extending that period as aforesaid, and any and all other rights conferred. Lessee may at any time execute and deliver to Lessor, or place of record, a release or releases covering any portion or portions of the above described premises and thereby surrender this lease as to such portion or portions and be relieved of all obligations as to the acreage surrendered, and thereafter the rentals payable hereunder shall be reduced in the proportion that the acreage covered hereon is reduced by said release or releases.

244

Should the first well drilled on the above described land be a dry hole, then, and in that event, if a second well is not commenced on said land within twelve months from the expiration of the last rental period for which rental has been paid, this lease shall terminate on the expiration of said twelve months or before the expiration of said twelve months shall resume the payment of rentals in the same amount as in the case of a well producing oil or gas. And it is agreed that upon the resumption of the payment of rentals, as above provided, that the last preceding period of rental shall be deemed to be a full period of rentals and the effect thereof, shall continue in force just as though there had been no interruption in the rental payments.

If said lease expires a less interest in the above described land than the entire and undivided fee simple, the lessee, its heirs, assigns and assigns herein provided shall be paid the lesser only in the proportion which the interest held by the whole and undivided fee. However, such rental shall be increased at the next succeeding rental anniversary after any such increase to cover the interest so assured.

Lessee shall have the right to use, free of cost, gas, oil, and water produced on said land for its operation thereon, except water from wells of lessor.

When requested by lessor, lessee shall bury his pipe lines below plow depth.

No well shall be drilled nearer than 200 feet to the house or barn on said premises, without the written consent of the lessor.

Lessee shall pay for damages caused by its operations to growing crops on said land.

Lessee shall have the right at any time to remove all machinery and fixtures placed on said premises, including the right to draw and haul therefrom.

If the lease shall commence to drill a well within the term of the lease or any extension thereof, the lessee shall have the right to drill and to complete with reasonable diligence and dispatch, and if oil or gas or either of them is found in paying quantities, this lease shall continue and be in force with the like effect as if such well had been completed within the term of years herein first mentioned.

If the estate of either party hereto is transferred, and the privilege of transferring in whole or in part is expressly allowed or if the right of remainder of either party hereto are vested by descent or devise, the provisions of this lease shall survive and be binding on the heirs, assigns, executors, administrators, successors, or assigns, but no change in the ownership of the land shall operate to terminate this lease. The original of this lease shall be furnished with the original or a certified copy thereof to any transferee of either party, and a certified copy of the original of this lease shall be furnished to the probate thereof if, in the event lessor dies hereunder and has estate in the above described land, a certified copy of the original of this lease shall be furnished to the executor or administrator of his estate. In the event of the death of lessor and no administration being had on his estate, any bona fide purchaser of the above described land shall be deemed to be authorized by this lease to pay or tender for deposit to their credit at the proper bank or banks, the amount of the rentals due hereunder, and the same shall be payable or due, and it is hereby agreed in the event the lease shall be terminated by a party other than the lessor, that the lessor, his heirs, assigns, executors, administrators, successors, or assigns of such party, or parts, shall fall or make default in the payment of the rentals due hereunder, the lessor, his heirs, assigns, executors, administrators, successors, or assigns thereof shall make due payments of said rentals. In case lease is sold or assigned, the assignee shall be bound by the terms of this lease, and the same shall apply to the assigned portion or portions arising subsequent to the date of assignment. If the land produced on the above described land is sold or assigned as in separate tracts, the premises, nevertheless, may be developed and operated as one tract, and the payment of rentals shall be made on the basis of the proportion that the acreage owned by him bears to the entire leased area. The same shall apply to the separate tracts into which the land covered by this lease may hereafter be divided by the lessor, his heirs, assigns, executors, administrators, successors, or assigns, or any other person, and the same shall apply to the separate tracts for the oil produced from such separate tracts.

Lessor hereby warrants and agrees to defend the title to the lands herein described, in the event of default of payment by lessee, and to indemnify lessor for losses by payment, any mortgages, taxes or other liens on the above described lands, to the rights of the holder thereof and may reimburse itself from any rental or royalties as herein provided.

The terms, covenants, and conditions hereof shall run with said land and hereunto the lessor, his heirs, assigns, executors, administrators, successors, or assigns, however, all express or implied covenants, conditions, and warranties shall be subject to the provisions of the Laws, Executive Orders, Rules or Regulations, and this lease shall not be terminated by any such Law, Executive Order, Rule or Regulation, hereinafter enacted, if compliance is prevented by, or if such failure is the result of any such Law, Executive Order, Rule or Regulation.

Witness my hand and seal of the day and year first above written.



*R. J. Pankratz*  
P. J. Pankratz

SEAL  
SEAL  
SEAL  
SEAL

STATE OF Kansas } ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans., Okla. and Colo.)  
COUNTY OF Stafford  
Before me, the undersigned, a Notary Public, within and for said County and State, on this 1st  
day of August, 19 55, personally appeared P. J. Pankratz, a single man

and R. Boyd Wallace known to be the identical person who executed the within and foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act and deed for the uses and purposes therein set forth. IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.  
April 4 1959  
R. Boyd Wallace Notary Public

1962 No. 5755

**OIL AND GAS LEASE**

FROM \_\_\_\_\_ TO \_\_\_\_\_

Date \_\_\_\_\_ 19 \_\_\_\_\_

Section \_\_\_\_\_ Twp \_\_\_\_\_ Rge \_\_\_\_\_

No. of Acres \_\_\_\_\_ Term \_\_\_\_\_ County \_\_\_\_\_

STATE OF Kansas ss:  
County of Stafford

This instrument was filed for record on the 22 day of August 1955 at 11:30 o'clock A.M., and duly recorded in Book 11122 Page 299 of the records of this office.  
By W. H. Anderson Register of Deeds.

When recorded, return to:  
FINCLAIR OIL & GAS COMPANY  
P. O. BOX 521, TULSA, OKLAHOMA

THE KANSAS BLUE PRINT CO.  
111 NORTH MARKET ST., WICHITA, KANSAS  
UNIVERSITY MICROFILMS

RUF

359-01 McPherson Co - Kansas



Mid-Continent Association Form A

(This Space Reserved for Filing Stamp)

# ASSIGNMENT OF OIL AND GAS LEASE

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned,  
Chas. M. Coats

hereinafter called Assignor (whether one or more), for and in consideration of One Dollar (\$1.00) the receipt whereof is hereby acknowledged, does hereby sell, assign, transfer and set over unto.

SINCLAIR OIL & GAS COMPANY

(hereinafter called Assignee), All right, title and \_\_\_\_\_ interest in and to the oil and gas lease dated July 30, 19 55, from

P. J. Fankratz, a single man

to Chas. M. Coats lessor.  
lessee.

recorded in book \_\_\_\_\_, page \_\_\_\_\_ insofar as said lease covers the following described land in McPherson County, State of Kansas  
East Half of the Northwest Quarter and Southwest Quarter of the Northwest Quarter of Section 16, Township 21 South of Range 4 West of Sixth Principal Meridian, excepting therefrom a tract now platted as Wien's Addition to the City of Inman; Also excepting therefrom a tract now platted as Sunnydale Addition to the City of Inman; Also excepting therefrom a tract owned by Rural High School District No. 1, McPherson County, Kansas, described as follows: A part of the W/2 NW/4 Section 16-21S-4W, 6th P.M., described as follows: Beginning at a point on Section line 2116 feet South of the common corner to Section 8, 9, 16 and 17 in Township 21 South, of Range 4 West 6th P.M. thence East 660 feet, thence North about 816 feet to the South line of Morgan Street in the City of Inman, thence West 660 feet on South line of said Morgan Street to the West line of said Section 16, thence South on Section line about 816 feet to place of beginning.

(The last above described tract contains about 20 feet more or less off the North side thereof, which is located in the NW/4, NW/4 of said Section 16)

(The lands covered by this lease is said to contain 99 acres, more or less)

This lease is subject to a certain lease to Commodity Credit Corporation dated May 1, 1954 for a term of five years from here covering the lands described as follows: Beginning 50 feet North of the Southwest corner of said SW/4 NW/4 Section 16, thence 485 feet North, thence 128 feet East, thence 128 feet South, thence 128 feet West to point of beginning which last described tract is said to contain 1.5 acres, more or less.

of Section 16 Township 21 South Range 4 West and containing 99 acres, more or less together with the rights incident thereto and the personal property thereon, appurtenant thereto, or used or obtained in connection therewith.

And for the same consideration the Assignor covenants with the Assignee, its or his heirs, successors or assigns: That the Assignor is the lawful owner of and has good title to the interest above assigned in and to said lease, estate, rights and property, free and clear from all liens, encumbrances or adverse claims; That said lease is a valid and subsisting lease on the land above described, and all rentals and royalties due thereunder have been paid and all conditions necessary to keep the same in full force have been duly performed, and that the Assignor will warrant and forever defend the same against all persons whomsoever, lawfully claiming or to claim the same.

EXECUTED, This 8th day of August, 19 55

*Chas. M. Coats*  
Chas. M. Coats



STATE OF KANSAS } ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans. Okla. and Colo.)  
 COUNTY OF SEDGWICK  
 Before me, the undersigned, a Notary Public, within and for said County and State, on this 8th  
 day of August, 19 55, personally appeared Charles Coats  
 and \_\_\_\_\_

to me personally known to be the identical person who executed the within and foregoing instrument and acknowledged to me  
 that \_\_\_\_\_ executed the same as his free and voluntary act and deed for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.  
 My commission expires July 25, 1956  
Lorraine Colaw Notary Public

STATE OF \_\_\_\_\_ } ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans. Okla. and Colo.)  
 COUNTY OF \_\_\_\_\_  
 Before me, the undersigned, a Notary Public, within and for said County and State, on this \_\_\_\_\_  
 day of \_\_\_\_\_, 19 \_\_\_\_\_, personally appeared \_\_\_\_\_  
 and \_\_\_\_\_

to me personally known to be the identical person who executed the within and foregoing instrument and acknowledged to me  
 that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.  
 My commission expires \_\_\_\_\_  
 \_\_\_\_\_ Notary Public

STATE OF \_\_\_\_\_ } ss. ACKNOWLEDGMENT FOR CORPORATION  
 COUNTY OF \_\_\_\_\_  
 Be it remembered that on this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_, before me, the undersigned, a  
 Notary Public, duly commissioned, in and for the county and state aforesaid, came \_\_\_\_\_  
 \_\_\_\_\_ president of \_\_\_\_\_

a corporation of the State of \_\_\_\_\_, personally known to me to be such officer, and to be  
 the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly  
 acknowledged the execution of the same for himself and for said corporation for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.  
 My commission expires \_\_\_\_\_  
 \_\_\_\_\_ Notary Public

1966 No. 5856

**ASSIGNMENT OF OIL AND GAS LEASE**

FROM \_\_\_\_\_ TO \_\_\_\_\_

Date \_\_\_\_\_ 19 \_\_\_\_\_  
 Section \_\_\_\_\_ Twp \_\_\_\_\_ Rge \_\_\_\_\_  
 No. of Acres \_\_\_\_\_ Term \_\_\_\_\_  
 County \_\_\_\_\_

STATE OF Kansas } ss:  
 County of sedgewick

This instrument was filed for record on the 22 day of August, 1955  
 at 11:25 o'clock AM, and duly recorded  
 in Book M-122 Page 201 of  
 the records of this office.  
Harold Burr  
 Register of Deeds.  
 By 155

When recorded, return to Harold Burr  
 SINGLARS, CO. INC.  
 THE KANSAS BLUE PRINT CO.  
 141 NORTH MARKET ST. WICHITA, KANSAS  
 PHOTOSTAT SERVICE - UP-TO-DATE OIL MAPS

NOTE: When signature by mark in Kansas, said mark to be witnessed by at least one person and also acknowledged.  
 For acknowledgment by mark, use regular Kansas acknowledgment.

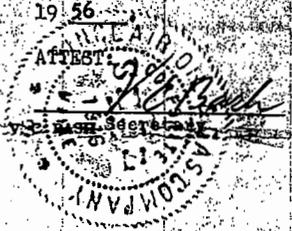
STATE OF \_\_\_\_\_ } ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans. Okla. and Colo.)  
 COUNTY OF \_\_\_\_\_  
 Before me, the undersigned, a Notary Public, within and for said County and State, on this \_\_\_\_\_  
 day of \_\_\_\_\_, 19 \_\_\_\_\_, personally appeared \_\_\_\_\_  
 and \_\_\_\_\_

to me personally known to be the identical person who executed the within and foregoing instrument and acknowledged to me  
 that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.  
 My commission expires \_\_\_\_\_  
 \_\_\_\_\_ Notary Public

30218

KNOW ALL MEN BY THESE PRESENTS  
That the undersigned, SINGLAIR OIL & GAS COMPANY, formerly  
Sinclair Prairie Oil Company, a corporation organized under the laws  
of the State of Maine and authorized to transact business in the State  
of Kansas, the owner of the oil and gas mining  
leases described in the EXHIBIT hereto attached and made a part hereof,  
and situated in the County of MCFHERSON and State of  
KANSAS, hereby releases, relinquishes and surren-  
ders unto the lessors in said leases or the present owners of said  
lands, all right, title and interest in and to said leases so de-  
scribed in the EXHIBIT hereto attached and made a part hereof.

DATED at Tulsa, Oklahoma, this 31st day of July



SINGLAIR OIL & GAS COMPANY  
By John N. Johnson  
Vice President  
JOHN N. JOHNSON, VICE-PRESIDENT

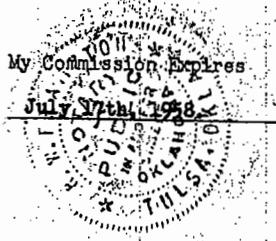
CORPORATION ACKNOWLEDGMENT

OKLAHOMA, KANSAS, MONTANA, OHIO  
NORTH DAKOTA and SOUTH DAKOTA

STATE OF OKLAHOMA }  
                          : SS,  
COUNTY OF TULSA    }

Before me, a Notary Public in and for said County and State,  
on this 31st day of July, 1956, personally appeared  
JOHN N. JOHNSON, to me known to be the identical person who  
subscribed the name of SINGLAIR OIL & GAS COMPANY, a corporation, to  
the foregoing instrument as its Vice President, and acknowledged to  
me that he executed the same as his free and voluntary act and deed  
and as the free and voluntary act and deed of such corporation, for  
the uses and purposes therein set forth.

R. W. Frampton  
Notary Public    R. W. FRAMPTON



- 354-01 Lease dated July 29, 1955, executed by Peter T. Frans and Selma Fleck Frans, his wife, and Mary Fleck, a widow, as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 277, records of McPherson County, Kansas, covering:
- NE 1/4 SE 1/4 of Section 15, Twp. 21 S., Range 4 W., containing 40 acres, more or less.
- 355-01 Lease dated July 29, 1955, executed by Peter T. Frans and Selma Frans, his wife, as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 281, records of McPherson County, Kansas, covering:
- NW 1/4 SE 1/4 & S 1/2 SE 1/4 of Section 16, Twp. 21 S., Range 4 W., containing 120 acres, more or less.
- 356-01 Lease dated July 29, 1955, executed by Jake E. Voth, a single man, as lessor, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 285, records of McPherson County, Kansas, covering:
- W 1/2 NE 1/4 of Section 16, Twp. 21 S., Range 4 W., containing 80 acres, more or less.
- 358-01 Lease dated July 29, 1955, executed by Henry Hildebrand and Margaret Hildebrand, his wife, as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 295, records of McPherson County, Kansas, covering:
- E 1/2 NE 1/4 of Section 16, Twp. 21 S., Range 4 W., containing 80 acres, more or less.
- 359-01 Lease dated July 30, 1955, executed by F. J. Pankrats, a single man, as lessor, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 299, records of McPherson County, Kansas, covering:
- 99 acres, more or less, out of the E 1/2 NW 1/4 & SW 1/4 NW 1/4 of Section 16, Twp. 21 S., Range 4 W., of 6th P. M.  
Said land being more particularly described and referred to in said oil and gas lease, reference to which and the record thereof is here made.
- 361-01 Lease dated July 28, 1955, executed by John H. Buller and Katie Buller, as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 553, records of McPherson County, Kansas, covering:
- N 1/2 SW 1/4 of Section 21, Twp. 21 S., Range 4 W., containing 80 acres, more or less.
- 362-01 Lease dated July 29, 1955, executed by John H. Klassen and Agnes Klassen, his wife, et al, as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 123, Page 47, records of McPherson County, Kansas, covering:
- NE 1/4 of Section 20, Twp. 21 S., Range 4 W., containing 160 acres, more or less.
- 364-01 Lease dated July 29, 1955, executed by Isaac H. Priesen, a single man, as lessor, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 531, records of McPherson County, Kansas, covering:
- NW 1/4 SW 1/4 & N 1/2 NE 1/4 SW 1/4 of Section 16, Twp. 21 S., Range 4 W., containing 60 acres, more or less.

of the first part and  
of the second part

WITNESSETH, That said parties of the first part, in consideration of the sum of Ten Dollars and other good and other valuable considerations Dollars the receipt of which is hereby acknowledged, do es by these presents Grant, Bargain, Sell and Convey unto said part y of the second part, his heirs and assigns, all the following described real estate situated in the County of McPherson and State of Kansas, to-wit:

The East-half of the Northwest Quarter (E $\frac{1}{2}$  NW $\frac{1}{4}$ ) and Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$  NW $\frac{1}{4}$ ) of Section Sixteen (16) Township Twenty-one (21) South, Range Four (4) West of the Sixth Principal Meridian, excepting therefrom the N $\frac{1}{2}$  NW $\frac{1}{4}$  SW $\frac{1}{4}$  of NW $\frac{1}{4}$  of said Section 16, also excepting therefrom a tract now platted as Sunrydale Addition to the City of Inman, also excepting therefrom a tract now platted as Wiens Addition to the City of Inman, also excepting therefrom a tract conveyed to Inman Rural High School described as follows: Commencing at the common corner of Sections 8, 9, 16 and 17, Township 21 South, Range 4; thence South on Section line 1654 feet to place of beginning, thence East 660 feet, thence South 462 feet, thence West 660 feet, thence North 462 feet to place of beginning, containing approximately 96 acres more or less



TO HAVE AND TO HOLD THE SAME, Together with all and singular the tenements, hereditaments, and appurtenances thereto belonging or in anywise appertaining forever.  
And said Grantor

for himself & heirs, executors or administrators, do es hereby covenant, promise and agree, to and with said part y of the second part, that at the delivery of these presents he is lawfully seized, in his own right, of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above granted and described premises with the appurtenances, that the same are free, clear, discharged and unincumbered of and from all former and other grants, titles, charges, estate, judgments, taxes, assessments and incumbrances of what nature or kind soever.

and that he will warrant and forever defend the same unto said part y of the second part, his heirs, and assigns, against said part y of the first part, his heirs and all and every person or persons whomsoever, lawfully claiming or to claim the same.

IN WITNESS WHEREOF, The said part y of the first part, ha s hereunto set his hand - the day and year first above written.

*P. J. Van Kraz*  
P. J. Van Kraz

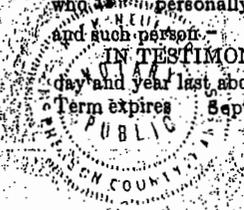
STATE OF Kansas McPherson COUNTY, ss.

BE IT REMEMBERED, That on this 25th day of June A. D. 19 56  
before me the undersigned, a Notary Public in and for said County

and State aforesaid came P.J. PanKratz, a single man  
who personally known to me to be the same person who executed the within instrument of writing  
and such person duly acknowledged the execution of the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the  
day and year last above written.

Term expires Sept 15, 1958 \_\_\_\_\_ Notary Public



STATE OF \_\_\_\_\_ COUNTY, ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_ A. D. 19 \_\_\_\_\_  
before me the undersigned, a \_\_\_\_\_ in and for said County  
and State aforesaid came \_\_\_\_\_

who personally known to me to be the same person who executed the within instrument of writing  
and such person duly acknowledged the execution of the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my \_\_\_\_\_ seal the  
day and year last above written.

Term expires \_\_\_\_\_ Notary Public

7482

Have this Deed Recorded

**DEED**

General Warranty

FROM \_\_\_\_\_

TO \_\_\_\_\_

Entered in Transfer Record in my office  
this \_\_\_\_\_ day of \_\_\_\_\_ A. D. 19 \_\_\_\_\_

County Clerk \_\_\_\_\_

State of Kansas, \_\_\_\_\_ County, ss:  
\_\_\_\_\_

X This instrument was filed for record on  
this \_\_\_\_\_ day of \_\_\_\_\_ A. D. 19 \_\_\_\_\_  
at \_\_\_\_\_ o'clock P. M. and duly recorded in  
book \_\_\_\_\_ page \_\_\_\_\_  
Fee \$ \_\_\_\_\_

\_\_\_\_\_ Register of Deeds  
\_\_\_\_\_

Box 163  
Laman, Kansas

U. S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL STABILIZATION AND CONSERVATION  
COMMODITY CREDIT CORPORATION

LEASE OF PROPERTY

THIS LEASE, made and entered into this 1st day of May, 1957,  
by and between H. Eddie Froese of R#1, Inman, Kans.,  
Lessor, and Commodity Credit Corporation, Lessee.

WITNESSETH THAT:

1. The Lessor leases to the Lessee, and the Lessee hereby leases from the Lessor, upon the terms and conditions hereinafter stated, the following described real estate (hereinafter called "property") situated in the County of McPherson and state of Kansas:

Beginning 50 feet due North of the Southwest corner of the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$ , 16-21-4, 485 feet North; thence 128 feet East; thence 485 feet South; thence 128 feet West to the point of beginning.

containing 1.5 acres, more or less.

2. The term of the lease shall be for a period of 2 years, commencing the 1st day of May, 1957, and ending the 1st day of May, 1959, with the right of the Lessee, during such term or any extension thereof, to terminate said lease, and liability for any further rent, on the 1st day of May of any year, by giving thirty (30) days' previous notice in writing to the Lessor.

3. As rent for said property, the Lessee shall pay the Lessor Sixty Dollars (\$ 60.00) per year, such rent to be payable in advance, but to be apportionable in the event the lease is terminated as provided in paragraph 2 hereof:

4. The Lessor warrants that he is the owner of the property, has the right to give the Lessee possession under this lease, and will, so long as this lease remains in effect, warrant and defend the Lessee's possession against any and all persons whomsoever.

5. The Lessee shall have the right, during this lease, to erect storage structures, or facilities, make alterations, install scales, fences, or signs, in or upon the premises hereby leased and, at the expiration of said lease or any renewal or extension thereof, or at any time this lease is in effect, may remove said storage structures, facilities, scales, fences, or signs or any part thereof, whether or not such structures, facilities, scales, fences or signs have become legally a fixture.

6. The Lessee shall not assign this lease without the written consent of the Lessor. The Lessee, may, however, sublet the structures on the premises leased hereunder; or any one or more of them for the term of the lease or any part thereof upon such terms and conditions as Lessee may wish to so sublet.

7. The Lessee, if required by the Lessor, shall upon the expiration of this lease, or renewal thereof, restore the premises to the same condition as that existing at the time of entering upon the same under this lease, reasonable and ordinary wear and tear and damages by the elements or by circumstances over which the Lessee has no control excepted; Provided, however, That if the Lessor required such restoration, the Lessor shall give written notice thereof to the Lessee sixty (60) days before the termination of the lease.

\*Revised  
12-8-54

4042+

State of Kansas, McPherson Co., SS:  
This instrument was filed for record  
on the 12 day of May, A.D., 1957  
at 2:50 o'clock P.M. and duly recorded  
in book DM-139 on page 349  
Maudie Bush  
Register of Deeds

LEASE OF PROPERTY

8. The Lessor grants and gives the Lessee the option as a consideration of this lease and for the further consideration of one dollar, the receipt of which is hereby acknowledged, to renew said lease for a period of \_\_\_\_\_ years from the Lessor, his heirs, executors, administrators, and assigns, for the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) per year.

9. As a consideration of this lease and for the further consideration of one dollar, the receipt of which is hereby acknowledged, the Lessor grants and gives the Lessee the option, at any time while this lease is in effect, to purchase said property from the Lessor, his heirs, executors, administrators, and assigns, for the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_). In the event the Lessee shall exercise this option to purchase said property, the Lessor agrees to furnish at his own expense an abstract of title, certificate of title, or other evidence of title satisfactory to CCC and to execute a good and sufficient warranty deed conveying fee simple title to said property free and clear of all taxes, liens, or encumbrances except for the following, and no others.

10. In the event any increased tax assessment is made against the Lessor or the property by virtue of the erection of storage structures and facilities thereon by the Lessee, the Lessor agrees to cooperate fully in any contest of such increased assessment which the Lessee feels should be made. The Lessee agrees that the rental hereunder shall be adjusted upward by the amount of any such increased tax assessment which the Lessor and Lessee mutually agree to be proper or which is determined to be legally valid in court proceedings.

11. No member of or Delegate to Congress or Resident Commissioner, shall be admitted to any share or part of this lease or purchase or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease or purchase if made with a corporation for its general benefit.

12. The Lessor warrants that he has not employed any person to solicit or secure this lease upon any agreement for a commission, percentage, brokerage, or contingent fee and that no such consideration or payment has been or will be made. Breach of this warranty shall give CCC the right to annul the lease, or, in its discretion, to deduct from the rental or purchase price the amount of such commission, percentage, brokerage or contingent fees. This warranty shall not apply to commissions payable by the Lessor if the lease is secured or made through a bona-fide agent maintained by the Lessor for the purpose of leasing or selling his property.

(Seal) W. Eddie Fross LESSOR COMMODITY CREDIT CORPORATION, LESSEE  
(Seal) \_\_\_\_\_, LESSOR By \_\_\_\_\_  
(Seal) \_\_\_\_\_, LESSOR James A. Wedel  
Chairman, \_\_\_\_\_ MoPherson County  
ASC Committee

State of Kansas  
County of \_\_\_\_\_ } ss:  
Be it remembered, that on this \_\_\_\_\_ day of \_\_\_\_\_, A.D. 19\_\_\_\_, before me, \_\_\_\_\_ Notary Public, personally appeared \_\_\_\_\_ (Here give title of officer at length)

\_\_\_\_\_ (Show marital status), who is (are) personally known to me, and known to me to be the same person who executed the foregoing instrument, and such person \_\_\_\_\_ duly acknowledged the execution of the same. In witness whereof, I have hereunto set my hand and affixed my official seal the day and year above written.

Com. expires June 21-1958

Anna B. Beake Notary Public

205

350

Box 439

WHEREAS, On the 24th day of October, 1957, a certain oil and gas mining lease was made and entered into by and between:

H. Eddie Froese and Verna Froese, his wife, Lessor and Loren W. Hallam, Lessee

covering the following-described land in the County of McPherson and State of Kansas, to-wit:

Southwest quarter of northwest quarter (SW 1/4 NW 1/4) Sec. 16, Range 4 West, Twp. 21 excepting therefrom N 1/2 NW 1/4 SW 1/4 of NW 1/4 of said Sec. 16, also excepting therefrom the tracts now platted as Sunnysdale add. and Wienc addition to City of Inman, also excepting a tract of land conveyed to Inman Rural High School described as follows, commencing at common corner of Sec. 8, 9, 16, 17, Twp. 21, Range 4, then south on section line 1654 feet to place of beginning thence east 660 feet, thence South 462 feet, thence west 660 feet, thence North 462 feet to place of beginning.

16 acres

Said lease being recorded in the office of the Register of Deeds in and for said County in Book M 141, Page 481; and

WHEREAS, The said lease and all rights thereunder or incident thereto are now owned by The Burry Oil & Gas Corp. (A Nevada Corp.)

NOW THEREFORE, For and in consideration of One Dollar (and other good and valuable considerations), the receipt of which is hereby acknowledged, the undersigned, the present owner of the said lease and all rights thereunder or incident thereto, do hereby bargain, sell, transfer, assign and convey unto Loren W. Hallam

all of its right, title and interest of the original lessee and present owner in and to the said lease and rights thereunder in so far as it covers the above described property

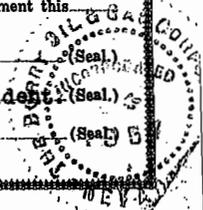
together with all personal property used or obtained in connection therewith to

and heirs, successors and assigns.

And for the same consideration, the undersigned for and heirs, successors and representatives, do covenant with the said assignee, heirs, successors or assigns, that the lawful owner of the said lease and rights and interests thereunder and of the personal property thereon or used in connection therewith; that the undersigned good right and authority to sell and convey the same, and that said rights, interests and property are free and clear from all liens and incumbrances, and that all rentals and royalties due and payable thereunder have been duly paid.

IN WITNESS WHEREOF, The undersigned owner and assignor has signed and sealed this instrument this 14th day of August, 1958.

The Burry Oil & Gas Corp. per Walter H. Burry, President



ACKNOWLEDGMENT OF INDIVIDUAL

County of STATE OF KANSAS, ) ss.

Before me, the undersigned, a Notary Public in and for said County and State, on this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, personally appeared \_\_\_\_\_ and \_\_\_\_\_ to me known to be the identical person who executed the within and foregoing instrument, and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth.

My commission expires \_\_\_\_\_ Notary Public.

ACKNOWLEDGMENT OF CORPORATION

STATE OF California )  
County of Los Angeles ) ss.

Before me, the undersigned, a Notary Public in and for said County and State, on this 14th day of August, 1958, personally appeared Walter H. Burry to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President, and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires My Commission Expires Jan. 9, 1959 Joseph S. Lee Notary Public.

34-6 7613 +  
Assignment of Oil and Gas Lease

FROM \_\_\_\_\_ TO \_\_\_\_\_

Dated \_\_\_\_\_, 19\_\_\_\_, Section \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_, No. of Acres \_\_\_\_\_, County \_\_\_\_\_, Term \_\_\_\_\_

COUNTY OF DePue )  
STATE OF Kansas ) ss.

This instrument was filed for record on the 30 day of September D. 1958 at 2:08 o'clock P.M., and duly recorded in Book 146 of Mar at page 315 of the records of this office.

By Maudie Pugh Register of Deeds.  
Deputy Register of Deeds. 160

Return to Abi Co.

#1879

FORM NO. 19

RELEASE OF OIL AND GAS LEASE



KNOW ALL MEN BY THESE PRESENTS: That O. A. Sutton does hereby release, relinquish and surrender to the lessor H. Eddie Froese and Verna Froese, his wife heirs, assigns and legal representatives, all right, title and interest, in and to a certain oil and gas mining lease, made and entered into by and between H. Eddie Froese and Verna Froese, his wife of as lessor and Loren W. Hallam as lessee, dated the 24th day of October, 1957, covering the following described land to-wit:

Southwest Quarter of Northwest Quarter (SW/4 NW/4) Sec. 16, Twp. 21, Range 4 West, excepting therefrom N 1/2 NW/4 SW/4 of NW/4 of said Sec. 16, also excepting therefrom the tracts now platted as Sunnydale add. and Wiens add to City of Inman, also excepting a tract of land conveyed to Inman Rural High School described as follows. Commencing at common corner of Sec. 8, 9, 10, 16, 17, Twp. 21, Range 4, then south on section line 1654 feet to place of beginning thence east 660 feet, thence South 462 feet, thence west 660 feet, thence North 462 feet to place of beginning.

Section 16, Township 21, Range 4W, and containing 16 acres, situated in the County of McPherson and State of Kansas said lease being recorded in the office of the Register of Deeds in and for said County, in Book M 141 Page 481

WITNESS the following signatures of the present owners, this 18th day of February, 1960

STATE OF KANSAS COUNTY OF SEDGWICK

ACKNOWLEDGMENT

Before me, the undersigned, a Notary Public, in and for said County and State, on this 18th day of February, 1960, personally appeared O. A. Sutton and

to me known to be the identical person who executed the within and foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and seal the day and year last above written.

My commission expires March 1, 1961

Tommie Chafin NOTARY PUBLIC

THE KANSAS BLUE PRINT CO. 117 NORTH ANNE STREET, KANSAS CITY, MO. 64108

Form fields for recording details: Dated, Lot, Block, Addition, Section, Township, Range, County, No. of Acres, Term, STATE OF, County of, This instrument was filed for record on the day of, at o'clock A.M., and duly recorded in Book-155 Page 696 of the records of this office.

RELEASE OF OIL AND GAS LEASE

Form No. 19

U. S. DEPARTMENT OF AGRICULTURE  
COMMODITY STABILIZATION SERVICE  
COMMODITY CREDIT CORPORATION  
**LEASE OF PROPERTY**

THIS LEASE, made and entered into this 28th day of June, 19 63, by and between  
H. Eddie Froese of R# 1, Inman, Kansas  
(hereinafter called the "Lessor"), and Commodity Credit Corporation, (hereinafter called the "Lessee").

WITNESSETH THAT:

1. The Lessor leases to the Lessee, and the Lessee hereby leases from the Lessor, upon the terms and conditions herein-  
after stated, the following described real estate (hereinafter called "property") situated in the County of McPherson  
and State of Kansas

(Enter here a complete legal description of the site)

Beginning 50 feet due North of the Southwest corner of the SW $\frac{1}{4}$  of the  
NW $\frac{1}{4}$  16-21-4, 485 feet North; thence 128 feet East; thence 485 feet South;  
thence 128 feet West to the point of beginning.

containing 1.5 acres, more or less.

2. The term of the lease shall be for a period of 5 years, commencing the 1st day of May 19 64  
and ending the 30th day of April, 19 69, with the right of the Lessee, during such term or any extension  
thereof, to terminate said lease, and liability for any further rent, on the 1st day of May of any  
year, by giving 30 days' previous notice in writing to the Lessor.

3. As rent for said property, the Lessee shall pay the Lessor Sixty Dollars (\$ 60.00)  
per year, such rent to be payable in advance, but to be apportionable in the event the lease is terminated as provided in  
paragraph 2 hereof;

4. The Lessor warrants that he is the owner of the property, has the right to give the Lessee possession under this lease,  
and will, so long as this lease remains in effect, warrant and defend the Lessee's possession against any and all persons  
whomsoever.

5. The Lessee shall have the right, during this lease, to erect storage structures or facilities, make alterations, install  
scales, fences, or signs, in or upon the premises hereby leased and, at the expiration of said lease or any renewal or extension  
thereof or at any time this lease is in effect, may remove said storage structures, facilities, scales, fences or signs or any  
part thereof, whether or not such structures, facilities, scales, fences or signs have become legally a fixture.

6. The Lessee shall not assign this lease without the written consent of the Lessor. The Lessee, may, however, sublet  
the structures on the premises leased hereunder, or any one or more of them for the term of the lease or any part thereof upon  
such terms and conditions as Lessee may wish to so sublet.

7. The Lessee, if required by the Lessor, shall upon the expiration of this lease, restore the premises to the same condi-  
tion as that existing at the time of entering upon the same under this lease, reasonable and ordinary wear and tear and damages  
by the elements or by circumstances over which the Lessee has no control excepted: Provided, however, That if the Lessor re-  
quires such restoration, the Lessor shall give written notice thereof to the Lessee 30 days before the termination  
of the Lease.

8. The Lessor grants and gives the Lessee the option as a consideration of this lease and for the further consideration of  
one dollar, the receipt of which is hereby acknowledged, to renew said lease for a period of 5 years from the Lessor,  
his heirs, executors, administrators, and assigns, for the sum of Sixty Dollars  
(\$ 60.00) per year.

9. As a consideration of this lease and for the further consideration of one dollar, the receipt of which is hereby acknow-  
ledged, the Lessor grants and gives the Lessee the option, at any time while this lease is in effect, to purchase said property  
from the Lessor, his heirs, executors, administrators, and assigns, for the sum of Three thousand Dollars  
(\$ 3,000). In the event the Lessee shall exercise this option to purchase said property, the Lessor agrees  
to furnish at his own expense an abstract of title, certificate of title, or other evidence of title satisfactory to CCC and to  
execute a good and sufficient warranty deed conveying fee simple title to said property free and clear of all taxes, liens, or  
encumbrances except for the following, and no others.

10. In the event any increased tax assessment is made against the Lessor or the property by virtue of the erection of storage structures and facilities thereon by the Lessee, the Lessor agrees to cooperate fully in any contest of such increased assessment which the Lessee feels should be made. The Lessee agrees that the rental hereunder shall be adjusted upward by the amount of any such increased tax assessment which the Lessor and Lessee mutually agree to be proper or which is determined to be legally valid in court proceedings.

11. No member of or Delegate to Congress or Resident Commissioner, shall be admitted to any share or part of this lease or purchase or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease or purchase if made with a corporation for its general benefit.

12. The Lessor warrants that he has not employed any person to solicit or secure this lease upon any agreement for a commission, percentage, brokerage, or contingent fee and that no such consideration or payment has been or will be made. Breach of this warranty shall give CCC the right to annul the lease, or, in its discretion, to deduct from the rental or purchase price the amount of such commission, percentage, brokerage, or contingent fees. This warranty shall not apply to commissions payable by the Lessor if the lease is secured or made through a bona-fide agent maintained by the Lessor for the purpose of leasing or selling his property.

"Effective May 1st, 1964, this lease supersedes lease for the same property which has been dated May 1st, 1958."

COMMODITY CREDIT CORPORATION, LESSEE

(Seal) H. Eddie Froese LESSOR  
H. Eddie Froese  
(Seal) Verna Froese LESSOR  
Carol Ruth Ek WITNESS  
Carol Ruth Ek

By Clyde L. Cline  
Clyde L. Cline  
Chairman, McPherson ASC County Committee  
Contracting Officer

ACKNOWLEDGMENT

I, Jacob A. Wedel, do hereby certify that H. Eddie & Verna Froese to me known to be the person (or persons) who executed the foregoing instrument, personally appeared before me and acknowledged that he (she or they) executed the same as his (her or their) free act and deed and, in case said instrument was executed on behalf of a corporation, that he (she or they) as \_\_\_\_\_ (insert name of officer(s) and his (her or their) official

title(s)) \_\_\_\_\_

\_\_\_\_\_ was (were) duly authorized by the Board (Name of Corporation) of Directors of said corporation to execute the said instrument on behalf of said corporation and to affix the corporate seal thereto. Given under my official hand and seal this day of June 28th, 1963. My commission expires March 12th, 1966.

Jacob A. Wedel  
Notary Public

CERTIFICATION OF TRUE COPY

The undersigned hereby certifies that the foregoing Lease of Property is true, correct and authentic copy of an original lease duly executed by the lessor as above set forth.

\_\_\_\_\_  
Recording Official or Notary Public

RECEIPT OF COUNTY RECORDING OFFICIAL

The above Lease of Property or a true copy thereof was recorded or filed for record on \_\_\_\_\_ in \_\_\_\_\_ Volume \_\_\_\_\_

Page \_\_\_\_\_ (Chattel Mortgage or real estate records, or other) (If Filed)  
State of \_\_\_\_\_, County of \_\_\_\_\_

\_\_\_\_\_  
County Recording Official

5215

3  
This instrument was filed for recording on the \_\_\_\_\_ day of \_\_\_\_\_, 1963, at \_\_\_\_\_, and duly recorded in Book \_\_\_\_\_ of the \_\_\_\_\_ of \_\_\_\_\_.



WARRANTY DEED (Kansas Statutory Form)

H. Eddie Froese and Verna Froese, husband and wife

CONVEY AND WARRANT TO

INMAN UNIFIED SCHOOLS No. 448

All the following described REAL ESTATE in the County of McPherson and the State of Kansas, to-wit:

A part of the Northwest Quarter (NW¼) of Section Sixteen (16), Township Twenty-one (21) South of Range Four (4) West of the Sixth Principal Meridian, described as follows: Beginning at a point 2116 feet South of the Northwest corner of said NW¼ of Section 16, thence South 534.2 feet to the Southwest corner of said NW¼ of Section 16, thence East on quarter section line 660 feet, thence North 536.99 feet, more or less, to the South line of a tract deeded to Inman Rural High School District No. 1 in deed recorded in Volume 129, page 251 in the Office of the Register of Deeds of McPherson County, Kansas, thence West along the South line of said School property to point of beginning



for the sum of -----Ten and No/100 Dollars and other valuable consideration-----

EXCEPT AND SUBJECT TO: Easements of record

Dated February 8 19 67

STATE OF KANSAS, McPherson COUNTY, ss BE IT REMEMBERED, That on this 7th day of February A. D. 19 67, before me, the undersigned, a notary public in and for the County and State aforesaid, came

H. Eddie Froese and Verna Froese, husband and wife

H. Eddie Froese (H. Eddie Froese) Verna Froese (Verna Froese)

whom I personally know to be the same person... who executed the within instrument of writing and such person... duly acknowledged the execution of the same. IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal, this 7th day of February, 1967. Robert A. Bartels Notary Public Term expires Jan 17, 1969

STATE OF Kansas 493 McPherson County, ss This instrument was filed for record on the 28 day of February, A. D., 19 67 at 11 o'clock P.M. and duly recorded in book 169 of Deeds at page 113 Mauda Bush Register of Deeds Deputy. Fees, \$ 125 + 20 Rev. 8 82

Draw Simmons Unified Dist 448

This Indenture, Made this 2nd day of January, A.D. 1947, between The Enns Milling Company a corporation duly organized, incorporated, and existing under and by virtue of the laws of the State of Kansas and having its principal place of business at Inman, in the State of Kansas, of the first part, and The Buhler Mill and Elevator Company of Buhler County, in the State of Kansas, of the second part:

WITNESSETH, That the said party of the first part, in consideration of the sum of One Dollar and Other Valuable Consideration 100 the receipt whereof is hereby acknowledged, does by these presents

grant, bargain, sell and convey unto said party of the second part, its successors and assigns, all the following described REAL ESTATE, situated in the County of McPherson and State of Kansas, to-wit:

Lots One (1), Two (2), Three (3), Four (4), Five (5), Six (6), Seven (7), Eight (8), Ten (10), Eleven (11), Thirteen (13), Fourteen (14), and Fifteen (15), in Block Eleven (11), City of Inman, and a part of the Northeast Quarter of the Northeast Quarter (NE $\frac{1}{4}$ ) of Section Seventeen (17), Township Twenty-one (21) South, Range Four (4) West of the Sixth Principal Meridian, described as follows: Beginning at the Southwest corner of Lot 8, in Block 11, Inman, thence northeasterly along the northwest boundary of said Block 11, to the apex of Lot 1, said Block 11, thence west to the right-of-way of the Chicago, Rock Island & Pacific Railroad, thence along said right-of-way line in a southwesterly direction to a point where the South line of Lot 8, said Block 11, extended, intersects with such right-of-way, thence east to place of beginning, being a part of Front Street, Inman, now vacated,

TO HAVE AND TO HOLD THE SAME, Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in anywise appertaining, forever.

And said The Enns Milling Company for itself, its successors and assigns, does hereby covenant, promise and agree, to and with said party of the second part, that at the delivery of these presents it is lawfully seized in its own right of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above-granted and described premises, with the appurtenances; that the same are free, clear, discharged and unincumbered of and from all former grants, titles, charges, estates, judgments, taxes, assessments and incumbrances, of what nature and kind soever,

*Deed to Buhler Mill & Elevator Co.*

and that it will WARRANT AND FOREVER DEFEND the same unto said party of the second part, its successors and assigns, against said party of the first part, its successors, and assigns, and all and every person or persons whomsoever lawfully claiming or to claim the same.

IN WITNESS WHEREOF, The said party of the first part has hereunto caused this Deed to be signed on its behalf by its President, thereunto duly authorized so to do, and to be attested by its Secretary, and has caused its common seal to be hereunto affixed, the day and year last above written.



THE ENNS MILLING COMPANY

By C M Hiebert President.

Attest: H. N. Regier Secretary.

of THE ENNS MILLING COMPANY

State of KANSAS McPHerson County, SS.

BE IT REMEMBERED, That on this 2nd day of January, A.D. 1947, before me, the undersigned, a notary public in and for the County and State aforesaid, came C. N. Hiebert, President of The Enns Milling Company, a corporation duly organized, incorporated and existing under and by virtue of the laws of State of Kansas, and Harold M. Regier, Secretary of said corporation, who are personally known to me to be such officers, and who are personally known to me to be the same persons who executed, as such officers, the within instrument of writing on behalf of said corporation, and such persons duly acknowledged the execution of the same to be the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my said notarial Seal, the day and year last above written.



H. N. Regier

Notary Public

(Term expires My commission expires Jan. 21, 1950)

STATE OF KANSAS, McPHERSON COUNTY,

A True Copy of the foregoing \_\_\_\_\_ day

of March 1947 at 8:15 A.M.

*Maudie Bush*

SPECIAL STATUTORY WARRANTY DEED  
(Statutory Form—Corporation)

FOR A VALUABLE CONSIDERATION, the receipt and sufficiency of which is hereby acknowledged, the Seller(s), convey(s) and warrant(s) <sup>Specially</sup> to Buyer(s) the hereinafter described real estate.

2190X  
State of Kansas, McPherson Co. SSN  
This instrument was filed for record on the 21 day of May A.D. 1984 at 1:25 p.m. and duly recorded in book 314 on page 361-362. Thomas Nelson  
Register of Deeds

This space for Reg. Deeds

SELLER(S): Nabisco Brands, Inc., Nabisco Brands Plaza, Parsippany, New Jersey 07054  
(a corporation duly organized under the laws of the Delaware

acting by its <sup>Vice</sup> President, being thereunto duly authorized)

BUYERS: ADM Milling Co., a Minnesota corporation, 4666 Faries Parkway, P.O. Box 1470, Decatur, Illinois 62505

LEGAL DESCRIPTION: See Schedule A annexed hereto.

Entered in Transfer Record in my office this 21st day of May 1984  
Thomas Nelson  
Register of Deeds  
McPherson Co. Kansas

THE FEE SIMPLE TITLE conveyed hereby is subject to the following encumbrances: easements, covenants and restrictions of record and such facts as an accurate, current survey would disclose.

EXECUTED this May 21, 1984

Attest: Robert K. DeVries  
Assistant Secretary.

Keith C. Thompson  
Vice President.  
Keith C. Thompson

STATE OF New Jersey, Morris COUNTY, ss.

BE IT REMEMBERED, That on this 21st day of May, A.D. 1984, before me, a Notary Public, in and for said County and State came Keith C. Thompson, Vice President of Nabisco Brands, Inc.

to me personally known to be the same person who executed the within and foregoing instrument, and duly acknowledged the execution of the same, for and on behalf, and as the act and deed of said company.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal, the day and year last above written.

My Commission Expires: \_\_\_\_\_

Jean M. Caffrey  
Notary Public  
JEAN M. CAFFREY  
Notary Public of New Jersey  
No. 105234  
Expires November 10, 1987

#600 Lawyers Title Insurance Corporation  
400 N. Broadway • Wichita, Kansas 67201  
(316) 263-9124  
361  
att. J. Edward Taylor

Tract I;

- ✓ A part of the Southeast Quarter of Section 8 and a part of the Northeast Quarter of Section 17, All in Township 21 South, Range 4 West, in the Village of Inman, McPherson County, Kansas, more particularly described as follows:

Parcel No. 1 - Commencing at the intersection of the south line of the Southeast Quarter of said Section 8 and the centerline of Chicago, Rock Island and Pacific Railroad Company's main track; thence Northeasterly along the centerline of said main track 333.6 feet; thence Southeasterly at right angles 50 feet to the point of beginning; thence continuing Southeasterly along last described line 100 feet, more or less, to a point on the Southeasterly line of said Railroad Company's right of way, which is also the Northwesterly line of Front Street in the Village of Inman; thence Southwesterly along said Southeasterly right of way line 175 feet; more or less, to a point on the North line of Center Street, Inman; thence Westerly along the North line of said Center Street 120 feet; more or less, to a point on a line being 50 feet Southeasterly of and parallel with the centerline of said Railroad Company's main track; thence Northeasterly parallel with and 50 feet Southeasterly of said centerline 240 feet, more or less, to the point of beginning.

Parcel No. 2 - Commencing at the intersection of the North line of the Northeast Quarter of said Section 17 and the centerline of the Chicago, Rock Island and Pacific Railroad Company's main track; thence Southwesterly along the centerline of said main tract 123 feet; thence Southeasterly at right angles 50 feet to the point of beginning; thence continuing Southeasterly along last described line 35 feet; thence Southwesterly at right angles 30 feet; thence Southeasterly at right angles 65 feet, more or less, to a point on the Southeasterly line of said Railroad Company's right of way, which is along the Northwesterly line of Front Street in the village of Inman; thence Northeasterly along said Southeasterly right of way line 200 feet, more or less to a point on the South line of Center Street, Inman; thence Westerly along the South line of said Center Street 120 feet, more or less, to a point on a line being 50 feet Southeasterly of and parallel with the centerline of said Railroad Company's main track; thence Southwesterly parallel with and 50 feet Southeasterly of said centerline 108 feet, more or less, to the point of beginning.

Tract II:

- ✓ Lots 8 and 9, Block Four, Inman, McPherson County, Kansas, except the East 100 feet.

Tract III:

- ✓ Lots 23 and 24, except the East 25 feet, Block 10, Inman, McPherson County, Kansas.

Tract IV:

- ✓ East one half of Lot Seven and East one half of Lot 8, Block Fifty-nine, Cassell Addition, McPherson, McPherson County, Kansas.

Tract V:

- ✓ Lots One and Two, Except the Railroad Right of Way and All of Lots Three and Four in Block Fifty-nine, Cassell Addition, McPherson, McPherson County, Kansas.

Being the same premises conveyed to the Grantor herein by deed of The Chase Grain Co., Inc., dated March 8, 1982, recorded March 11, 1982 in Book 206 of Deeds, Page 433, land records of McPherson County, Kansas.

X 357  
State of Kansas, McPherson Co., 889

This instrument was filed for record on the 7 day of Feb. A.D. 19 69 at 9:30 clock A.M. and duly recorded in book 173 on page 609  
Register of Deeds



KANSAS QUITCLAIM DEED  
(Corporation to Corporation)

THIS INDENTURE, Made on the 14th day of November, A. D., One thousand Nine Hundred and Sixty Eight, by and between CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY, a corporation duly organized, incorporated, and existing under and by virtue of the laws of the state of Delaware and having its principal place of business at Chicago in the State of Illinois, party of the first part, and THE CHASE GRAIN CO., INC. -----

-----, a corporation duly organized, incorporated, and existing under and by virtue of the laws of the state of Kansas and having its principal place of business at Inman in the State of Kansas, party of the second part:

WITNESSETH, THAT SAID PARTY OF THE FIRST PART, in consideration of the sum of TWO THOUSAND SIX HUNDRED SIXTY-FIVE AND 00/100 (\$2,665.00) DOLLARS - -

----- to it paid by said party of the second part (the receipt of which is hereby acknowledged), does by these presents Remise, Release and forever Quitclaim, subject to the reservations hereinafter designated, unto the said party of the second part the following described lots, tracts or parcels of land lying, being and situate in the Village of Inman, County of McPherson and State of Kansas, to-wit:

A part of the Southeast Quarter of Section 8 and a part of the Northeast Quarter of Section 17, all in Township 21 South, Range 4 West, in the Village of Inman, McPherson County, Kansas, more particularly described as follows:

PARCEL NO. 1 - Commencing at the intersection of the south line of the Southeast Quarter of said Section 8 and the centerline of the Chicago, Rock Island and Pacific Railroad Company's main track; thence northeasterly along the centerline of said main track 333.6 feet; thence southeasterly at right angles 50 feet to the point of beginning; thence continuing southeasterly along last described line 100 feet, more or less, to a point on the southeasterly line of said Railroad Company's right of way, which is also the northwesterly line of Front Street in the Village of Inman; thence southwesterly along said southeasterly right of way line 175 feet; more or less, to a point on the north line of Center Street, Inman; thence westerly along the north line of said Center Street 120 feet, more or less, to a point on a line being 50 feet southeasterly of and parallel with the centerline of said Railroad Company's main track; thence northeasterly parallel with and 50 feet southeasterly of said centerline 240 feet, more or less, to the point of beginning.

PARCEL NO. 2 - Commencing at the intersection of the north line of the Northeast Quarter of said Section 17 and the centerline of the Chicago, Rock Island and Pacific Railroad Company's main track; thence southwesterly along the centerline of said main track 123 feet; thence southeasterly at right angles 50 feet to the point of beginning; thence continuing southeasterly along last described line 35 feet; thence southwesterly at right angles 30 feet; thence southeasterly at right angles 65 feet, more or less, to a point on the southeasterly line of said Railroad Company's right of way, which is also the northwesterly line of Front Street in the Village of Inman; thence northeasterly along said southeasterly right of way line 200 feet; more or less, to a point on the south line of Center Street, Inman; thence westerly along the south line of said Center Street 120 feet, more or less, to a point on a line being 50 feet southeasterly of and parallel with the centerline of said Railroad Company's main track; thence southwesterly parallel with and 50 feet southeasterly of said centerline 108 feet, more or less, to the point of beginning.

Party of the first part reserves unto itself, its successors or assigns, its trackage and an easement for railroad right of way on, over and across those portions of the above described premises lying northwesterly of a line located 10 feet southeasterly of and parallel with party of the first part's most southeasterly side track as said track is now located along the northwesterly boundaries of said premises with the right to use, operate over and replace or remove railroad tracks and appurtenances thereto, in, over, along, upon and across that portion of the premises, for so long as required for railroad purposes and until abandoned and the trackage removed.

Party of the first part reserves unto itself, its successors or assigns, a nonexclusive appurtenant easement for roadway purposes on, over and across that portion of Parcel 2 of the above described premises lying southwesterly of a line located 30 feet northeasterly of and parallel with the most southwesterly boundary of said parcel and extending from the northwesterly line of Front Street 65 feet, more or less, to the northwesterly boundary of said parcel. Said easement shall forever remain as a private roadway to provide ingress to and egress from real property herein-after described and for the use and benefit of present and future owners of said real property, to-wit:

Beginning at the point of intersection of the southeasterly right of way line of the Chicago, Rock Island and Pacific Railroad Company and the southerly line of Center Street in the Village of Inman; thence westerly along said southerly line of Center Street, 120 feet, more or less, to a point on a line being 50 feet southeasterly of and parallel with the centerline of the main track of the Chicago, Rock Island and Pacific Railroad Company; thence southwesterly parallel with and 50 feet southeasterly of said centerline, 600 feet; thence easterly parallel with the southerly line of said Center Street, 120 feet, more or less, to a point on the southeasterly right of way line of the Chicago, Rock Island and Pacific Railroad Company; thence northeasterly along said right of way line, 600 feet to the point of beginning.

Party of the first part reserves an easement for the continued maintenance, operation and use of all existing conduits, sewers, water mains, gas lines, electric power lines, communication lines, wires and other utilities and easements of any kind whatsoever on said premises, whether owned, operated, used or maintained by the party of the first part, party of the first part's licensees or others, and whether or not of record, with reasonable right of entry for the purpose of repairing, reconstructing and replacing same; and

Reserves unto itself, its successors and assigns, all coal, oil, gas, casinghead gas and all ores and minerals of every kind and nature underlying the surface of said premises, together with the full right, privilege and license at any and all times to explore, or drill for and to protect, conserve, mine, take, remove and market any and all such products from a site located outside of the premises conveyed and in a manner which will not damage structures on the surface of said premises.

TO HAVE AND TO HOLD THE SAME, with all the rights, immunities, privileges and appurtenances thereto belonging, unto said party of the second part and unto its successors and assigns forever, so that neither the said party of the first part, nor its successors or assigns, nor any other person or persons for it or in its name or behalf, shall or will hereafter claim or demand any right or title to the aforesaid premises or any part thereof, but they and each of them shall, by these presents, be excluded and forever barred.

IN WITNESS WHEREOF, The said party of the first part has hereunto caused this Deed to be signed on its behalf by its Vice President, thereunto duly authorized so to do, and to be attested by its Assistant Secretary, and has caused its common seal to be hereunto affixed, the day and year first above written.

ATTEST:



CHICAGO, ROCK ISLAND AND PACIFIC  
RAILROAD COMPANY.

By William J. Dixon  
Vice President  
William J. Dixon

STATE OF ILLINOIS )  
                          ) SS  
COUNTY OF C O O K )

BE IT REMEMBERED, That on this 14th day of November,  
A.D., 1968, before me, the undersigned, a Notary Public in and for the County  
and State aforesaid, came William J. Dixon, Vice President of CHICAGO,  
ROCK ISLAND AND PACIFIC RAILROAD COMPANY a corporation duly organized,  
incorporated and existing under and by virtue of the laws of Delaware and  
P. A. Kaaturak Assafatan Secretary of said corporation, who are personally known  
to me to be such officers, and who are personally known to me to be the same  
persons who executed, as such officers, the within instrument of writing on  
behalf of said corporation, and such persons duly acknowledged the execution  
of the same to be the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my  
notarial seal the day and year last above mentioned.

Term Expires:

June 28, 1972

Gail L. Benegas  
Notary Public  
Gail L. Benegas



*Deed to Nabisco*

State of Kansas, McPherson Co., SS# 1231

This instrument was filed for record on the 10 day of May, A.D. 1982 at 3:35 o'clock P.M., and duly recorded in book 206 on page 435-437

*Russell Nelson* Register (Kansas State Statutory Form) *Rogers* ✓ ✓

CORPORATION WARRANTY DEED

THE CHASE GRAIN CO., INC., Inman, Kansas, (a Kansas corporation)

CONVEYS AND WARRANTS TO:

NABISCO BRANDS, INC., a Delaware corporation, with offices at 9 West 57th Street, New York, New York 10022.

All the following described REAL ESTATE in the County of McPherson, and the State of Kansas, to-wit:

A part of the Southeast Quarter of Section 8 and a part of the Northeast Quarter of Section 17, all in Township 21 South, Range 4 West, in the Village of Inman, McPherson County, Kansas, more particularly described as follows:

McPherson County Clerk  
Office  
Inman, Kansas  
May 10, 1982  
*[Handwritten signatures and initials]*

PARCEL NO. 1- Commencing at the intersection of the south line of the Southeast Quarter of said Section 8 and the centerline of the Chicago, Rock Island and Pacific Railroad Company's main track; thence northeasterly along the centerline of said main track 333.6 feet; thence southeasterly at right angles 50 feet to the point of beginning; thence continuing southeasterly along last described line 100 feet, more or less, to a point on the southeasterly line of said Railroad Company's right of way, which is also the northwesterly line of Front Street in the Village of Inman; thence southwesterly along said southeasterly right of way line 175 feet, more or less, to a point on the north line of Center Street, Inman; thence westerly along the north line of said Center Street 120 feet, more or less, to a point on a line being 50 feet southeasterly of and parallel with the centerline of said Railroad Company's main track; thence northeasterly parallel with and 50 feet southeasterly of said centerline 240 feet, more or less, to the point of beginning.

Parcel No. 2 - Commencing at the intersection of the North line of the Northeast Quarter of said Section 17 and the centerline of the Chicago, Rock Island and Pacific Railroad Company's main track; thence Southwesterly along the centerline of said main track 123 feet; thence Southeasterly at right angles 50 feet to the point of beginning; thence continuing Southeasterly along last described line 35 feet; thence Southwesterly at right angles 30 feet; thence Southeasterly at right angles 65 feet, more or less, to a point on the Southeasterly line of said Railroad Company's right of way, which is along the Northwesterly line of Front Street in the Village of Inman; thence Northeasterly along said Southeasterly right of way line 200 feet, more or less, to a point on the South line of Center Street, Inman; thence Westerly along the South line of said Center Street 120 feet, more or less, to a point on a line being 50 feet Southeasterly of and parallel with the centerline of said Railroad Company's main track; thence Southwesterly parallel with and 50 feet Southeasterly of said centerline 108 feet, more or less, to the point of beginning.

For the sum of: ONE HUNDRED AND 00/100 (\$100.00) DOLLARS and other good and valuable consideration.

*J.E.B.*

EXCEPT AND SUBJECT TO:

The Chicago, Rock Island and Pacific Railroad Company has previously reserved unto itself, its successors or assigns, its trackage and an easement for railroad right of way on, over and across those portions of the above described premises lying northwesterly of a line located 10 feet southeasterly of and parallel with their most southeasterly side track as said track is now located along the northwesterly boundaries of said premises with the right to use, operate over and replace or remove railroad tracks and appurtenances thereto, in, over, along, upon and across that portion of the premises, for so long as required for railroad purposes and until abandoned and the trackage removed.

The Chicago, Rock Island and Pacific Railroad Company has previously reserved unto itself, its successors or assigns, a nonexclusive appurtenant easement for roadway purposes on, over and across that portion of Parcel 2 of the above described premises lying southwesterly of a line located 30 feet northeasterly of and parallel with the most southwesterly boundary of said parcel and extending from the northwesterly line of Front Street 65 feet, more or less, to the northwesterly boundary of said parcel. Said easement shall forever remain as a private roadway to provide ingress to and egress from real property hereinafter described and for the use and benefit of present and future owners of said real property, to-wit:

Beginning at the point of intersection of the southeasterly right of way line of the Chicago, Rock Island and Pacific Railroad Company and the southerly line of Center Street in the Village of Inman; thence westerly along said southerly line of Center Street, 120 feet, more or less, to a point on a line being 50 feet southeasterly of and parallel with the centerline of the main track of the Chicago, Rock Island and Pacific Railroad Company; thence southwesterly parallel with and 50 feet southeasterly of said centerline, 600 feet; thence easterly parallel with the southerly line of said Center Street, 120 feet, more or less, to a point on the southeasterly right of way line of the Chicago, Rock Island and Pacific Railroad Company; thence northeasterly along said right of way line, 600 feet to the point of beginning.

The Chicago, Rock Island and Pacific Railroad Company has previously reserved unto itself an easement for the continued maintenance, operation and use of all existing conduits, sewers, water mains, gas lines, electric power lines, communication lines, wires and other utilities and easements of any kind whatsoever on said premises, whether owned, operated, used or maintained by The Chicago, Rock Island and Pacific Railroad Company, their licensees or others, and whether or not of record, with reasonable right of entry for the purpose of repairing, reconstructing and replacing same; and

Reserved unto itself, its successors and assigns, all coal, oil, gas, casinghead gas and all ores and minerals of every kind and nature underlying the surface of said premises, together with the full right, privilege and license at any and all times to explore, or drill for and to protect, conserve, mine, take, remove and market any and all such products from a site located outside of the premises conveyed and in a manner which will not damage structures on the surface of said premises.

DATED: March 8, 1982.

IN WITNESS WHEREOF, THE CHASE GRAIN CO., INC., has hereunto caused this Deed to be signed on its behalf by its President, thereunto duly authorized so to do, and to be attested by its Assistant Secretary, and has caused its common seal to be hereunto affixed, the day and year written above.

THE CHASE GRAIN CO., INC.

BY Jack E. Beebe  
Jack E. Beebe, President

ATTEST

Martha Wiens, Ass't Secretary

STATE OF KANSAS            )  
                                  ) SS  
COUNTY OF McPHERSON )

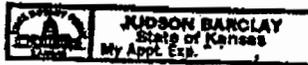
BE IT REMEMBERED, That on this 8th day of March, A. D., 1982, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came Jack E. Beebe, President of THE CHASE GRAIN CO., INC., a corporation duly organized, incorporated and existing under and by virtue of the laws of Kansas and Martha Wiens, Assistant Secretary of said corporation, who are personally known to me to be such officers, and who are personally known to me to be the same persons who executed, as such officers, the within instrument of writing on behalf of said corporation, and such persons duly acknowledged the execution of the same to be the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my notarial seal the day and year last above mentioned.

*Judson Barclay*  
Notary Public

Term Expires:

March 10, 1985



#7.00 abs.

SPECIAL STATUTORY WARRANTY DEED

(Statutory Form—Corporation)

FOR A VALUABLE CONSIDERATION, the receipt and sufficiency of which is hereby acknowledged, the Seller(s) convey(s) and warrant(s) <sup>Specially</sup> to Buyers the hereinafter described real estate.

X 2191  
State of Kansas, McPherson Co. SS:  
This instrument was filed for record  
on the 21 day of May A.D. 1984  
at 1:30 o'clock P.M. and duly recorded  
in book 211 on page 363-364  
*Franklin Nelson*  
Register of Deeds

This space for Reg. Deeds

SELLER(S): Nabisco, Inc., Nabisco Brands Plaza, Parsippany, New Jersey  
07054

(a corporation duly organized under the laws of the New Jersey

acting by its <sup>Vice</sup> President, being thereunto duly authorized)

BUYERS: ADM Milling Co., a Minnesota corporation, 4666 Faries Parkway,  
P. O. Box 1470, Decatur, Illinois 62505

LEGAL DESCRIPTION: See Schedule A annexed hereto.

Entered in Transfer Record in  
my office this 21st day of  
May A.D. 1984  
at 1:30 o'clock P.M.  
D. Frank Nelson  
Reg. Deeds

THE FEE SIMPLE TITLE conveyed hereby is subject to the following encumbrances: easements, covenants and restrictions of record and such facts as an accurate, current survey would disclose.

EXECUTED this May 21, 19 84.

Attest: *Robert K. Devries*  
Assistant Secretary.

Nabisco, Inc.

Robert K. Devries

By: *Keith C. Thompson*  
Vice President.  
Keith C. Thompson

STATE OF New Jersey, Morris COUNTY, ss.

BE IT REMEMBERED, That on this 21st day of May, A.D. 19 84,

before me, a Notary Public, in and for said County and State came

Keith C. Thompson, Vice  
President of Nabisco, Inc.

to me personally known to be the same person who executed the within and foregoing instrument, and duly acknowledged the execution of the same, for and on behalf, and as the act and deed of said company.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal, the day and year last above written.

My Commission Expires:

*Jean M. Caffrey*  
JEAN M. CAFFEY  
Notary Public of New Jersey  
No. 105234  
Expires: November 10, 1987

# 6.3 Lawyers Title Insurance Corporation  
400 N. Broadway • Wichita, Kansas 67201  
(316) 263-9124  
363  
*att. of Edward Taylor*

SCHEDULE A

Tract I:

- ✓ Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, and 15, Block 11, Original Town of Inman (formerly Aiken), McPherson County, Kansas, together with that portion of alleys in said block now vacated and reverting thereto.

Tract II:

- ✓ Lots 1 and 2 and the East 55 feet of Lots 13, 14 and 15, and All of Lots 16, 17, 18, 19 and 20, Block 12, Original Town of Inman (formerly Aiken), McPherson County, Kansas.

Tract III:

- ✓ All that part of Spruce Street abutting Lots 5, 6, 7, 8 and 9, Block 11, and Lot 20, Block 12, Original Town of Inman (formerly Aiken), now vacated and reverting thereto.

Tract IV:

- ✓ All of Front Street abutting the Northwesterly lin of Block 11, Original Town of Inman (formerly Aiken), McPherson County, Kansas, from Delaware Street to the North apex corner of Lot 1, in said Block 11, and more particularly described as follows: Commencing at the Southwest corner of Lot 13, Block 11, Original Town of Inman (formerly Aiken) for a place of beginning; thence Northwesterly along the Northwesterly line of said Block 11, 527.9 feet to the North corner of Lot 1 of said Block 11; thence with a deflection angle of 90° left - Northwest 50 feet to the Southeasterly right-of-way line of the Chicago, Rock Island and Pacific Railway Company; thence Southwest along said railroad right-of-way and parallel with the Northwesterly line of said Block 11, 558.3 feet to the intersection with the Extension of the North line of Delaware Street as platted; thence East along the Extension of said street line 58.515 feet to the place of beginning.

Being the same premises conveyed to the Grantor herein by deed of the Board of the County Commissioners of McPherson County dated November 26, 1979, recorded December 12, 1979 in Book 201 of Deeds, Page 392, land records of McPherson County, Kansas; and deed of Buhler Mills, Inc. dated November 21, 1979, recorded December 12, 1979 in Book 201 of Deeds, Page 394 and in Book 201 of Deeds, Page 396, land records of McPherson County, Kansas.

Original

4517 x  
State of Kansas, McPherson Co., SS:  
This instrument was filed for record  
on the 29 day of July, A.D., 2002  
at 11:00 o'clock A.M. and duly recorded  
in book 360 on page 67-70  
*Linda Paul*  
Register of Deeds

1613-56

QUITCLAIM DEED

UNION PACIFIC RAILROAD COMPANY, a Delaware corporation, successor in interest by merger to Union Pacific Railroad Company, a Utah corporation and St. Louis Southwestern Railway Company, ("Grantor") in consideration of the sum of Ten Dollars (\$10.00), and other valuable consideration to it duly paid, the receipt whereof is hereby acknowledged, does hereby REMISE, RELEASE and forever QUITCLAIM unto CITY OF INMAN, a municipal corporation of the State of Kansas, ("Grantee") whose address is 104 N. Main, P.O. Box 177, Inman, Kansas 67546 and unto its successors and assigns forever, all of Grantor's right, title, interest, estate, claim and demand, both at law and in equity, of, in, and to the real estate (hereinafter the "Property") situated in Inman, McPherson County, State of Kansas, as more particularly described in Exhibit A, hereto attached and hereby made a part hereof.

EXCEPTING from this quitclaim and RESERVING unto Grantor, its successors and assigns, forever, all minerals and all mineral rights of every kind and character now known to exist or hereafter discovered underlying the Property, including without limiting the generality of the foregoing, oil and gas and rights thereto, together with the sole, exclusive and perpetual rights to explore for, remove and dispose of said minerals by any means or methods suitable to the Grantor, its successors and assigns, but without entering upon or using the surface of the Property, and in such manner as not to damage the surface of the Property, or to interfere with the use thereof by the Grantee, its successors and assigns.

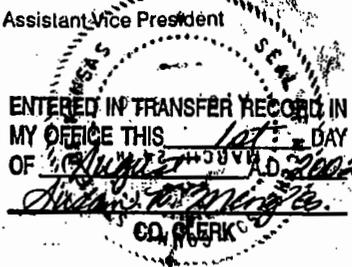
IN WITNESS WHEREOF, the Grantor has caused this deed to be duly executed as of the 24 day of July, 2002.

Attest:

*C. J. Meyer*  
Assistant Secretary  
(Seal)

UNION PACIFIC RAILROAD COMPANY

By *[Signature]*  
Title: Assistant Vice President





**UNION PACIFIC RAILROAD COMPANY**  
**Inman, McPherson County, Kansas**

**EXHIBIT "A"**

✓  
A tract of land in the SE ¼ of Section 8, Township 21 South, Range 4 West in the County of McPherson, Kansas more particularly described as follows:

Commencing at the intersection of the South line of the SE 1/4 of Section 8, Township 21 South, Range 4 West and the centerline of Union Pacific Railroad Company Main Track; thence Northeasterly along said centerline of track a distance of 333.6 feet; thence southeasterly at right angles 50 feet to the Point of Beginning; thence continuing at same right angle 100 feet to the southerly line of said railroad company's right of way; thence northeasterly parallel with the centerline of the railroad track 225.43 feet; thence north parallel with the east line of said SE ¼, 193.8 feet; thence southwesterly parallel with the centerline of the railroad track 391.45 feet to the Point of Beginning.

Together with that part of Main Street which would attach by operation of Law.

Containing 0.867 Acres more or less.

OFFICE OF REAL ESTATE

OMAHA, NEBRASKA

WRITTEN BY: JCO

June 18, 2002

161356.leg

CERTIFICATION OF NON-FOREIGN STATUS

Under Section 1445(e) of the Internal Revenue Code, a corporation, partnership, trust, or estate must withhold tax with respect to certain transfers of property if a holder of an interest in the entity is a foreign person. To inform the transferee that no withholding is required with respect to UNION PACIFIC RAILROAD COMPANY's interest in it, the undersigned hereby certifies the following on behalf of UNION PACIFIC RAILROAD COMPANY (hereinafter the "COMPANY"):

1. The COMPANY is not a foreign corporation, foreign partnership, foreign trust, or foreign estate (as those terms are defined in the Internal Revenue Code and Income Tax Regulations);
2. The COMPANY's U.S. employer identification number is 94-6001323; and
3. The COMPANY's office address is 1416 Dodge Street, Omaha, Nebraska 68179 and state of incorporation is Delaware.

The COMPANY agrees to inform the transferee if it becomes a foreign person at any time during the three year period immediately following the date of this notice.

The COMPANY understands that this certification may be disclosed to the Internal Revenue Service by the transferee and that any false statement contained herein could be punished by fine, imprisonment, or both.

Under penalties of perjury, I declare that I have examined this certification and to the best of my knowledge and belief it is true, correct, and complete, and I further declare that I have authority to sign this document on behalf of the COMPANY.

Title: Assistant Vice President

Date: 7/24/2002

12  
8/20  
City of Omaha  
PO Box 177  
Jennings  
68146

# CORPORATION WARRANTY DEED

(Following Kansas Statutory Warranty Form)

This 9<sup>th</sup> day of September, 2002

City of Inman, Kansas, a municipal corporation

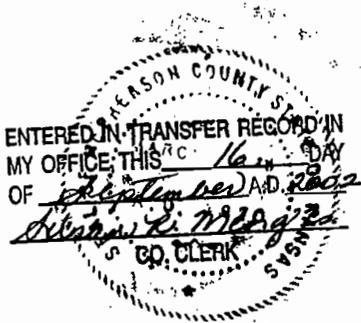
a corporation duly incorporated and existing under the laws of the State of Kansas and having its place of business at Inman in the State of Kansas

CONVEY(S) AND WARRANT(S) TO

Inman Industrial Inc.

McPherson, all of the following described REAL ESTATE in the County of State of Kansas, to-wit:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.



5430  
State of Kansas, McPherson Co., SS:  
This instrument was filed for record on the 10 day of Sept, A.D., 2002 at 8:55 o'clock P.m., and duly recorded in book 260 on page 294-295  
*Loretta V. Brown*  
Register of Deeds

for the sum of One Dollar and other Valuable Consideration

EXCEPT AND SUBJECT TO:

Easements, Restrictions and Reservations of record, if any.

City of Inman, Kansas

*John O'Brien, Mayor*  
John O'Brien,  
Mayor

STATE OF KANSAS, McPherson COUNTY, ss.

BE IT REMEMBERED, That on this 9<sup>th</sup> day of September, A.D. 2002, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came:

John O'Brien, Mayor of City of Inman, Kansas, a municipal corporation

a corporation duly incorporated and existing under the laws of the State of Kansas who is personally known to me to be the same person who executed, as such officer, the foregoing deed on behalf of said corporation, and such person duly acknowledged the execution of the same to be the act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal, the day and year last above written.

Term Expires Dec. 28, 2005 *Loretta V. Brown* Notary Public

**Loretta V. Brown**  
LORETTA V. BROWN  
Notary Public - State of Kansas  
My Appl. Expires 12-28-2005

**EXHIBIT A**

FILE: 00065402

✓A tract of land in the Southeast Quarter (SE 1/4) of Section Eight (8), Township Twenty-one (21) South, Range Four (4) West of the Sixth Principal Meridian, more particularly described as follows:

Commencing at the intersection of the South line of the SE 1/4 8-21S-4W and the centerline of the Union Pacific Railroad Company Main Track; thence Northeasterly along said centerline of track a distance of 333.6 feet; thence Southeasterly at right angles 50 feet to the point of beginning; thence continuing at same right angle 100 feet to the Southerly line of said Railroad Company's right-of-way; thence Northeasterly parallel with the centerline of the Railroad track 225.43 feet; thence North parallel with the East line of said SE 1/4 193.8 feet; thence Southwesterly parallel with the centerline of the Railroad track 391.45 feet to the point of beginning, McPherson County, Kansas;

Not including any part of Main Street which abuts thereon and would attach by operation of Law.

00065402

ant land

Abstract

**Appendix C:**

**Waste Management Plan**

## Appendix C: Waste Management Plan

This appendix presents the environmental protection controls and performance standards enacted to ensure that environmental investigation and remediation activities do not adversely affect public health or the environment. In addition, this section discusses the mechanisms for establishing site-specific controls for each location undergoing response activities.

This section addresses only environmental protection controls and standards, not the numerous controls and standards for protecting the health and safety of site workers and the general public and for assuring the quality and accuracy of data gathered. The latter are discussed in the *Master Work Plan* (Argonne 2002).

### C.1 The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and Applicable or Relevant and Appropriate Requirements

The federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or “Superfund”)<sup>1</sup> is the primary driver for the work addressed at former CCC/USDA facilities. CERCLA authorizes both short-term removal (emergency response) actions and long-term remediation. CERCLA specifies that response and cleanup must assure protection of health and the environment. Further, on-site remedial actions must attain (or receive waivers for) federal environmental applicable or relevant and appropriate requirements (ARARs), more stringent state environmental ARARs, and state facility siting laws.<sup>2</sup>

Compliance with ARARs derived from other environmental laws is a crucial feature of CERCLA. The ARARs identified for each site addressed under CERCLA authority provide cleanup goals and guide response implementation. Factors considered in identifying site-specific ARARs include the chemicals present, the location, the physical features, and the actions under consideration as remedies.

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<sup>1</sup> 42 USC (United States Code) 9601 *et seq.*

<sup>2</sup> Section 121(d).

## **C.2 The National Oil and Hazardous Substances Pollution Contingency Plan and U.S. Environmental Protection Agency Policy**

The 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP)<sup>3</sup> extended the requirement for compliance with ARARs to include not only long-term remedial actions, but also more immediate removal actions as practicable (considering the urgency of the situation).<sup>4</sup> The NCP explicitly requires the identification of ARARs only when the response evaluation phase is reached (in the case of remediation activities, during the remedial investigation or feasibility study).<sup>5</sup> As a matter of policy, the EPA has stated that treatment or disposal of investigation-derived wastes produced during response activities must ensure protection of human health and the environment and must, to the extent possible, comply with (or receive waivers for) federal and state ARARs.

## **C.3 Procedure for Identifying Controls and Standards**

In numerous documents, the EPA has published guidance for the identification of site-specific ARARs and the subsequent determination of environmental protection controls and performance standards from the ARARs. For this investigation, federal statutes, executive orders, federal regulations, state laws, state regulations, and local ordinances were all reviewed as potential sources of necessary, reasonable, and prudent controls and standards. State laws and regulations and local ordinances were considered only when they are legally enforceable, consistently enforced, and more stringent than the corresponding federal requirements. In addition to statutes and regulations directed at protection of the environment, state laws and regulations pertaining to the siting of certain facilities were also reviewed.

In general, *applicable requirements* have basic statutory or regulatory jurisdiction, whether an activity is conducted under CERCLA or another authority. The EPA guidance defines applicable requirements as “cleanup standards, standards of control, and other

---

<sup>3</sup> Published in the *Federal Register* on March 8, 1990 (55 FR 8666) and codified in Part 300 of Title 40 of the *Code of Federal Regulations* (40 CFR 300).

<sup>4</sup> See NCP, 40 CFR Section 300.415(j) (55 FR 8666, 8843) and Section 300.435(b)(2) (55 FR 8666, 8852) (March 8, 1990).

<sup>5</sup> 40 CFR 300.430(d)(3).

substantive environmental protection requirements, criteria, or limitations promulgated under Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance present at a CERCLA site.” *Relevant and appropriate requirements*, though they are “not ‘applicable’ . . . at a CERCLA site, address problems or situations sufficiently similar . . . that their use is well suited to the particular site.”

Additional standards and controls for response activities derived from guidance or advisories issued by federal or state agencies are not legally binding, but they are defined as requirements *to be considered* in the formal ARAR process. Such standards and controls were reviewed for their usefulness in developing operating procedures or best management practices that assure compliance with federal and state regulations and protection of public health and the environment in conjunction with response activities at former CCC/USDA facilities.

Environmental protection controls and standards are classified as follows:

- **Chemical Specific.** Chemical-specific (or ambient) controls and standards are health-based or risk-based standards issued for specific chemicals or chemical families. The anticipated chemical-specific requirements applicable to the generation, management, and ultimate disposal of wastes derived from site investigations would involve carbon tetrachloride and, at some locations, nitrates. (Even though the nitrate contamination that might be encountered is not attributable to CCC/USDA activities, the presence of such contamination will establish the applicability of nitrate-specific controls in the management and disposal of wastes.)
- **Performance, Design, or Action Specific.** Performance-, design-, or action-specific requirements are applicable to the generation, management, and disposal of wastes associated with planned response activities.
- **Location Specific.** Location-specific restrictions are placed on concentrations of hazardous substances — or the conduct of activities involving those substances — solely because of the special or sensitive nature of the location involved. It is beyond the scope of this document to develop a comprehensive list of location-specific requirements. However, this document directs that a reconnaissance survey of each location be conducted before characterization

activities begin. This survey is to identify the presence of environmentally sensitive areas that could be affected by the investigation and response. Such sensitive areas include faults displaced in Holocene time; 100-yr floodplains; salt dome formations; historic properties; critical habitats upon which endangered or threatened species depend; wetlands; wilderness areas; wildlife refuges; areas immediately adjacent to streams or rivers; areas affecting national, wild, scenic, or recreational rivers; wellhead protection areas; and other sensitive areas as defined by the EPA or state authorities. In addition, the survey is to identify all requirements imposed by federal or state siting statutes and regulations.

The KDHE is the authorized state agency for developing and implementing environmental protection programs.<sup>6</sup> Most Kansas environmental control programs are authorized to operate *in lieu* of their federal counterparts.

The federal and state environmental protection controls and performance standards that are applicable or relevant and appropriate to the activities anticipated at former CCC/USDA facilities are identified and analyzed in Table D.1 (at the end of this appendix).

#### **C.4 Implementation of Controls and Standards**

The application of the standards and requirements identified in Table C.1 depends on the chosen techniques for the response action, the specific location where activities will be conducted, and the chemical constituency of the resulting waste at each site. Consequently, the controls ultimately applied will be determined during the response activities at each location.

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<sup>6</sup> Kansas Statutes Annotated (KSA), Chapter 75, Article 56, Statute 75-5601.

#### C.4.1 CERCLA Wastes and the Off-Site Rule

CERCLA wastes are any hazardous substance, pollutant, or contaminant<sup>7</sup> generated in the course of a response action. CERCLA wastes are subject to requirements of the Resource Conservation and Recovery Act (RCRA), Subtitle C, *if* they are listed or identified as hazardous waste or exhibit a characteristic of hazardous waste. Such wastes may be placed *only* in a facility operating in compliance with RCRA or other applicable federal or state requirements. Furthermore, CERCLA wastes may not be transferred to a land disposal facility that is releasing contaminants into the environment; releases from other waste management units must be controlled. The purpose is to avoid contributions to present or future environmental problems by CERCLA wastes from response actions authorized or funded under CERCLA. Such wastes are therefore directed to management units determined to be environmentally sound.<sup>8</sup>

The Off-Site Rule (OSR)<sup>9</sup> regulates the off-site transfer of CERCLA wastes. The OSR establishes the following:

- Criteria and procedures for determining whether facilities are acceptable for the receipt of CERCLA wastes from response actions authorized or funded under CERCLA.
- Compliance and release criteria, along with a process for determining whether facilities are acceptable on the basis of those criteria.

The OSR applies to any remedial or removal action involving the off-site transfer of CERCLA waste, whether the action is conducted by the EPA, states, private parties, or other federal agencies, if the action is financed through the Superfund or is taken under CERCLA legal authority.

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<sup>7</sup> Section 121(d)(3).

<sup>8</sup> Preamble to final Off-Site Rule (OSR), 58 FR 49200, 49201, September 22, 1993.

<sup>9</sup> 40 CFR 300.440.

#### **C.4.2 Investigation-Derived Wastes**

Although the investigations conducted at former CCC/USDA facilities are generally minimally intrusive, they do produce small amounts of wastes. Investigation-derived waste (IDW) streams include (1) cuttings from soil borings and well installations, (2) well development fluids, (3) purge water recovered from sampling wells, (4) residuals and quality control duplicates from sample analyses performed both in the field and in off-site laboratories, (5) equipment decontamination rinsates, (6) soiled and potentially contaminated personal protective equipment, and (7) other miscellaneous wastes associated with well installation and sampling of various environmental media.

Site characterization activities might result in air emissions of particulate matter or other materials from drilling equipment. Therefore, air pollution laws and regulations can be ARARs.

In all instances, investigation-derived wastes are to be managed in a manner consistent with the applicable EPA Office of Solid Waste and Emergency Response directive. In addition, field investigators are to seek site-specific guidance and directives from the appropriate regulatory authorities, including federal, state, and local environmental or public health authorities.

The approach to management of IDWs is as follows:

- Leave a site in a condition no worse than before the project.
- Remove wastes that pose an immediate threat to human health or the environment.
- Keep on-site wastes that do not require off-site disposal or extended aboveground containerization.
- Comply with federal and state ARARs, to the extent practicable.
- Exercise careful planning and coordination for management of project-derived wastes.

- Minimize the quantity of wastes generated.

The approach to handling and disposal of soil and water IDWs is as follows:

- Soil cores collected during sampling will be retained in core boxes for lithologic descriptions and research. The cores will be transported and stored at an Argonne facility.
- Soil IDW from drilling activities will be stored on-site in 55-gal drums or a roll-off dumpster. A representative sample will be collected and analyzed by a KDHE-certified laboratory.
- A Solid Waste Disposal Authorization will be obtained from the KDHE for disposal of soil in a permitted landfill. If analytical data indicate the soils cannot be disposed in a permitted landfill, alternative disposal methods will be proposed to KDHE for review.
- Water IDW will be stored on-site in 55-gal drums or polyurethane containers. If acceptable to KDHE, the wastewater will be aerated prior to sampling. Then the wastewater will be analyzed for VOCs and nitrate.
- The results of the wastewater analyses will be discussed with the KDHE project manager, and the appropriate disposal method will be determined.

TABLE C.1 Potential applicable or relevant and appropriate requirements (ARARs) for former CCC/USDA facilities in Kansas. <sup>a</sup>

Title	Citation <sup>b</sup>	Description	Comment
<i>Federal Laws and Regulations</i>			
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	42 USC 9601 <i>et seq.</i>		
National Oil and Hazardous Substances Pollution Contingency Plan (NCP)	40 CFR Part 300	Provides the federal government's blueprint for responding to both oil spills and hazardous substance releases.	Applicable to releases into the environment of hazardous substances and pollutants or contaminants that may present an imminent and substantial danger to public health or the national welfare.
		Off-Site Rule establishes procedures for planning and implementing off-site response actions (40 CFR 300.440).	Applicable to response actions involving off-site transfers of hazardous substances, pollutants, or contaminants.
Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)	67 FR 71169 (Nov. 29, 2002)	The draft guidance is intended to be a screening tool to aid users in determining whether a vapor intrusion pathway is complete and, if so, whether the complete pathway poses an unacceptable risk to human health at cleanup sites. With a complete pathway, humans are exposed to vapors originating from site contamination. The draft guidance begins with simple and generally reasonably conservative screening approaches and gradually progresses toward a more complex assessment involving increasingly greater use of site-specific data. For sites determined to have an incomplete vapor intrusion pathway, further consideration of the current site situation generally should not be needed. For sites determined to have a complete pathway, guidance is provided to evaluate whether the pathway does or does not pose a potential significant risk to human health. The draft guidance is not intended to provide recommendations to delineate the extent of risk or eliminate the risk.	Suggested for use at National Priorities List and Superfund Alternative Sites.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Safe Drinking Water Act (SDWA) (Public Health Service Act)	42 USC 300(f) <i>et seq.</i>		
National Primary Drinking Water Standards	40 CFR Part 141, Subparts B and G	Establishes maximum contaminant levels (MCLs), which are health-based standards for public water systems. The MCL for carbon tetrachloride is 5 µg/L. The MCL for chloroform (total trihalomethanes) is 100 µg/L.	Applicable to organic groundwater contamination in a sole-source aquifer.
National Secondary Drinking Water Regulations (NSDWRs)	40 CFR Part 143	Establishes secondary maximum contaminant levels (SMCLs) for public water systems to protect the aesthetic quality of the water. The SMCLs are not federally enforceable but are included as guidelines for the states.	Applicable if groundwater is a source of drinking water and if the NSDWRs have been adopted as enforceable standards by the state.
Maximum Contaminant Level Goals (MCLGs)	40 CFR Part 141, Subpart F	Establishes non-enforceable drinking water quality goals at levels of no known or anticipated adverse health effects, with an adequate margin of safety. The MCLG for carbon tetrachloride is zero.	May be relevant and appropriate if a more stringent standard is required to protect human health and the environment.
Standards for Owners and Operators of Public Water Supply Systems	40 CFR Part 141	Provides treatment requirements for public water supply systems (i.e., systems that serve at least 25 people or have at least 15 connections).	Relevant and appropriate in the establishment of cleanup goals for groundwater contamination.
Underground Injection Control Regulations	40 CFR Parts 144–148	Provides for protection of underground sources of drinking water.	Applicable if a response alternative involves underground injection.
Sole-Source Aquifers	40 CFR Part 149	Prohibits activities, including drilling, in an area designated a sole-source aquifer without special permission of the U.S. Environmental Protection Agency (EPA).	Applicable if the aquifer in the area is a sole-source aquifer.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Clean Water Act (Federal Water Pollution Control Act)	33 USC 1251 <i>et seq.</i>		
Ambient Water Quality Criteria	40 CFR Part 131	Section 304(a) of the Clean Water Act (CWA) requires the EPA to publish and periodically update ambient water quality criteria (AWQCs). These criteria are to “. . . accurately reflect . . . the latest scientific knowledge . . . on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life . . . which may be expected from the presence of pollutants in any body of water. . . .” Water quality criteria developed under Section 304(a) are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects. These recommended criteria provide guidance for states and tribes in adopting water quality standards under Section 303(c) of the CWA.	Developed for some organic constituents in groundwater; may be relevant and appropriate.
National Pollutant Discharge Elimination System (NPDES)	40 CFR Parts 122, 124, and 125	Establishes NPDES permit procedures, criteria, and standards governing the discharge of pollutants from any point source into waters of the United States (Sections 318, 402, and 405 of the CWA). Most storm water discharges require coverage by an NPDES permit.	Discharge limits will be established if effluent is discharged to a surface water body.  No permit is required for on-site response actions under CERCLA, but the substantive requirements apply if a response alternative involves discharge into a creek or other surface water on-site. A permit is required if the discharge is to a creek or other surface water off-site.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Clean Water Act (cont.)			
Water Quality Standards	40 CFR Part 131	Forms the foundation of the water-quality-based pollution control program mandated by the CWA. These standards define the goals for a water body by designating the water body's uses, setting criteria to protect those uses, and establishing provisions to protect water bodies from pollutants.	Applicable to surface water discharges.
National Pretreatment Standards	40 CFR Part 403	Provides general pretreatment standards and regulations for existing and new sources of pollution; establishes standards to control pollutants that pass through or interfere with treatment processes in publicly owned treatment works (POTW) or that may contaminate sewage sludge.	Applicable if a response alternative involves discharge to publicly owned treatment works.
Dredge or Fill Requirements	40 CFR Parts 230–233 (40 CFR Part 6.302(a))	Requires permits for discharge of dredged or fill material into navigable waters.	Applicable if a response alternative requires discharge of dredged or fill material into navigable waters.
Executive Order on Protection of Wetlands	Executive Order 11,990	Requires federal agencies to avoid, to the extent possible, adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists.	Applicable if a response alternative has a negative effect on a wetland.
Rivers and Harbors Act of 1899			
Section 10 Permit	33 CFR Parts 320–330 (40 CFR Part 6.302(a))	Requires permit for structures for work in or affecting navigable waters.	Applicable if a response alternative affects a navigable waterway.
Executive Order on Floodplain Management	Executive Order No. 11,988	Requires federal agencies to evaluate the potential effects of actions in a floodplain to avoid, to the extent possible, the adverse impacts associated with direct and indirect development of a floodplain.	Applicable if activities are located in a 100-yr floodplain.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Clean Air Act	42 USC 7401 <i>et seq.</i>		
National Primary and Secondary Ambient Air Quality Standards	40 CFR Part 50	Establishes national primary and secondary ambient air quality standards under Section 109 of the Clean Air Act to protect public health and welfare.	Applicable if contaminants are discharged to the air during treatment.
National Emissions Standards for Hazardous Air Pollutants (NESHAPs)	40 CFR Parts 61 and 63	Implements Section 112 of the Clean Air Act, which governs the federal control program for hazardous air pollutants (HAPs). Identifies emission standards for HAPs that originate from specific categories of sources, including site remediation. NESHAPs are technology based and are issued to limit the release of specified HAPs from specific industrial sectors. A <i>Federal Register</i> notice published for carbon tetrachloride (50 FR 32621 [August 13, 1985]) and chloroform (50 FR 39626 [September 27, 1985]) included consideration of serious health effects, such as cancer, due to ambient exposures.	Applicable if the identified HAPs are emitted from a specific source category (for example, if on-site treatment units with emissions are part of response actions).
Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act [RCRA])	40 USC 6901 <i>et seq.</i>		
Criteria for Classification of Solid Waste Disposal Facilities and Practices	40 CFR Part 257	Establishes classification criteria for sanitary landfills and open dumps, which are prohibited (Sections 4005 and 1008 of RCRA). At a minimum, facilities meet the sanitary landfill classification "only if there is no reasonable probability of adverse effects on health or the environment . . ." [Section 4004(a) of RCRA].	Applicable if a response alternative involves land disposal of solid waste.
		Provides for protection of surface water and groundwater at solid waste disposal facilities (40 CFR 257.3-3 and -4).	Applicable if a response action includes provisions for an on-site landfill.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Solid Waste Disposal Act (cont.)			
Criteria for Municipal Solid Waste Landfills	40 CFR Part 258	Establishes minimum national criteria for municipal solid waste landfill units.	Applicable if municipal solid waste is placed in a municipal solid waste landfill.
Identification and Listing of Hazardous Wastes	40 CFR Part 261	Identifies solid wastes that are subject to regulation as hazardous wastes under 40 CFR Parts 124, 262-265, 268, 270, and 271.	Applicable if a material at the site is defined as a solid and hazardous waste; requires handling as a hazardous waste.
Standards Applicable to Generators of Hazardous Waste	40 CFR Part 262	Establishes standards for generators of hazardous waste.	Applicable if hazardous wastes are generated as a result of on-site activities.
Standards Applicable to Transporters of Hazardous Waste	40 CFR Part 263	Establishes standards that apply to transporters of hazardous waste within the United States if the transportation requires a manifest under 40 CFR Part 262.	Applicable if a response alternative involves off-site transportation of hazardous wastes.
Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities	40 CFR Part 264	Establishes minimum national standards that define the acceptable management of hazardous wastes for owners and operators of facilities that treat, store, or dispose of hazardous waste.	Applicable or relevant and appropriate if hazardous waste is disposed of on-site.
Standards for Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities	40 CFR Part 266	Provides for groundwater protection standards, general monitoring requirements, corrective action requirements, and technical requirements.	RCRA standards can be relevant and appropriate for groundwater at a site if an on-site landfill is constructed.
		Establishes requirements that apply to recyclable materials.	No substances are expected to be present at CCC/USDA sites in quantities to warrant recycling.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Solid Waste Disposal Act (cont.)			
Land Disposal Restrictions	40 CFR Part 268	Identifies hazardous wastes that are restricted from land disposal; defines limited circumstances under which an otherwise prohibited waste may continue to be land disposed.	Applicable or relevant and appropriate if hazardous waste are disposed of on-site.
Hazardous Waste Permit Program	40 CFR Part 270	Establishes provisions covering basic EPA permitting requirements.	No permit is required for on-site CERCLA response actions. Substantive requirements are addressed in 40 CFR Part 264.
Universal Wastes	40 CFR Part 273	Establishes requirements governing universal wastes (hazardous waste batteries, hazardous waste pesticides that are either recalled or collected in waste pesticide collection programs, hazardous waste thermostats, and hazardous waste lamps).	Applicable if universal wastes are generated or managed on-site in the course of investigation or response operations.
Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks	40 CFR Part 280	Establishes regulations related to underground storage tanks.	Applicable if a response alternative involves use of underground storage tanks.
Occupational Safety and Health Act (OSHA)			
Occupational Safety and Health Standards	29 CFR Part 1910	Establishes safety and health standards for workers. OSHA has set a limit of 100 ppm for carbon tetrachloride in workplace air for an 8-hr work day, 40-hr work week.	Under 40 CFR Section 300.150, response actions under the NCP will comply with OSHA requirements for the safety and health of response action workers.
Noise Control Act of 1972	42 USC Sect. 4901 <i>et seq.</i>	Prohibits federal activities resulting in noise that would jeopardize the health or welfare of public.	Applicable for activities such as drilling near a public access point.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Hazardous Materials Transportation Act	49 USC 5101 <i>et seq.</i>	Protects against the risks to life and property inherent in the transportation of hazardous material by listing the materials deemed hazardous and describing required labeling, placarding, and training. Hazardous materials are chemicals that the U.S. Department of Transportation has determined pose unreasonable risks to health, safety, and property during transportation activities.	Applicable if an alternative involves transportation of hazardous materials. Does not apply to on-site response operations.
Hazardous Materials Transportation Regulations	49 CFR Parts 106–180	Protects against the risks to life and property inherent in the transportation of hazardous material by listing the materials deemed hazardous and describing required labeling, placarding, and training. Hazardous materials are chemicals that the U.S. Department of Transportation has determined pose unreasonable risks to health, safety, and property during transportation activities.	Applicable if an alternative involves transportation of hazardous materials. Does not apply to on-site response operations.
National Historic Preservation Act	16 USC 470 <i>et seq.</i>	Requires (Section 106) federal agencies to consider the effects of any federally assisted undertaking (including those carried out with federal financial assistance and those requiring a federal permit, license, or approval) on any district, site, building, structure, or object that is listed in the National Register of Historic Places or eligible for such listing; requires agencies to give the Advisory Council on Historic Preservation a reasonable opportunity to comment on those undertakings.	Applicable if a district, site, building, structure, or object listed on or eligible for the National Register is on or adjacent to the site.
Protection of Historic Properties	36 CFR Parts 800 (40 CFR 6.301(b))	Defines how federal agencies meet the statutory responsibilities.	Applicable if a district, site, building, structure, or object listed on or eligible for the National Register is on or adjacent to the site.
Executive Order on Protection and Enhancement of Cultural Environments	Executive Order 11,593	Requires federal agencies to preserve, restore, and maintain the nation's historic and cultural environment in their activities.	
Executive Order on Preserve America	Executive Order 13,287	Formulates policy to promote intergovernmental cooperation and partnerships for the preservation and use of historic properties.	

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Historic Sites, Buildings and Antiquities Act (Historic Sites Act)	16 USC 461 <i>et seq.</i> (40 CFR 6.301(a))	Establishes a national policy to preserve historic sites and objects of national significance, including those located on refuges. Provides procedures for designation, acquisition, administration, and protection of such sites. Requires federal agencies to consider the existence and location of landmarks on the National Registry of Natural Landmarks and avoid undesirable impacts to such landmarks.	Applicable if an entity on the National Register of National Landmarks is on or adjacent to the site.
Archaeological and Historic Preservation Act	16 USC 469 <i>et seq.</i> (40 CFR 6.301(c))	Carries out policy established by the Historic Sites Act. Establishes procedures for preservation of historical and archaeological data that might be lost or destroyed through alteration of terrain as a result of a federal construction project or a federally licensed activity or program. Directs federal agencies to notify the Secretary of the Interior whenever they find that a federal or federally assisted, licensed, or permitted project may cause loss or destruction of significant scientific, prehistoric, or archaeological data.	Applicable if historical or archaeological data are on or adjacent to the site and if construction projects or alteration of terrain at the site could destroy historical or archaeological materials.
Antiquities Act	16 USC 431 <i>et seq.</i>	Authorizes the President to designate as national monuments objects or areas of historic or scientific interest on lands owned or controlled by the United States. Requires a permit for examination of ruins, excavation of archaeological sites, and the gathering of objects of antiquity on lands under the jurisdiction of the Secretaries of Interior, Agriculture, and Army. Provides penalties for violations.	
Preservation of American Antiquities	43 CFR 3 (40 CFR Sect. 6.301(b)) Executive Order 11,593	Protects all historic and prehistoric sites on federal lands and prohibits excavation or destruction of such antiquities without the permission (Antiquities Permit) of the secretary of the department that has the jurisdiction over those lands; authorizes the President to declare areas of public lands as national monuments and to reserve or accept private lands for that purpose.	Applicable if site operations affect antiquities on federal lands.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Archaeological Resources Protection Act	16 USC 470aa <i>et seq.</i>	Supplements the provisions of the Antiquities Act of 1906. Establishes detailed requirements for issuance of permits for any excavation for or removal of archaeological resources from federal or Indian lands. Also established civil and criminal penalties for the unauthorized excavation, removal, or damage of such resources.	
Protection of Archaeological Resources	43 CFR Part 7, 36 CFR Part 296 (40 CFR 6.301(b))	Establishes uniform definitions, standards, and procedures to be followed by all federal land managers in providing protection for archaeological resources located on public lands and Indian lands.	Applicable if site operations affect archaeological resources on public or Indian lands.
American Indian Religious Freedom Act	42 USC 1996 <i>et seq.</i>	Protects and preserves the right of American Indians to have access to their sacred places; directs federal agencies to consult with Indian religious practitioners if a place of religious importance to American Indians may be affected by an undertaking.	Applicable if site operations affect access to sacred Indian sites.
Executive Order on Indian Sacred Sites	Executive Order 13,007	Requires agencies managing federal lands to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites; also requires agencies to develop procedures for reasonable notification of proposed actions.	Applicable if site operations affect access to sacred Indian sites.
Native American Grave Protection and Repatriation Act	25 USC 3001 <i>et seq.</i>	Establishes the priority for ownership or control of Native American cultural items excavated or discovered on federal or tribal lands after 1990 and the procedures for repatriation of items in federal possession; allows the intentional removal or excavation of Native American cultural items from federal or tribal lands only with a permit or upon consultation with the appropriate tribe.	Applicable if site operations involve excavation or discovery of Native American cultural items on federal or tribal lands.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Native American Grave Protection and Repatriation Act (cont.)			
Native American Graves Protection and Repatriation Regulations	43 CFR Part 10	Develops a systematic process for determining the rights of linear descendants and Indian tribes to certain Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony. Defines items included under the Native American Grave Protection and Repatriation Act. Describes the consultation procedure applicable to intentional excavation or inadvertent discovery of remains or objects covered.	
Endangered Species Act	16 USC 1531 <i>et seq.</i>	Provides for the conservation of threatened and endangered plants and animals and the habitats in which they are found.	
Interagency Cooperation	50 CFR Part 402 (40 CFR 6.302(h))	Requires action to conserve threatened and endangered species within critical habits upon which endangered species depend, including consultation and conferencing with the Department of the Interior (U.S. Fisheries and Wildlife Service/U.S. National Marine Fisheries Service).	Applicable if threatened or endangered species or critical habitats are identified at the site.
Migratory Bird Treaty Act	16 USC 703 <i>et seq.</i>		
Migratory Bird Permits	50 CFR Parts 10 and 21	Requires a permit from the U.S. Fisheries and Wildlife Service for the taking of protected migratory birds.	Applicable if a response alternative will affect a migratory pathway.
Executive Order on Responsibilities of Federal Agencies to Protect Migratory Birds	Executive Order 13,186	Directs federal agencies taking actions having or likely to have a negative effect on migratory bird populations to work with the U.S. Fisheries and Wildlife Service to develop an agreement to conserve those birds.	

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Bald and Golden Eagle Protection Act	16 USC 668 <i>et seq.</i>		
Eagle Permits	50 CFR Parts 10 and 22	Requires a permit from the U.S. Fisheries and Wildlife Service to move nests because of construction or operation of project facilities.	Applicable if project activities affect bald and golden eagle populations, including construction or operation of facilities that call for the moving of nests.
Fish and Wildlife Conservation Act	16 USC 2901 <i>et seq.</i>	Encourages states to develop conservation plans for nongame fish and wildlife of ecological, educational, aesthetic, cultural, recreational, economic, or scientific value.	Applicable if significant populations are present at a site or are affected by site response activities.
Fish and Wildlife Coordination Act	16 USC 661 <i>et seq.</i> (40 CFR 6.302(g))	Requires consultation with the U.S. Fish and Wildlife Service when a federal department or agency proposes, authorizes, permits, or licenses any modification of any stream or other water body. Requires adequate provision for protection of fish and wildlife resources.	Applicable if a response alternative will cause damage to or loss of wildlife by modifying a stream or body of water.
Wilderness Act	16 USC 1311 <i>et seq.</i>		
Wilderness Preservation and Management	50 CFR Part 35, 43 CFR Part 6300	Describes the activities allowed and banned in wilderness areas and uses requiring authorization.	Applicable if a wilderness area exists on-site or adjacent to the site.
National Wildlife Refuge System Administration Act	16 USC 668dd		
Executive Order on the Management and General Public Use of the National Wildlife Refuge System	Executive Order 12,996	Directs preservation of a national network of lands and waters for the conservation and management of fish, wildlife, and plant resources for the benefit of present and future generations. Recognizes compatible uses, while ensuring maintenance of biological integrity and environmental health.	Applicable if a wildlife refuge area exists on-site or adjacent to the site.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Wild and Scenic Rivers Act	16 USC 1271 <i>et seq.</i>	States that a federal agency may not assist, through grant, loan, license, or otherwise, the construction of a water resources project that would have a direct and adverse effect on the values for which a river in the National Wild and Scenic Rivers System or a study river on the National Rivers Inventory was established (as determined by the Secretary of the Interior for rivers under the jurisdiction of the Department of the Interior and by the Secretary of Agriculture for rivers under the jurisdiction of the Department of Agriculture).	
Wild and Scenic Rivers	36 CFR Part 297 (40 CFR 6.302(e))	Requires a notification process for federally assisted water resource projects in any portion of a designated river.	Applicable to on-site water resource projects located within, above, below, or outside a wild and scenic river or study river.
<i>Kansas State Laws</i>			
Kansas Voluntary Cleanup and Property Redevelopment Program	KSA, Chapter 65, Article 34, Sections 164 <i>et seq.</i> KAR, Title 28, Article 71	<p data-bbox="953 898 1503 1198">Applies to low- to medium-priority contaminated sites with minimal risk. Provides a mechanism for stakeholders (e.g., property owners, facility operators) cleaning up such sites to receive a “no further action” determination from the Kansas Department of Health and Environment (KDHE) (KAR 28-71-10). The KDHE is working with the EPA to develop a Memorandum of Agreement providing voluntary participants with assurance of relief from future federal liability for the voluntary party’s property.</p> <p data-bbox="953 1222 1503 1360">Identifies remedial standards for cleanup of environmental media (KAR 28-71-11). Provides that groundwater cleanup levels will be based on the most beneficial use of the groundwater [KAR 28-71-11(l)].</p>	According to the KDHE, the program is truly voluntary and is designed for stakeholders to properly address contamination on eligible properties through private-state partnerships. No additional burdens or requirements are placed on voluntary participants.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Environmental Use Control	KSA, Chapter 65, Article 1, Sections 1,221 <i>et seq.</i> KAR, Title 28, Article 73	<p data-bbox="953 375 1444 451">Provides a way for landowners to achieve site closure by addressing environmental concerns caused by residual contamination.</p> <p data-bbox="953 483 1499 837"><i>An environmental use control</i> is a restriction or prohibition of uses of or activities on a specific property, as requested by the property owner, to ensure future protection of public health and the environment when environmental contamination exceeding standards for unrestricted use remains on the property following appropriate assessment and/or remedial activities [KSA, 65-1,222(b)]. Eligible property is real property that exhibits environmental contamination exceeding standards for unrestricted use and is being or has been investigated or remediated, or both, in an approved program [KAR 28-73-1(c)].</p> <p data-bbox="953 870 1499 1195">Governs environmental use control agreements (KAR 28-73-3); long-term care agreements for properties that cover a large acreage, exhibit residual contamination characterized by higher toxicity or mobility, require complicated maintenance or monitoring of protective structures, and require frequent or complicated site inspections (KAR 28-73-4); financial assurance for such properties (KAR 28-73-5); duration of environmental controls (KAR 28-73-6); and restrictions, prohibitions, and zoning in lieu of environmental use controls (KAR 28-73-7).</p>	An environmental use control can be applied voluntarily to a property by the landowner to assure adequate protection of public health and the environment from contamination on the subject property. The protection offered can give a landowner relief from environmental liability concerns, making property more attractive to redevelopment or prospective buyers.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Kansas Air Quality Control Act; Kansas Air Quality Regulations	KSA, Chapter 65, Article 30; KAR, Title 28, Article 19	<p>Requires permitting and preconstruction notice for air contaminant sources. Provides for reporting and inspections. Establishes state emission standards for listed HAPs and state air quality standards to protect the public health.</p> <p>Provides emission standards for HAPs (KAR 28-19-200 <i>et seq.</i>), including carbon tetrachloride and chloroform [KAR 28-19-201(a)]. Emission above a certain threshold requires an annual emissions fee (e.g., 10 tons/yr of a single HAP and 25 tons/yr of any combination of HAPs) (KAR 28-19-202).</p> <p>Emissions above certain threshold amounts require a construction permit (e.g., 25 tons/yr of particulate matter [PM], 15 tons/yr of PM 10, 100 tons/yr of carbon monoxide, 40 tons/yr of volatile organic compounds [VOCs]) or a preconstruction approval (e.g., 5 lb/hr of PM, 2 lb/hr of PM 10, 50 lb per 24-hr period of carbon monoxide, 50 lb per 24-hr period of VOCs (either 15 lb per 24-hr period or 3 lb/hr in a nonattainment area) (KAR 28-19-300).</p> <p>Requires operating permits for certain stationary sources (28-19-500 <i>et seq.</i>).</p> <p>Prohibits open burning (28-19-645 <i>et seq.</i>).</p> <p>Establishes new source performance standards for municipal solid waste landfills, including reporting, calculation of nonmethane organic compound emissions, installation of collection and control systems (28-19-720 <i>et seq.</i>).</p> <p>Establishes emission standards for major source HAPs (28-19-750 <i>et seq.</i>).</p>	<p>Applicable if any listed pollutants are discharged to the air during investigation or response through air stripping, thermal destruction, handling of contaminated soil, gaseous waste treatment, aeration, or disposal in a municipal solid waste landfill.</p>

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Underground Storage, Disposal Wells, and Surface Ponds	KSA, Chapter 65, Article 1; KAR, Title 28, Article 13	Regulates the construction and use of underground storage reservoirs, disposal wells, and surface ponds for the confinement, storage, and disposal of industrial fluids. Establishes approval and permitting requirements.	Applicable if a response alternative requires underground storage reservoirs, disposal wells, or surface ponds.
Drinking Water Regulations	KSA, Chapter 65, Article 33; KAR, Title 28, Article 15a	Establishes primary drinking water regulations. Adopts federal MCLs pertaining to public water supplies.	Applicable if waste derived from investigation or response enters public water systems. Not applicable to investigative wells that are not used for drinking water supply; however, relevant and appropriate for establishing sampling and analysis parameters during an investigation.
Water Pollution Control Regulations	KSA, Chapter 65, Article 33; KAR, Title 28, Article 16	Provides for the maintenance and protection of public health and welfare and the use of surface water for aquatic life; for agricultural, domestic, and industrial water supply; and for recreation. Controls surface water use designation. Establishes surface water quality standards (KAR 28-16-28 <i>et seq.</i> ). Maximum contaminant level is defined as any of the enforceable standards for drinking water promulgated by the EPA [KAR 28-16-28b(aa)].  When the KDHE finds that the criteria are underprotective or overprotective for a given surface water segment, the KDHE may, in accordance with KAR 28-16-28f(f), make appropriate site-specific determinations (KAR 28-16-28e(a)). Surface water must be free from the harmful effects of substances that produce any public health hazard; hazardous substances must not occur in surface water at concentrations that jeopardize public health and other protected life [KAR 28-16-28e(b)].	Applicable if contaminated effluent from an investigative or response operation is discharged into surface water; also might be applicable to alluvial aquifers demonstrated to be hydraulically connected to surface water bodies.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Water Pollution Control Regulations (cont.)		<p>Provides numeric criteria by use category for different parameters [KAR 28-16-28e(d)]. For chloroform the values are 28,900 µg/L for aquatic life-acute, 1,240 µg/L for aquatic life-chronic, 15.7 µg/L for public health-food procurement, and 100 µg/L for public health-domestic water supply. (No values are specified for agriculture-livestock and agriculture-irrigation.) For carbon tetrachloride the values are 35,200 µg/L for aquatic life-acute, 6.94 µg/L for public health-food procurement, and 5 µg/L for public health-domestic water supply. (No values are specified for aquatic life-chronic, agriculture-livestock, and agriculture-irrigation.)</p>	
		<p>Establishes procedures relating to the discharge of wastewaters under the NPDES program (KAR 28-16-57 <i>et seq.</i>). National effluent standards are adopted by reference.</p>	<p>Applicable if investigation or response operations involve discharge into “waters of the state.”</p>
		<p>Requires water management planning for water quality management areas deemed critical by state authorities (KAR 28-16-69 <i>et seq.</i>).</p>	<p>Applicable if contaminants resulting from investigation or response are discharged into a water quality management area.</p>
		<p>Establishes limitations on the types of wastes that can be discharged to a POTW and governs pollutants from nondomestic sources that are subject to one or more pretreatment standards and that are indirectly discharged, or otherwise introduced by any means, into any POTW (KAR 28-16-83 <i>et seq.</i>).</p>	<p>Applicable if investigation or response alternatives involve discharge of contaminated groundwater to a POTW.</p>
Kansas Water Well Contractor’s License Regulations; Water Well Construction and Abandonment Regulations	KSA, Chapter 82a, Article 12; KAR, Title 28, Article 30	<p>Establishes requirements for licensing of well drillers and standards for construction, operation, and plugging of wells (KAR 28-30-3 <i>et seq.</i>).</p>	<p>Applicable if investigation or response involves drilling of monitoring wells or other wells.</p>
Kansas Water Appropriation Act; Kansas Water Appropriation Act Rules	KSA, Chapter 82a, Sections 701 <i>et seq.</i> KAR, Title 5, Articles 1 <i>et seq.</i>	<p>Establishes requirements for obtaining, maintaining, and transferring water appropriations.</p>	<p>Applicable if water appropriations are required for groundwater remediation.</p>

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Underground Injection Control Regulations	KSA, Chapter 65, Article 1; KAR, Title 28, Article 46	Governs discharges into underground injection wells (KAR 28-46-1 <i>et seq.</i> ). In general, federal SDWA regulations are adopted by reference.	Applicable if investigative or response wastes are introduced into wells for discharge or disposal.
Solid Waste Regulations	KSA, Chapter 65, Article 34; KAR, Title 28, Article 29	Establishes standards for management activities and facilities relative to solid wastes (KAR 28-29-21 <i>et seq.</i> ).	Applicable if nonhazardous materials discarded as a result of the investigation or response are landfilled on-site.
		Establishes location restrictions, design standards, operating standards, groundwater monitoring, corrective action, and financial assurance for closure and postclosure, for municipal solid waste landfill units (KAR 28-29-100 <i>et seq.</i> ). Liners for new municipal solid waste landfills must be designed in accordance with KAR 28-19-104(e)(1)(A) or (B). Alternative designs must demonstrate that a carbon tetrachloride concentration of 0.005 mg/L will not be exceeded [KAR 28-29-104(e)(1)(B)]. (Small units may request exemption [KAR 28-19-103].) Requires detection and assessment monitoring for carbon tetrachloride and chloroform (KAR 28-29-113).	Applicable if a municipal solid waste landfill is used.
Hazardous Waste Management Standards and Regulations	KSA, Chapter 65, Article 34; KAR, Title 28, Article 31	Requires generators of solid waste to make a hazardous waste determination. For a waste that is not excluded from hazardous waste regulations and not listed as a hazardous waste, the determination is generally made through testing by a laboratory certified by the KDHE for such analyses [KAR 28-31-4(b)].	Applicable if investigation or response operations generate solid wastes.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Hazardous Waste Management Standards and Regulations (cont.)		Establishes standards for hazardous waste generators and transporters and for storage, treatment, and disposal facilities (KAR 28-31-4 <i>et seq.</i> ). Storage by certain hazardous waste generators for more than 90 days requires a permit [KAR 28-31-4(g)]. Adopts by reference federal land disposal restrictions (KAR 28-31-14).	Applicable to investigation samples or response-generated wastes that are determined to be hazardous and are transported or managed on-site through treatment, storage, and disposal. Transportation requirements do not include a manifesting requirement for samples sent for characterization.
		Adopts by reference federal regulations governing universal wastes (KAR 28-31-15).	Applicable if universal wastes are generated or managed on-site in the course of investigation or response operations.
Kansas Storage Tanks Act	KSA Chapter 65, Article 34	Governs storage tanks.	Applicable if a response alternative involves use of storage tanks to contain an accumulation of regulated substances; applies to associated piping, ancillary equipment, and the containment system.
Kansas State Board of Technical Professions	KSA, Chapter 74, Article 70 KAR, Title 66, Number 66-6-1 through Number 66-14-12	Establishes requirements for licensing of engineers, land surveyors, geologists, and others.	Applicable if the services of engineers, land surveyors, and geologists are required for site investigation and response activities.
Kansas Nongame and Endangered Species Conservation Act; Kansas Nongame and Endangered Species Conservation Regulations	KSA, Chapter 32, Article 9; KAR, Title 115, Article 15	Designates endangered and threatened species, as well as nongame species in need of conservation. Requires consultation with the Kansas Department of Wildlife and Parks regarding actions that might affect listed species and their critical habitats. Any projects that affect listed species or their habitat and that are publicly funded, are state or federally assisted, or require a permit from another state or federal agency require review and action permits (KSA 32-957 through 32-963, 32-1009 through 32-1012, 32-1033; KAR 115-15-1, -2, -3, and -4).	Applicable if threatened or endangered species are identified at or near the site.

TABLE C.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Kansas Levee Law	KSA, Chapter 24, Article 1; KAR, Title 5, Article 45	Requires prior approval of chief engineer before construction of floodplain fills and levees (KSA 24-126).  <i>Floodplain fill</i> is material, usually soil, rock, or rubble, placed in a floodplain to an average height of more than 1 ft above the existing ground, which has the effect of diverting, restricting, or raising the level of floodwaters of a stream (KAR 5-45-1).	Applicable if site activities involve construction of floodplain fills.
Kansas Historic Preservation Act	KSA, Chapter 75, Article 27; KAR, Title 118, Article 3	Provides for protection and preservation of sites and buildings listed on state or federal historic registries (KSA 75-2715 through 75-2726; KAR 118-3-1 through 118-3-16).	Applicable if the investigation or response site is a listed state or federal historic site or is adjacent to such a site and if activities requiring permitting are initiated.
Kansas Unmarked Burial Sites Preservation Act	KSA Chapter 75, Article 27; KAR Title 126, Article 1	Establishes Burial Sites Preservation Board. Prohibits unauthorized disturbance. Requires permits for excavation of any unmarked burial site, registered or unregistered (KSA 75-2741 through 75-2754; KAR 126-1-1 through 126-1-2).	Applicable if investigation or remediation activities encounter a burial site.

TABLE C.1 Footnotes (cont.)

<sup>a</sup> In addition to the ARARs listed here, the following advisory levels are to be considered:

- EPA Health Advisories (2004 Edition)

<u>Exposure</u>	<u>Carbon Tetrachloride</u>	<u>Chloroform</u>
One day (mg/L) (10-kg child)	4.0	4.0
Ten days (mg/L) (10-kg child)	0.2	4.0
Reference dose (mg/kg day)	0.0007	0.01
Drinking water equivalent level (mg/L)	0.03	0.4
Lifetime (mg/L) (70-kg adult)	Not available	0.7

- EPA Region III Risk-Based Concentration Table (2006 Update)  
(carcinogenic effects)

	<u>Carbon Tetrachloride</u>	<u>Chloroform</u>
Tap water (µg/L)	1.6E-01	1.5E-01
Ambient air (µg/m <sup>3</sup> )	1.2E-01	7.7E-02
Fish (mg/kg)	2.4E-02	1.4E+01
Soil, industrial (mg/kg)	2.2E+01	1.0E+04
Soil, residential (mg/kg)	4.9E+00	7.8E+02

<sup>b</sup> Abbreviations for citations:

- CFR, Code of Federal Regulations
- FR, Federal Register
- KAR, Kansas Administrative Regulations
- KSA, Kansas Statutes Annotated
- Sect., Section
- USC, United States Code

**Appendix D:**

**Site-Specific Health and Safety Plan**

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## Appendix D: Site-Specific Health and Safety Plan

This appendix supplements Section 3.6 of this site-specific *Work Plan*, as well as Section 3 of the *Master Work Plan* (Argonne 2002). This appendix supersedes Section 3 of the *Master Work Plan* (Argonne 2002) in all instances where provisions of the two differ.

### D.1 Activities at Inman

Phased activities at Inman may include cone penetrometer (CPT) work, sonic or auger drilling, soil sampling, groundwater sampling, and the installation of temporary and/or permanent wells. In addition to work at the former CCC/USDA site, drilling and private well sampling may occur along Main Street.

For their health and safety, workers should consistently conduct themselves as follows:

- Stay alert and avoid fatigue.
- Use common sense.
- Follow procedures.
- Ask questions as needed about anything that is unclear.

Specific guidelines for working safely at Inman are found below. This appendix includes safety management and hazard information, standard operating procedures, emergency contacts, and a map of the route to Memorial Hospital in McPherson.

The field safety coordinator for the work at Inman is Monte Brandner, the field project manager is David Surgnier, the technical project manager is Eugene Yan, and the AGEM program manager is Lorraine LaFreniere.

## **D.2 Training**

Before starting work on the site, Argonne employees and subcontractor personnel must complete a 40-h basic hazardous waste safety and health training course that meets the requirements of 29 CFR 1926.65(e). The training is to be documented with a certificate signed by the course director. Basic training will also include at least an additional 24 h of field or operations training under supervision. Supervisors are required to complete an additional 8 h of hazardous waste management training. Employees are required to complete 8 h of refresher training annually.

Only personnel who have completed U.S. Department of Transportation hazardous material training and have the authorization of the AGEM field safety coordinator or the AGEM program manager may ship packages containing dry ice, if shipment is to be by air or water.

Task-specific hazards will be reviewed daily at “tailgate” meetings. Attendance is mandatory and will be documented by signature.

## **D.3 Integrated Safety Management**

The U.S. Department of Energy requires that the principles of Integrated Safety Management (ISM) be implemented for all Argonne activities. Therefore, all Argonne personnel and subcontractor personnel are to incorporate the basic ISM core functions (Section D.3.1) during all work activities.

### **D.3.1 Responsibilities of the AGEM Program Manager**

The AGEM program manager is responsible for ensuring that the five core ISM functions are carried out properly. These core functions are as follows:

1. *Defining the scope of work.* Define the work, roles, and responsibilities. Allocate resources to ensure that programmatic and research goals are balanced with safe work practices.

2. *Identifying and analyzing hazards associated with the work.* Identify and analyze the hazards through environment, safety, health, and quality evaluations; consultation with subject matter experts; and use of MSDS information, lessons learned by other project managers and staff, and other resources.
3. *Developing and implementing hazard controls.* Actions and tools include training to optimize engineering controls and procedural approaches; job-specific hazard communication training; job pre-briefings; compliance-based and project-specific training; environment, safety, and health permits; and protective equipment.
4. *Performing work activities within these controls to assure that work is done safely.* Communicate expectations to project staff. Ensure that the controls identified in the *Master Work Plan* (Argonne 2002) and this site-specific work plan are carried out. Provide opportunities for procedure modification in response to unanticipated situations. Ensure that employees feel empowered to stop work if imminent danger exists.
5. *Providing feedback on the adequacy of the controls to continue improving safety management.* Solicit feedback from project staff regarding environment, safety, health, and quality issues, and act on that input. Communicate concerns to and seek help from supervisors and Environmental Science Division environment, safety, and health personnel. Reallocate resources to address issues that arise, and ensure that safety meetings are held and site briefings are performed.

### **D.3.2 Responsibilities of Field Project Personnel**

Field project personnel involved in on-site operations are responsible for understanding the intent of the principles of ISM and are to be knowledgeable of the processes in place to satisfy the intent of ISM. These personnel must understand their responsibilities and the expectations regarding their performance. Field personnel are to incorporate ISM principles in their work by doing the following:

- Actively participate in identification of hazards before work begins.
- Ensure that potential work hazards have been evaluated by subject matter experts and are accounted for in all work practices.
- Ensure that safety measures are incorporated into all activities.

Field project personnel are to conduct their work as follows:

- Perform only those tasks that can be done safely.
- Take all reasonable precautions to prevent injury to themselves and their fellow employees.
- Follow all directives in this site-specific health and safety plan and the Argonne *ES&H Manual* (available online).
- Suspend work if unexpected concerns arise. Address unexpected concerns before resuming work.
- Keep the field safety coordinator, the field project manager, and the AGEM program manager informed of all issues, problems, and concerns regarding all aspects of the work.
- Report any changes in conditions that may affect safety and health to the field safety coordinator, the field project manager, and the AGEM program manager.
- Immediately notify the field safety coordinator and the field project manager or designee of symptoms or signs of exposure potentially related to any chemical, physical, or biological hazards at the site.
- Immediately report any accidents, injuries, and/or unsafe conditions to the field safety coordinator and the field project manager or designee.

- Stop work if imminent danger exists, and notify the field safety coordinator, the field project manager, and the AGEM program manager of the danger. Further information is in Section D.10.4.

#### **D.4 Authorization to Start Field Activities**

Authorization to start field activities at Inman must be granted by the AGEM program manager or designee for each field mobilization and when the scope of work has changed. Authorization may be verbal, via electronic mail, or by telephone. The field project manager, who is responsible for field activities, is to enter the date and time when start authorization was granted, along with his/her concurrence, in the field log book.

#### **D.5 Potential Hazards**

##### **D.5.1 Physical and Mechanical Hazards**

Potential *physical and mechanical hazards* include the following:

- Uneven terrain and unsure footing, especially in wet conditions.
- Rodents, ticks, mosquitoes, and snakes.
- Debris.
- Vegetation that can hide hazards.
- A broken air compressor hose that can move uncontrollably, with great force, and cause damage to equipment, serious injury, or even death.
- A stack of pipes that can collapse if one pipe moves.

- Heavy equipment involved in drilling (drill or push rigs, compressors, flatbeds, drill rods, rotating components, hoists, hot engine parts, material overhead, etc.).

#### **D.5.2 Chemical Exposure Hazards**

Potential *chemical exposure hazards* are as follows:

- Exposure to the likely site contaminants, carbon tetrachloride and chloroform, expected to be below levels presenting a health hazard to field personnel.
- Exposure of personnel to site contaminants due to contact with contaminated soil, water, or vapors.
- Hazardous vapors or fluids (including contaminated groundwater) conveyed through the borehole to the surface.
- Hazardous volatiles released from soil as a result of the air stripping effect of rotary drilling with air. The vapors can be relatively concentrated at the wellhead.
- Sulfuric and hydrochloric acids used in very small quantities by field investigators.
- Dry ice used to preserve and ship soil samples.
- Containerized fuels (gasoline, diesel fuel, and motor oil).

#### **D.5.3 Other Hazards**

Other hazards include the following:

- Vehicle traffic.

- Overhead and buried power lines.
- Adverse weather.
- Fatigue.

## **D.6 Personal Safety**

### **D.6.1 Personal Protective Equipment**

Level D protection is generally appropriate for the work at Inman. Level D protection includes the following:

- Work clothing appropriate for the weather.
- Safety shoes that come above the ankle (no loafers or sport shoes) or boots.
- Safety glasses.
- Chemical goggles and a full-face shield when indicated.
- Hard hat.
- Leather or other work gloves when contact with contaminated soils or water is not anticipated.
- No loose-fitting clothing or jewelry; long hair constrained.

Additional protection is needed in specific situations, as follows:

- Minimum personal protective equipment for a *rotary drill rig crew* and persons in the vicinity includes gloves, hard hat, safety glasses, safety shoes, and hearing protection.

- Minimum personal protective equipment for *CPT operators* includes gloves, hard hat, safety glasses, and safety shoes.
- Wear a reflective vest when work is within 6 ft of a street or road that is open to traffic.
- Wear nitrile, neoprene, or natural rubber gloves if contact with contaminated soils or water is a possibility.
- Wear appropriate respiratory and dermal protection if exposure to hazardous vapors or contaminated cuttings and fluids is a possibility.

#### **D.6.2 Working Safely with Chemical Hazards**

Air monitoring for hazardous vapors in the work zone will be performed as determined by the project manager.

The Occupational Safety and Health Administration (OSHA) has set a maximum concentration limit for carbon tetrachloride in workplace breathing zone air of 10 ppm for an 8-h workday (time-weighted average) over a 40-h work week, with a ceiling concentration of 25 ppm that may not be exceeded during an 8-h workday, except for one 5-min period every 4 h. The acceptable maximum peak during this 5-min period is 200 ppm.(29 CFR 1910.1000TABELZ-2). OSHA has established a permissible exposure limit (PEL) for chloroform of 50 ppm as a non-exceedable ceiling value in workplace breathing zone air (29 CFR 1910.1000TABELZ-1).

Appendix C of the *Master Work Plan* (Argonne 2002) contains material safety data sheets (MSDSs) for anticipated potential chemical hazards.

#### **D.6.3 Working Safely with Dry Ice**

Dry ice is used to hold and ship soil samples. Dry ice is solid carbon dioxide at a temperature of  $-78.5^{\circ}\text{C}$  ( $-109.3^{\circ}\text{F}$ ). Safety precautions are listed in the MSDS for dry ice in

Appendix C of the *Master Work Plan* (Argonne 2002). Site workers who do not work directly with dry ice must nevertheless be aware of its hazards. These hazards include the following:

- Dry ice in contact with skin can cause cryogenic burns (severe frostbite).
- Carbon dioxide changes directly from a solid to a gas (sublimes) at temperatures above  $-78.5^{\circ}\text{C}$ . Gaseous carbon dioxide generated in a closed space from dry ice can cause asphyxia by displacing oxygen. Concentrations of carbon dioxide in excess of 1.5% can cause death.
- Excess carbon dioxide gas from dry ice in aircraft can asphyxiate pilots and cause a crash.
- Gas pressure generated in a tightly closed space can cause an explosion.

Handle dry ice with special caution, as follows:

- Protect skin and eyes.
- Properly label holding coolers containing dry ice.
- Ventilate storage areas.
- Open a window when transporting coolers of samples with dry ice in an enclosed vehicle. If climate control in use in the vehicle, set the controls to draw outdoor air rather than to recirculate. *Any exception to this procedure must be approved by the AGEM program manager or designee.*
- Transport large quantities of dry ice in open-bed vehicles.
- Observe packaging instructions in the *Master Work Plan*, Section 6.2 (Argonne 2002). Perforate plastic bags containing dry ice to relieve pressure and prevent explosive build-up of gas.

- To protect any drivers and pilots who transport shipping containers to the laboratory, follow shipping regulations, and use proper labeling.

## **D.7 Handling Wastes Safely**

Actual or potential waste includes soil cuttings, soil cores, drilling mud, purge water, decontamination fluids, sampling expendables, personal protective equipment, and general trash.

### **D.7.1 Investigation-Derived Waste**

Anticipated contaminants of concern are carbon tetrachloride and chloroform in low concentrations. Field-screening techniques and laboratory results for representative samples of accumulated waste will be used to characterize media. Waste disposal will be in accordance with state and federal guidelines.

Potentially contaminated investigation-derived waste is to be segregated, contained, characterized, and disposed of in a manner protective of worker health and the environment. Containers approved by the U.S. Department of Transportation will be used, with appropriate labels. Such containers include steel drums, covered roll-offs, or bulk liquid containers.

Waste container contents are to be identified by weather-resistant labels indicating the status of the waste (e.g., “Waste Awaiting Characterization”). Information including project name, origin of waste, date containerized, container identification number, and the nature of the waste is to be written on each label with indelible ink. The information is to be initialed by the labeler. Containers are to be re-labeled if the status of the waste changes.

Waste containers are to be staged to minimize public contact while meeting project-specific needs and conditions, including landowner preferences. On-site handling will be consistent with the “as low as reasonably achievable” concept to the extent practicable. Small quantities of environmental media or solid waste may be contained in steel or plastic carboys or plastic bags. Best professional judgment will be used to determine whether management options are protective and compliant in a site-specific context. Waste will be moved off-site only in compliance with applicable laws.

### **D.7.2 Purge Water**

Purge water from any source suspected of being contaminated must be containerized, *without exception*.

### **D.7.3 Field Assay Kits**

Field assay kits may contain small volumes of spent reagents or contaminated disposables. Kit wastes of concern are to be segregated and accumulated during the field event in secure, labeled containers (e.g., plastic bottles or sealable plastic bags). Kit wastes are to be disposed of appropriately at the end of the field activity.

### **D.7.4 Non-Hazardous Trash**

Non-hazardous trash is to be bagged for later disposal in a sanitary landfill. Because of the volatility and low concentrations of the contaminants of concern, Level D personal protective equipment is normally appropriate. Contact of environmental media with personal protective equipment does not result in risk-level contamination. Used personal protective equipment and expendables may be combined with general trash for disposal.

## **D.8 Safety around the Drill and Push Rigs**

The drilling and CPT contractors have health and safety plans. Argonne workers are to know and observe the contractors' safety rules and procedures, especially with regard to respect for the exclusion zone and safety equipment requirements. *Workers who do not need to be in the exclusion zone should not be there*. See Section D.10.1.

Personal protective equipment for the drilling crew and CPT operators is discussed in Section D.6.1.

Workers are to proceed as follows around the drilling and CPT rigs:

- Heavy equipment is to have backup alarms, and spotters are to be assigned.
- Do not touch or go near moving parts. If close observation is required to complete an inspection, minimize exposure time. Always get authorization to proceed from the driller.
- Know the location of the *Emergency Shut Off* switches. These switches must be checked for proper operation before drilling or sampling begins and during the daily maintenance check. All malfunctions must be repaired before drilling or sampling may proceed.
- Do not smoke or use spark-producing equipment around drilling operations, because flammable gases may be released from the subsurface environment.
- Use proper lifting procedures and ask for help as needed.
- CPT operators need to be especially aware of monitoring weather conditions because of the noise level and limited visibility in the enclosed units.
- Do not work around a drill rig during a thunderstorm, because lightning could strike the rig. *If you can see lightning, you are already in danger.*

## D.9 Storms

Tornado procedures will be established at the beginning of the field event. Storm warning radios or devices will be available in the field. Keep a close watch on weather conditions when weather is unsettled in the region.

Rain or snow can increase the risk of sliding and falling, decrease visibility, and make equipment more hazardous to operate. Extra caution is required in these conditions.

## **D.10 Safety-Related Standard Operating Procedures**

Standard operating procedures for the work at Inman are described below. These requirements may not totally be inclusive for all site safety situations. Therefore, all applicable rules and regulations of 29 CFR 1926 (OSHA Construction Standards) and 29 CFR 1910 (OSHA General Industry Standards), as well as all applicable environment, health, and safety policies of the U.S. Department of Energy, the Kansas Department of Health and Environment, and Argonne National Laboratory, apply to all Argonne and contractor personnel performing work at this site.

### **D.10.1 Controlling the Work Area**

Identify the work area by using cones, flags, signs, or a combination of these. Control access to the work area; keep unauthorized persons out of the area.

Keep the work area organized and neat. Correct tripping hazards at once. Housekeeping is everyone's responsibility.

### **D.10.2 Working around Utilities and Power Lines**

Take note of the locations of overhead utilities (electric lines, telephone lines, etc.). The driller is to inspect the area when drilling occurs in the vicinity of overhead electrical lines. Determine the minimum distance from any point on the drill rig to the location of the nearest power line when the mast is raised or is being raised. *Do not raise the mast or operate the drill rig if the minimum distance is less than 20 ft.*

Underground utilities are to be marked and avoided. Before the ground is penetrated in investigation activities, contact Kansas One Call at 800-DIG-SAFE to determine the locations of utilities.

### D.10.3 Working on Electrical Circuits

Work is not to be performed on any energized electrical circuits. Before work is done, the circuit must be de-energized and tested to make sure that no voltage present is present. A lock and tag must then be applied, and an attempt must be made to operate the equipment to ensure that it has been de-energized. Only then may work on the circuit begin. Only qualified persons may implement lockout/tagout procedures; the procedures must be performed in accordance with OSHA 29CFR 1910.147.

### D.10.4 Stopping and Restarting Work

Every worker is empowered to stop work if imminent danger exists. In general, the worker who stops work is to notify the field safety coordinator, the field project manager, and the AGEM program manager of the unsafe condition. Work may not resume until the unsafe condition has been abated, and the field safety coordinator, the field project manager, and the AGEM program manager have authorized the restart.

In the specific circumstances below, handle the stopping and restarting of work as follows:

- In the event of hitting an *underground utility* or drilling into *questionable material*, immediately stop work, leave the area, and contact the AGEM field project manager for direction. The AGEM field manager will contact the field safety coordinator and the AGEM program manager for direction and authorization to restart work.
- All drilling activities are to be monitored for *explosive gases* in accordance with Section 3 of the *Master Work Plan* (Argonne 2002). Enter into the field logbook the location of the sample, the time taken, the instrument used, the person taking the sample, and the results. If an explosive atmosphere exists, work must stop, and an action plan to proceed must be developed. Work may not be restarted until the unsafe condition has been abated, and the field safety coordinator, the field project manager, and the AGEM program manager have authorized the restart.

### **D.11 Visitors to the Site**

Visitors and other individuals seeking access to the site must receive a briefing conducted by the field safety coordinator or designee. The briefing must include identification of restricted areas, discussion of site evacuation procedures and emergency shelters, and other topics as required by the nature of the visit.

Visitors' personal protective equipment may be adjusted to be commensurate with the hazards in the area they are visiting, as determined by the field safety coordinator, the field project manager, and the AGEM program manager.

### **D.12 Emergency Contacts and Accident Reporting**

Emergency contact information for this investigation is in Table D.1, and the route to the hospital is in Figure D.1.

All accident and/or injuries must be reported to the on-site project manager and to the Argonne field safety coordinator as soon as possible after the occurrence. A full written report must be submitted to the Environmental Science Division's environment, safety, and health coordinator, David Peterson, within 48 h.

TABLE D.1 Emergency contact information for the investigation at Inman, Kansas.<sup>a</sup>

Resource	Telephone Number	Name
All Emergencies	911	-
Medical Care	(620) 241-2250	Memorial Hospital <sup>b</sup> 1000 Hospital Drive McPherson, Kansas
Fire Protection (nonemergency)	(620) 245-2505	McPherson Fire Department 312 East Kansas McPherson, Kansas
Police (nonemergency)	(620) 585-2108	Inman Police Department
Industrial Hygiene	(630) 252-3310	Argonne-Industrial Hygiene
Safety	(630) 252-2885	EVS Division <sup>c</sup> Field Safety Coordinator (Monte Brandner)
	(630) 252-3294	EVS Division <sup>c</sup> Environmental, Safety, and Health Coordinator (Dave Peterson)
Management	(630) 252-7969	AGEM Program Manager (Lorraine LaFreniere)
	(630) 252-1275 (630) 408-7114	AGEM Field Project Manager (David Surgnier) (cellular)
	(630) 252-6322	AGEM Technical Project Manager (Eugene Yan)
Security	(630) 252-5737 (630) 252-5731	Argonne-Operations Security (workdays) (after hours and weekends)
Poison Control	(800) 222-1222 or (913) 588-6633	Mid-America Poison Control Center, University of Kansas Medical Center
Utilities Survey	(800) 344-7233 (800) DIG-SAFE	Kansas One Call, Wichita, Kansas

<sup>a</sup> Post this table in the field operations base.

<sup>b</sup> The route from Inman to the McPherson Memorial Hospital is shown in Figure D.1.

<sup>c</sup> Environmental Science Division at Argonne.

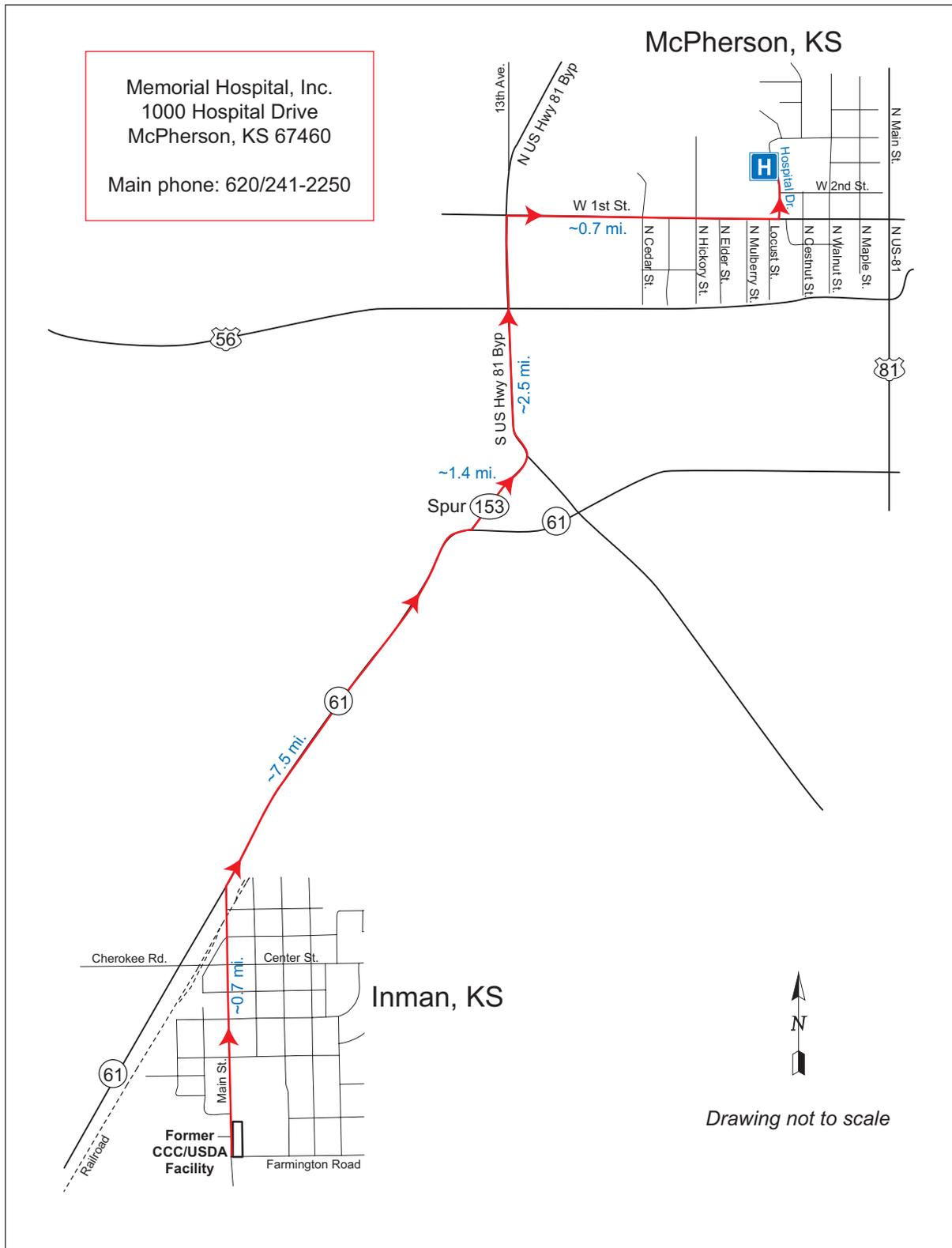


FIGURE D.1 Emergency route from the Inman site to the McPherson Memorial Hospital.



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