Final Work Plan for Targeted Investigation at Inman, Kansas

Environmental Science Division
Final Work Plan for Targeted Investigation at Inman, Kansas

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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).

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Carbon Tetrachloride</th>
<th>Chloroform</th>
<th>Methylene Chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sisson (formerly Ensz)a</td>
<td>Unknown 10/17/97</td>
<td>3.2</td>
<td>0.9</td>
<td>ND (0.5)c</td>
</tr>
<tr>
<td>Pankratz(^a)</td>
<td>Unknown 10/17/97</td>
<td>4.3</td>
<td>1.6</td>
<td>ND (0.5)</td>
</tr>
<tr>
<td>Willems(^d,e)</td>
<td>Unknown</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Bengston(^d)</td>
<td>Unknown 10/17/97</td>
<td>4.1</td>
<td>1.2</td>
<td>ND (0.5)</td>
</tr>
<tr>
<td>Stucky</td>
<td>Unknown 10/17/97</td>
<td>ND (0.5)</td>
<td>ND (0.5)</td>
<td>ND (0.5)</td>
</tr>
<tr>
<td>Pankratz(^a)</td>
<td>Unknown 1/28/98</td>
<td>3.9</td>
<td>0.7</td>
<td>ND (0.5)</td>
</tr>
<tr>
<td>Bengston</td>
<td>Unknown 1/28/98</td>
<td>4.1</td>
<td>0.8</td>
<td>ND (0.5)</td>
</tr>
</tbody>
</table>

**Sampling by the KDHE for the USDA Private Well Sampling Program in October 1997 and January 1998**

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Carbon Tetrachloride</th>
<th>Chloroform</th>
<th>Methylene Chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP-1</td>
<td>4/29/98</td>
<td>ND (0.2)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SP-1</td>
<td>4/29/98</td>
<td>0.4</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SP-2</td>
<td>4/29/98</td>
<td>0.3</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SP-2</td>
<td>4/29/98</td>
<td>2.5</td>
<td>ND (1)</td>
<td>ND (1)</td>
</tr>
<tr>
<td>SP-3</td>
<td>4/29/98</td>
<td>ND (0.2)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SP-3</td>
<td>4/29/98</td>
<td>0.5</td>
<td>ND (1)</td>
<td>ND (1)</td>
</tr>
<tr>
<td>SP-4</td>
<td>4/30/98</td>
<td>ND (0.2)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SP-4</td>
<td>4/30/98</td>
<td>ND (0.2)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SP-5</td>
<td>4/30/98</td>
<td>ND (0.2)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SP-5</td>
<td>4/30/98</td>
<td>0.3</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

**Soil sampling by the KDHE in April 1998**

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Carbon Tetrachloride</th>
<th>Chloroform</th>
<th>Methylene Chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pankratz(^a)</td>
<td>Unknown 9/14/05</td>
<td>–</td>
<td>7.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Bengston(^d)</td>
<td>Unknown 9/14/05</td>
<td>–</td>
<td>6.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Pankratz(^a)</td>
<td>Unknown 9/26/05</td>
<td>–</td>
<td>4.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Willems(^d)</td>
<td>Unknown 9/26/05</td>
<td>–</td>
<td>1.1</td>
<td>ND (0.5)</td>
</tr>
<tr>
<td>Bengston(^d)</td>
<td>Unknown 9/26/05</td>
<td>–</td>
<td>3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

**Private well sampling by the KDHE in September 2005**
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.

### TABLE 2.1 Footnotes

<table>
<thead>
<tr>
<th>Footnote</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Identified by the KDHE in 1997 as a lawn and garden well.</td>
</tr>
<tr>
<td>b</td>
<td>Not analyzed.</td>
</tr>
<tr>
<td>c</td>
<td>ND, not detected at the indicated reporting limit.</td>
</tr>
<tr>
<td>d</td>
<td>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).</td>
</tr>
<tr>
<td>e</td>
<td>Willems drinking water well not sampled in 1997, because the owner could not be contacted.</td>
</tr>
<tr>
<td>f</td>
<td>Qualifier B indicates that the contaminant was present in the laboratory method blank.</td>
</tr>
</tbody>
</table>
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).

<table>
<thead>
<tr>
<th>System</th>
<th>Series</th>
<th>Formation</th>
<th>Thickness (ft)</th>
<th>Physical Character</th>
<th>Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quaternary</td>
<td>Recent</td>
<td>Alluvium unconf. on older formations</td>
<td>0–75 ±</td>
<td>Silt, clay, and cross-beded coarse-grained sand and gravel containing silt and clay.</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Younger dune sand unconf. on older dune sand</td>
<td>0–50 ±</td>
<td>Fine- to medium-grained eolian quartz sand. These younger, higher dunes are subject to shifting and blowout and are devoid of vegetation.</td>
<td>The higher dunes are above the water table in most places but constitute a valuable intake area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>McPherson Formation unconf. on older formations</td>
<td>0–100 ±</td>
<td>Fine- to medium-grained, rounded eolian quartz sand, 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.</td>
<td>Yields small quantities of soft water to domestic and stock wells. Water contains considerable iron. Forms an important catchment area for rainfall.</td>
</tr>
<tr>
<td>Pleistocene</td>
<td></td>
<td>Pleistocene</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleistocene</td>
<td>Tertiary</td>
<td>Delmore Formation unconf. on older formations</td>
<td>0–75 ±</td>
<td>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.</td>
<td>Yields small supplies of relatively hard water to stock and domestic wells.</td>
</tr>
<tr>
<td>Cretaceous</td>
<td></td>
<td>Kiowa shale unconf. on older formations</td>
<td>0–120</td>
<td>Dark gray to black, gypsiferous shale; gray to buff, sandy shale; soft, cross-beded sandstone; hard, limonitic sandstone; &quot;quartzite&quot;; and thin fossiliferous limestone.</td>
<td>Yields small supplies of hard water to farm and stock wells and to small springs.</td>
</tr>
<tr>
<td>Permian</td>
<td></td>
<td>Stone Corral dolomite unconf. on older formations</td>
<td>0–8</td>
<td>Gray, cellular, thin-beded dolomite on outcrop in McPherson County. Contains anhydrite and gypsum in subsurface westward.</td>
<td>Yields no water to wells in this area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ninnescah shale unconf. on older formations</td>
<td>0–275</td>
<td>Soft to hard, brick-red shale. Contains some thin beds of gray and green shale, thin argillaceous limestone and gyspum.</td>
<td>Yields meager supplies of highly mineralized water to farm wells.</td>
</tr>
<tr>
<td>Wellington Form.</td>
<td></td>
<td>Wellington Formation unconf. on older formations</td>
<td>550 ±</td>
<td>Soft, gray, calcareous shale contain+ing gypsum, anhydrite, salt, and thin beds of argillaceous limestone.</td>
<td>Yields meager supplies of highly mineralized water to farm wells from weathered surface zones and crevices in unweathered beds of shale and limestone.</td>
</tr>
</tbody>
</table>

a 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

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 2.8  Current property boundaries and current ownership for properties related to grain storage operations at Inman. Source of photograph: 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 \textit{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.

\textbf{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

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>John D. O’Brien, Mayor</td>
<td>Post Office</td>
<td>210 South Main Street</td>
</tr>
<tr>
<td></td>
<td>104 North Main Street</td>
<td>Inman, KS 67546</td>
</tr>
<tr>
<td></td>
<td>620-585-2122 (office)</td>
<td>620-585-6868</td>
</tr>
<tr>
<td></td>
<td>620-585-6526 (home)</td>
<td></td>
</tr>
<tr>
<td>Eva Friesen, City Clerk</td>
<td>Inman USD 448 High School</td>
<td>404 South Main Street</td>
</tr>
<tr>
<td></td>
<td>104 North Main Street</td>
<td>Inman, KS 67546</td>
</tr>
<tr>
<td></td>
<td>620-585-2122 (office)</td>
<td>620-585-6441 or</td>
</tr>
<tr>
<td></td>
<td>620-585-2346 (home)</td>
<td>620-585-6442</td>
</tr>
<tr>
<td>Bill Maurer, City Superintendent</td>
<td>McPherson Courthouse</td>
<td>117 North Maple Street</td>
</tr>
<tr>
<td></td>
<td>108 East Center Street</td>
<td>McPherson, KS 67460</td>
</tr>
<tr>
<td></td>
<td>620-585-6467 (office)</td>
<td>620-241-505</td>
</tr>
<tr>
<td></td>
<td>620-585-2524 (home)</td>
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</tr>
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</table>

3.8 Argonne Contacts

<table>
<thead>
<tr>
<th>Name</th>
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<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorraine M. LaFreniere, Ph.D.</td>
<td>Environmental Science Division</td>
<td>630-252-7969</td>
</tr>
<tr>
<td>Manager, Applied Geosciences and Environmental Management Section</td>
<td>Argonne, IL 60439-4843</td>
<td><a href="mailto:lafreniere@anl.gov">lafreniere@anl.gov</a></td>
</tr>
<tr>
<td>James Hansen</td>
<td>Community Relations Representative</td>
<td>202-488-2453</td>
</tr>
<tr>
<td>Environmental Science Division</td>
<td>Argonne National Laboratory</td>
<td><a href="mailto:hansenj@anl.gov">hansenj@anl.gov</a></td>
</tr>
<tr>
<td>9700 South Cass Avenue</td>
<td>955 L’Enfant Plaza SW, Suite 6000</td>
<td></td>
</tr>
<tr>
<td>Argonne, IL</td>
<td>Washington, DC 20024</td>
<td></td>
</tr>
</tbody>
</table>
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
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


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

McPherson Mapping Department, 2006, *Aerial Photograph of McPherson County*, Mapping Department, McPherson County, Kansas.


Appendix A:

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

<table>
<thead>
<tr>
<th>Owner</th>
<th>Easting</th>
<th>Northing</th>
<th>Well Depth</th>
<th>Static Water Level</th>
<th>Screen/Open Interval</th>
<th>Clay and Silt</th>
<th>Shale Penetrated</th>
<th>Well Use</th>
<th>Date of Completion</th>
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<tr>
<td>Cross Section A-A' (NW-SE)</td>
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<td></td>
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<td>Stimatze</td>
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<td>29</td>
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<td>0–30</td>
<td>30–100</td>
<td>Domestic</td>
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<td>Davisson</td>
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<td>38.22549</td>
<td>114</td>
<td>26</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Plugged</td>
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<td>Pauls</td>
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<td>38.21823</td>
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<td>27</td>
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<td>0–25</td>
<td>25–101</td>
<td>Domestic</td>
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<td>Donovan Ediger</td>
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<td>12</td>
<td>Open 20-135</td>
<td>0–15</td>
<td>15–135</td>
<td>Domestic</td>
<td>07/14/02</td>
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<td>Kelly Reeves</td>
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<td>7</td>
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<td>Domestic</td>
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<td>Cross Section B-B' (SW-NE)</td>
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<tr>
<td>Lionel Friessen</td>
<td>-97.77780</td>
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<td>25</td>
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<td>Hull</td>
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<td>31</td>
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<td>-97.77442</td>
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<td>Kliever</td>
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<td>14</td>
<td>Open 28-148</td>
<td>0–20</td>
<td>20–148</td>
<td>Pond/swimming pool</td>
<td>12/28/01</td>
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Water Well Records Used for Section A-A'}
Work Plan for Targeted Investigation at Inman, Kansas

Version 00, 02/22/07

### WATER WELL RECORD

<table>
<thead>
<tr>
<th>County</th>
<th>Location of Water Well:</th>
<th>Section Number</th>
<th>Township Number</th>
<th>Range Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>McHenry</td>
<td>Edge of Inman</td>
<td>17</td>
<td>21</td>
<td>S R 4 N0</td>
</tr>
</tbody>
</table>

Distance and direction from nearest town or city street address of well if located within city:

**WELL LOCATION:**

- **WELL NO.:** 5403 Apple
- **ZIP CODE:** 67562
- **Application Number:**

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

**DEPTH OF COMPLETED WELL:**
- **Depth(s) Groundwater Encountered:** 1
- **Bore Hole Diameter:** 10
- **WELL WATER TO BE USED AS:**
  - 5 Public water supply
  - 8 Air conditioning
  - 11 Injection well
- **Other:**

**WELL ACTUAL WATER LEVEL:**
- **ft. below land surface measured on monthly / daily:**
- **Pump test data:**
  - **Well water was:** 8 ft. after 12 hours pumping
  - **Est. Yield:** 3 gpm
  - **Well water was:** 8 ft. after 12 hours pumping
  - **2 Irrigation 4 Industrial 7 Lawn and garden only 10 Monitoring well**

**WELL WATER DISINFECTED?**
- Yes

**Was a chemical/bacteriological sample submitted to Department?**
- Yes

**TYPE OF BLANK CASING USED:**
- **5 Wrought iron 6 Concrete tile**
- **CASING JOINTS:**
  - **1 Steel 3 RMP (SR)**
  - **6 Asbestos-Cement 9 Other (specify below)**
- **7 PVC 11 Other (specify)**
- **8 ABS 10 Galvanized steel**
- **3 Fiberglass 11 Other (specify)**
- **Threaded 11 Other (specify)**

**Blank casing diameter:**
- **6 in. to 12 in.**
- **Dia. in to 12 in.**
- **Dia. in to 12 in.**

**Casing height above land surface:**
- **6 in. to 12 in.**
- **Dia. in to 12 in.**
- **Dia. in to 12 in.**

**TYPE OF SCREEN OR PERFORATION MATERIAL:**
- **1 Steel 3 Stainless steel**
- **5 Fiberglass 7 PVC**
- **10 Asbestos-cement 8 RMP (SR)**
- **11 Other (specify)**
- **Galvanized steel 6 Concrete tile**
- **None used (open hole)**

**SCREEN-PERFORATED INTERVALS:**
- **From:**
- **To:**

**GRAVEL PACK INTERVALS:**
- **From:**
- **To:**

**GROUT MATERIAL:**
- **1 Neat cement 2 Cement grout**
- **Identify other:**
- **Pentolite 4 Other**

**Grout intervals:**
- **From:**
- **To:**

**What is the nearest source of possible contamination:**
- **10 Livestock pens 14 Abandoned water well**
- **4 Septic tank 7 Potable 11 Fuel storage**
- **2 Sewer lines 8 Sewage lagoon 12 Fertilizer storage**
- **3 Waterline sewage lines 6 Septicage pit 16 Other (specify below)**
- **9 Peace Ludwig 13 Insecticide storage**

**FROM WELL TO:**

**LITHOLOGIC LOG:**

**FROM TO PLUGGING INTERVALS:**

**CONTRACTOR'S OR LANDOWNER'S CERTIFICATION:**

- This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/da/year):
- This Water Well Record was completed on (mo/da/year):

**INSTRUCTIONS:** Use typewriter or ball point pen. PLEASE PRINT NAME and PRINT READLY. Please fill in blanks, indicate or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water Protection, Topeka, Kansas 66620-7725. Telephone: 713-224-5673. Send one to WATER WELL OWNER and retain one for your records.
Work Plan for Targeted Investigation at Inman, Kansas
Version 00, 02/22/07

PLUGGING REPORT

LOCATION OF WATER WELL: McPherson

WATER WELL OWNER: Judy Davison
Board of Agriculture, Division of Water Resources

City, State, ZIP Code: Inman KS 67546
Application Number:

DEPTH OF COMPLETED WELL: 114 ft. ELEVATION:

WELL'S STATIC WATER LEVEL: 28 ft. below land surface measured on 5/1/93.

Pump test data: Well water was pumped at 17 gpm, hours pumping:

Depth(s) Groundwater Encountered: 1 ft. land after hours pumping:

Bore Hole Diameter: 4 in.

WELL WATER TO BE USED AS: 5 Public water supply

WATER WELL Desinfection Method:

Was a chemical/bacteriological sample submitted to Department? Yes

5. TYPE OF BLANK CASING USED:

Type of Blank Casing:

Casing JOINTS: Glued

5. TYPE OF SCREEN OR PERFORATION MATERIAL:

Screen or Perforation Material:

5. SCREEN-PERFORATED INTERVALS:

From N/A ft. to N/A ft.

4. GRAVEL PACK INTERVALS:

From N/A ft. to N/A ft.

4. GROUT MATERIAL:

Grout Material:

5. LITHOLOGIC LOG:

LITHOLOGIC LOG:

FROM TO LITHOLOGIC LOG FROM TO LITHOLOGIC LOG

114 ft. 26 ft. Chlorinated sand
26 ft. 6 ft. Bentonite
6 ft. 6 ft. Cement
6 ft. 0 ft. Basement

Contractor's or Landowner's Certification:

1. CONTRACTOR'S OR LANDOWNER'S CERTIFICATION:

This water well was drilled and completed under my jurisdiction and was plugged under my jurisdiction and was completed on 5/1/93. This record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 5/3/93 Water Well Record was completed on 5/3/93.

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRINT CLEARLY and PRINT neatly. Please fill in all blanks 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**

**LOCATION OF WATER WELL:**
- County: McPherson
- Nearest town or city: Inman
- Street Address: 310 8th Ave
- State, ZIP Code: KS 67564

**WATER WELL OWNER:**
- Name: Dennis Pauls
- Address: 310 8th Ave

**LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:**
- Section: 16
- Township: T 21 S
- Range: R 4 E

**4 DEPTH OF COMPLETED WELL:**

**TYPE OF CASING USED:**
- Steel: 1
- Stainless Steel: 3
- PVC: 4
- Galvanized Steel: 2
- Concrete tile: 1
- Wrought Iron: 5
- PVC: 6
- Asbestos-Cement: 9
- Other: 11

**SCREEN OR PERFORATION MATERIAL:**
- Steel: 1
- Stainless Steel: 3
- PVC: 7
- Fiberglass: 5
- Fiber glass: 8

**Casing joints:**
- Welded: 1
- Flanged: 2
- Clamped: 3
- Threaded: 4

**Well water to be used:**
- Public water supply: 5
- Air conditioning: 8
- Injection well: 11

**Type of Water:**
- Domestic: 3
- Feedlot: 6
- Oil field water supply: 9
- Dewatering: 12

**Well was disinfected:**
- Yes: 1
- No: 2

**GROUT MATERIAL:**
- Cement: 2
- Bentonite: 4
- Other: 10

**Grout intervals:**
- From 1 ft. to 2 ft.
- From 2 ft. to 3 ft.
- From 3 ft. to 4 ft.

**Lithologic Log:**
- 0 ft. to 2 ft. Top Soil
- 2 ft. to 6 ft. Clay
- 6 ft. to 25 ft. Clay Shale
- 25 ft. to 101 ft. Red Shale

**Planning Intervals:**
- From 0 to 2 ft.
- From 2 to 6 ft.
- From 6 to 25 ft.
- From 25 to 101 ft.

**CONTRACTORS OR LANDOWNER'S CERTIFICATION:**
- This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (month/year) .

**Instructions:** Use typewriter or ballpoint pen. Please fill in blanks, underline or circle the correct answers. Send 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 $5.00 for each constructed well. Visit us at http://www.kdhe.state.ks.us/po/waterwells.
**Work Plan for Targeted Investigation at Inman, Kansas**

**Version 00, 02/22/07**

---

### WATER WELL RECORD

**Form WNR-5**  
**KSA Sec. 17-1212**  
**ID No.**

#### 1. LOCATION OF WATER WELL:
- **Section Number:**  
- **Township Number:**  
- **Range Number:**

#### 2. WATER WELL OWNER:
- **Name:** Donnivan Edson  
- **Address:**  
- **City, State, ZIP Code:**

#### 3. DEPTH OF COMPLETED WELL:
- **Elevation:**
- **Well Water:**
- **Static Water Level:**

#### 4. TYPE OF BLANK CASING USED:
- **Material:**
- **Casing Joints:**

#### 5. SCREEN OR PERFORATION MATERIAL:
- **Material:**
- **Perforations:**
- **Screen Perforation Intervals:**

#### 6. GROUT MATERIAL:
- **Type:**
- **Perforations:**

### LITHOLOGIC LOG

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

**CONTRACTORS OR LANDOWNER'S CERTIFICATION:**

This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (month/year):  

**INSTRUCTIONS:** Use print only or set pen. Only one answer is correct. Please fill in blank, underline or circle the correct answers. Send this sheet copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0036, Telephone: 785-296-2023. Service to WNR(2)/WNR(3) always be typed or print legibly. Use only block type for your signature. Fails of $50.00 for each page is subject to Kansas Department of Health and Environment. Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0036, Telephone: 785-296-2023. Service to WNR(2)/WNR(3) only be typed or print legibly. Use only block type for your signature. Fails of $50.00 for each page is subject to Kansas Department of Health and Environment.
**Work Plan for Targeted Investigation at Inman, Kansas**

**Version 00, 02/22/07**

### WATER WELL RECORD

<table>
<thead>
<tr>
<th>WATER WELL OWNER:</th>
<th>Kelly Redus</th>
</tr>
</thead>
<tbody>
<tr>
<td>RRA, St. Address, Box #:</td>
<td>R+1</td>
</tr>
<tr>
<td>City, State, Zip Code:</td>
<td>Inman, Ks 67562</td>
</tr>
<tr>
<td>Application Number:</td>
<td>Board of Agriculture, Division of Water Resources</td>
</tr>
</tbody>
</table>

### DEPTH OF COMPLETED WELL: 104 ft.

- **Location:** Mephissa
- **Fraction:** NW 1/4 SE 1/4 NE 1/4
- **Section:** 21
- **Township:** T 21 S
- **Range:** R 14
- **Bore Hole Diameter:** 2 in.
- **Elevation:** 27 ft.
- **Well Water to be Used As:**
  - 5 Public Water supply
  - 8 Air conditioning
  - 11 Injection well

### TYPE OF BLANK CASING USED:
- **5 Wrought iron**
- **Concrete tile**

### TYPE OF SCREEN OR PERFORATION MATERIAL:
- **7 PVC**
- **10 Asbestos-cement**
- **6 Stainless steel**
- **8 RMP (SR)**
- **9 Other**

### SCREEN OR PERFORATION OPENINGS ARE:
- **5 Gauged wrapped**
- **9 Drilled holes**
- **6 Wire wrapped**
- **2 Louvered shutters**
- **4 Key punched**
- **7 Torch cut**

### GROUT MATERIAL:
- **1 Neat cement**
- **2 Cement grout**
- **4 Other**

### What is the nearest source of possible contamination?

<table>
<thead>
<tr>
<th>Source</th>
<th>Distance (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Septic tank</td>
<td>4</td>
</tr>
<tr>
<td>5 Sewer lines</td>
<td>2</td>
</tr>
<tr>
<td>5 Lateral lines</td>
<td>7</td>
</tr>
<tr>
<td>7 Pit privy</td>
<td>11</td>
</tr>
<tr>
<td>12 Fertilizer storage</td>
<td>16</td>
</tr>
<tr>
<td>8 Sewage lagoon</td>
<td>12</td>
</tr>
<tr>
<td>6 Septage pit</td>
<td>9</td>
</tr>
<tr>
<td>13 Insecticide storage</td>
<td></td>
</tr>
</tbody>
</table>

### CONTRACTOR'S OR LANDOWNER'S CERTIFICATION:

- **J. Miller Drilling**
- **By (signature):**

**INSTRUCTIONS:** Use typewriter or ball point pen. PLEASE PRINT PRINT 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. Topeka, Kats. 66613-3002. Telephone: 913-266-5345. Send one to WATER WELL OWNER and retain one for your records.
Water Well Records Used for Section B-B'
**WATER WELL RECORD**

**DRILLER'S LOG OF WELL**

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Color/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Soil</td>
</tr>
<tr>
<td>5-10</td>
<td>Clayey Clay Soil</td>
</tr>
<tr>
<td>10-25</td>
<td>Red Shale</td>
</tr>
<tr>
<td>25-40</td>
<td>Red Clay</td>
</tr>
<tr>
<td>40-50</td>
<td>Red Clay</td>
</tr>
<tr>
<td>50-75</td>
<td>Red Shale</td>
</tr>
<tr>
<td>75-105</td>
<td>Red Shales</td>
</tr>
</tbody>
</table>

**WELL OWNER**: Lionel Gorman  
**Address**: RR Damon 70  
**Drilling Contractor**:  
**Date Drilled**: Oct 19-1977  
**Method of Drilling**:  
**Casing Schedule**:  
**Screen Data (if any)**: 20' 4 1/2 AC

**Measured depth to water in completed well (Static Level)**: 25 ft below  
**Testing Yield**: 1-3 gallons per MIN  
**Drawdown**: 50 ft after 2 hrs  

**Remarks**:  

**Location of Well**: NE 1/4 NE 1/4 Sec 20  
**County**: McPherson
## Work Plan for Targeted Investigation at Inman, Kansas

### Version 00, 02/22/07

**WATER WELL RECORD**

<table>
<thead>
<tr>
<th>Fract.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW 1/4 SE 1/4 SE 1/4</td>
</tr>
</tbody>
</table>

**Section Number** | **Township Number** | **Range Number**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>T 21 S</td>
<td>R 4 E 00</td>
</tr>
</tbody>
</table>

**Distance and direction from nearest town or city street address of well if located within city?**

- **2 mi:** S of Inman

**WATER WELL OWNER:**
- Gary Huil

**Rhe, St. Address, Box #**
- Inman, KS 67546

**City, State, ZIP Code**
- Inman, KS 67546

**Board of Agriculture, Division of Water Resources**

**Application Number:**

### DEPTH OF COMPLETED WELL

- **10.6 ft. ELEVATION:**

**WELL’S STATIC WATER LEVEL:**
- **31 ft. below land surface measured on mdsyr:**

**Pump test data:**
- **Well water was:**
  - **3.7 ft. after 2 hours pumping:**
  - **25 gpm**

**Est. Yield:**
- **10 gpm:**
  - **Well water was:**
  - **9 ft. after 1 hour pumping:**

**Bore Hole Diameter:**
- **9 in. to:**
  - **5 ft.**
  - **in. to:**
  - **10.6 ft.**

**WELL WATER TO BE USED AS:**
- **5 Public water supply**
  - **8 Air conditioning**
  - **11 Injection well**
- **Domestic**
  - **3 Feedlot**
  - **6 Oil field water supply**
  - **9 Dewatering**
  - **12 Other (Specify below)**
- **2 Irrigation**
  - **4 Industrial**
  - **7 Lawn and garden only**
  - **10 Monitoring well**

**Was a chemical/bacteriological sample submitted to Department? Yes:**
- **No:**
  - **If yes, mdsyr sample was submitted:**
  - **Water Well Disinfected? Yes:**
    - **No:**
      - **Water Well Disinfected? No:**

**TYPE OF BLANK CASING USED:**
- **5 Wrought Iron**
  - **Concrete pipe**
  - **CASING JOINTS:**
    - **Glue**
    - **Clamped**

**DPC / PVC**
- **ABS Fiberglass**
  - **Threaded**

**Blank casing diameter:**
- **6 in. to:**
  - **54 ft. Dia.**
  - **in. to:**
  - **Dia.**
  - **in. to:**

**Casing height above land surface:**
- **12 ft.**
  - **7 ft.**
  - **10 ft.**
  - **16 ft.**

**TYPE OF SCREEN OR PERFORATION MATERIAL:**
- **7 PVC**
  - **10 Asbestos-cement**
  - **1 Other (Specify)**

**SCREEN OR PERFORATION OPENINGS ARE:**
- **5 Gauged wrapped**
  - **8 Saw cut**
    - **3 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:**
  - **ft. to:**
  - **ft.**

**GRAVEL PACK INTERVALS:**
- **From:**
  - **ft. to:**
  - **ft.**

**GROUT MATERIAL:**
- **1 Neat cement**
- **2 Cement grout**
  - **Dentonite**
  - **4 Other**

**Grout Intervals:**
- **From:**
  - **ft. to:**
  - **ft.**
  - **ft. to:**
  - **ft.**
  - **ft. to:**
  - **ft.**

**What is the nearest source of possible contamination:**
- **1 Septic tank**
  - **4 Lateral lines**
  - **7 Pit privy**
  - **11 Septic tank**
  - **15 Oil well/Gas well**
  - **2 Sewer lines**
  - **6 Septic basin**
  - **9 Wastewater system**
  - **10 Freedom storage**
  - **13 Insecticide storage**

**Water table:**
- **8 186 Shale**

**Direction from well?**
- **N**

**LITHOLOGIC LOG**

<table>
<thead>
<tr>
<th>FROM TO</th>
<th>Lithologic Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Gr. Clay</td>
</tr>
<tr>
<td>3</td>
<td>Gr. Clay</td>
</tr>
<tr>
<td>12</td>
<td>Very Rippy Bt. Clay</td>
</tr>
<tr>
<td>13</td>
<td>Clay Silt</td>
</tr>
<tr>
<td>18</td>
<td>Shale</td>
</tr>
</tbody>
</table>

**FROM TO**

<table>
<thead>
<tr>
<th>PLUGGING INTERVALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>18</td>
</tr>
</tbody>
</table>

**CONTRACTORS OR LANDOWNER’S CERTIFICATION:**

- This water well was **constructed**, **reconstructed**, or **plugged** under my jurisdiction and was completed on **(specify date):** **3-16-93**
  - and this record is true to the best of my knowledge and belief. Kansas Water Well Contractors License No. **747**
  - This Water Well Record was completed on **(specify date):** **3-16-93**
  - under the business name of **Mills Engineering** by **Mills**

**INSTRUCTIONS:** Use typewriter or ball point pen. PLEASE PRINT CLEARLY. Please fill in blanks, underline or circle the correct choices. Send two copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-5037. Telephone: 913-266-6245. Send one to WATER WELL OWEN and retain one for your records.
Work Plan for Targeted Investigation at Inman, Kansas
Version 00, 02/22/07

LOCATION OF WATER WELL:
County: McPherson

WATER WELL OWNER: Judy Davison.
PH: St. Address, Box #: 509 S. Main
City, State, ZIP Code : Inman, Kansas 67546

LOCATE WELL’S LOCATION WITH AN “X” IN SECTION BOX:

DEPTH OF COMPLETED WELL: 114 ft.
ELEVATION: 
WELL’S STATIC WATER LEVEL: 28 ft. below land surface measured on 5/1/93.
Pump test data: Well water was .06 gpm. Well water was .06 gpm.
Est. Yield: .06 gpm. Water was .06 gpm.

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, mold/day sample was submitted

TYPE OF BLANK CASING USED: 5 Wrought iron 8 Concrete tile
1 Steel 3 RMP (SR) 6 Asbestos-Cement
2 PVC 4 ABS 7 Fiberglass X 9 Other (Specify below)

Blank casing diameter: 5 in.
Casing height above land surface: 28 ft.

TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass 8 RMP (SR)
2 Brass 4 Galvanized steel 6 Concrete tile 9 ABS
11 Other (Specify) N/A

SCREEN OR PERFORATION OPENINGS ARE:
5 Gauzed wrapped 8 Saw cut 11 None (open hole)

RESS-PERFORATED INTERVALS:
From N/A to N/A

Cement to N/A From N/A to

3 Gravel pack intervals:

GROUT MATERIAL:
1 Neat cement 2 Cement ground 4 Other
X 3 Bentonite

Great intervals: From 26 ft. to 6 ft. From 6 ft. to 114 ft.

1 Septic tank 4 Lateral lines 7 Pit privy 11 Fuel storage
2 Sewer lines 5 Cess pool 8 Sewage lagoon 12 Fertilizer storage
3 Water distribution lines 8 Septage pit 9 Feedyard 13 Insecticide storage

Direction from well: north

CONTRACTOR’S OR LANDOWNER’S CERTIFICATION: This water well was pluged under my jurisdiction and was plugged on 5/1/93. 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 5/1/93 under the business name of ADVANCE TERMITIC & PEST CONTROL, INC. by (signature) _______. 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 Environmental Services, Division of Environmnt, Environmental Geology Section, Topeka, KS 66620. Send one to WATER WELL OWNER and retain one for your records.
**Work Plan for Targeted Investigation at Inman, Kansas**

Version 00, 02/22/07

---

**LOCATION OF WATER WELL:**

<table>
<thead>
<tr>
<th>County</th>
<th>Meeker County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraction</td>
<td>NW ¼ SW ¼ NW ¼</td>
</tr>
<tr>
<td>Section Number</td>
<td>16</td>
</tr>
<tr>
<td>Township Number</td>
<td>T 21 S</td>
</tr>
<tr>
<td>Range Number</td>
<td>R 4</td>
</tr>
</tbody>
</table>

Distance and direction from nearest town or city street address of well if located within city:

- 1 mi E 3½ yr W of Inman

**WATER WELL OWNER:**

- Matt Tanzen
  - Board of Agriculture, Division of Water Resources
  - Application Number: 6752

**DATE OF COMPLETED WELL:**

- Depth (ft): 118
- Elevation (ft): 777
- Pump test data: Well water was observed after 4 hours pumping at 12 gpm

**WELL'S STATIC WATER LEVEL:**

- Depth (ft): 777
- Elevation (ft): 777
- Est. Yield (gpm): 12

**Bore Hole Diameter:**

- 4½ in.

**WELL WATER TO BE USED AS:**

- 5 Public water supply
- 8 Air conditioning
- 11 Injection well
- 1 Domestic
- 9 Irrigation
- 12 Other (Specify below)

**Was a chemical/bacteriological sample submitted to Department?**

- Yes

**TYPE OF BLANK CASING USED:**

- 5 Wrought iron
- 8 Concrete tile

**CASING JOINTS:**

- Glued
- Clamped

**Blank casing diameter:**

- 6 in.

**Casing height above land surface:**

- 15 ft

**TYPE OF SCREEN OR PERFORATION MATERIAL:**

- 1 Steel
- 3 RMP (SR)
- 6 Asbestos-Cement
- 9 Other (Specify below)

**SCREEN OR PERFORATION OPENINGS ARE:**

- 5 Gauzed wrapped
- 8 Saw cut

**Screen/perforated intervals:**

- 4 Key punched
- 7 Torch cut

**GROUT MATERIAL:**

- 1 Neat cement
- 2 Cement grout
- 4 Other

**Grout Intervals:**

- From 3 ft to 9 ft

**LITHOLOGIC LOG:**

- From 32 ft to 174 ft

**PLUGGING INTERVALS:**

- 32 Rocky or Clay
- 174 Shale

---

**CONTRACTORS OR LANDOWNER'S CERTIFICATION:**

- This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mold/day/year):
  - 7-7-85
- This record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 319677.
- This Water Well Record was completed on (mold/day/year):
  - 7-7-85

- Under the business name of Miller Drilling by (signature):

---

**INSTRUCTIONS:** Use typewriter or ball point pen. Please press firmly and print clearly. Please fill in blanks, underline or circle the correct choices. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone: 913-296-5840. Send one to WATER WELL OWNER and retain one for your records.
**Work Plan for Targeted Investigation at Inman, Kansas**

Version 00, 02/22/07

<table>
<thead>
<tr>
<th>LOCATION OF WATER WELL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>County: McPherson</td>
<td></td>
</tr>
<tr>
<td>Township Number</td>
<td>16</td>
</tr>
<tr>
<td>Section Number</td>
<td>7</td>
</tr>
<tr>
<td>Range Number</td>
<td>R 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WATER WELL OWNER: Mid Kansas Coop Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWN, St. Address, Box #: 4 P. O. Box D</td>
</tr>
<tr>
<td>City, State, ZIP Code: Moundridge, Kansas 67107</td>
</tr>
<tr>
<td>Application Number:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEPTH OF COMPLETED WELL</th>
<th>ELEVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 ft.</td>
<td>30 ft.</td>
</tr>
</tbody>
</table>

**WELL WATER TO BE USED AS:**
- 5 Public water supply
- 8 Air conditioning
- 11 Injection well

**WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well**

**WATER WELL DISINFECTED?** Yes No  

**WELL WATER DISINFECTED?** Yes No  

**TYPE OF BLANK CASING USED:**
- 5 Wrought iron
- 8 Concrete tile

**CASING JOINTS:** Glue Clamp

**Pipe Diameter:**
- 2 PVC
  - 3 ABS

**Casing Height Above Land Surface:**
- 15 ft. Dia.
  - In. to

**Steel:**
- 3 Stainless steel
- 6 Asbestos-Cement 9 Other (specify below)

**Joints:**
- Welded
  - threaded

**Concrete Tile:**
- 5 Concrete tile
  - 6 Concrete tile

**Screen or Perforation Material:**
- 7 PVC
  - 10 Asbestos-cement

**Other:**
- 11 Other (specify)
- 12 None used

**Screen or Perforation Openings:**
- 5 Cased wrapping
  - 8 Saw cut
  - 11 None

**Gravel Pack Materials:**
- 3 Mill slot
- 6 Wire wrapped

**Gravel Pack Intervals:**
- From 15 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.
- From 13 ft. to 40 ft.

**Grout Material:**
- 1 Neat cement
- 2 Cement slurry
- 3 Bentonite

**Grout Intervals:**
- From 0 ft. to 2 ft.
- From 2 ft. to 13 ft.

**Lithological Log:**
- Clay, silty, v. plastic, moist, v. Dark Brown
- Clay, v. silty, v. sl. plastic, v. sl. moist, Dark Br
- Clay, v. silty, calcareous, nonplastic, Reddish
- Shale, silty, v. weathered, v. moist, Reddish Gr
- Shale, hard, saturated, Dark Reddish Green

**PLUGGING INTERVALS:**
- MWH, Tag # 90160989, Flashmount

**CONTRACTORS OR LANDOWNERS CERTIFICATION:**

This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (m/d/y) 11/23/2004. And this record is true to the best of my knowledge and belief.

Kanasa Water Well Contractor's License No. 527.

This Water Well Record was completed on (m/d/y) 11/23/2004.

**INSTRUCTIONS:**

Please fill in blanks, underline or circle the correct answers. Send to three copies to Kansas Department of Health and Enviroment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone: 913-295-5045. Send one to WATER WELL OWNER and retain one for your records.
### Work Plan for Targeted Investigation at Inman, Kansas

#### Version 00, 02/22/07

<table>
<thead>
<tr>
<th>LOCATION OF WATER WELL:</th>
<th>D. Phenix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Township Number</td>
<td>10</td>
</tr>
<tr>
<td>Range Number</td>
<td>B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WATER WELL OWNER:</th>
<th>George Kliever</th>
</tr>
</thead>
<tbody>
<tr>
<td>City, State, ZIP Code</td>
<td>Inman, KS 67546</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEPTH OF COMPLETED WELL</th>
<th>110.6 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump test date</td>
<td>Well water was</td>
</tr>
<tr>
<td>Est. Yield</td>
<td>100 gpm</td>
</tr>
<tr>
<td>Bare Hole Diameter</td>
<td>2.2 in.</td>
</tr>
<tr>
<td>WELL WATER TO BE USED AS</td>
<td>5 Public water supply</td>
</tr>
<tr>
<td>1 Downhole</td>
<td>3 Feeder</td>
</tr>
<tr>
<td>Other (Specify below)</td>
<td>11 Injection well</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE OF BLANK CASING USED</th>
<th>1 Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Grass</td>
<td>10 Asbestos-cement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE OF SCREEN OR PERFORATION MATERIAL</th>
<th>7 PVC</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Gravelite</td>
<td>9 ABS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCREEN OR PERFORATION OPENINGS ARE</th>
<th>5 Gravel wrapped</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Strip cut</td>
<td>None (open hole)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCREEN/PERFORATED INTERVALS</th>
<th>From, ft. to, ft.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>GRAVEL PACK INTERVALS</th>
<th>From, ft. to, ft.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>GROUT MATERIAL</th>
<th>1 Cement cement</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Grout Intervals</th>
<th>From, ft. to, ft.</th>
</tr>
</thead>
</table>


### Lithologic Log

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
<th>PLUGGING INTERVALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11</td>
<td>8.5 clay</td>
</tr>
<tr>
<td>11</td>
<td>106</td>
<td>stating</td>
</tr>
</tbody>
</table>

### Contractor's or Landowner's Certification

I, [Name], certify that this water well was [constructed, reconstructed, or plugged] under my jurisdiction and was completed on [Date]. This Well Record was completed on [Date].

[Signature]
**Work Plan for Targeted Investigation at Inman, Kansas**

**Version 00, 02/22/07**

**WATER WELL RECORD**

<table>
<thead>
<tr>
<th>Location of Water Well</th>
<th>Tittle Number</th>
<th>Township Number</th>
<th>Range Number</th>
</tr>
</thead>
</table>

**WELL OWNER:**
City of Inman - City Park

**WELL LOCATION:**
City of Inman, Kansas 67556

**WELL DEPTH:**
- Depth to Groundwater Encountered: 12 ft.
- Well Water to Be Used: 11 Injection well
- Other: None

**WELL CASINGS:**
- Type: 6 Wrought iron, 6 Concrete tile
- Joins: Glued, Clamped

**SCREEN OR PERFORATION OPENINGS:**
- Type: 5 Gauzed wrapped, 8 Saw cut, 3 None used (open hole)
- Material: Galvanized steel, Concrete tile, 9 ABS

**GROUT MATERIAL:**
- Type: 1 Nect cement, 2 Cement grout
- Other: None

**LITHOLOGIC LOG:**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>20</td>
<td>118</td>
</tr>
</tbody>
</table>

**PLUGGING INTERVALS:**

- 12-16 ft

**CONTRACTOR’S OR LANDOWNER’S CERTIFICATION:**
This water well was constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (month/year) . . . . 12-3-01 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor’s License No. 4477 . . . . . This Water Well Record was completed on (month/year) . . . . 12-3-01 under the business name of Miller Drilling by (signature).
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.7 1987 plat of Inman, Kansas.
### TABLE B.1  Summary of property documentation related to grain storage facilities at Inman.

<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction</th>
<th>Property Description</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties associated with the former private grain storage facilities (from 1940s to present)ᵃ</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Property containing the northern private grain storage structures</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08/14/1941</td>
<td>Toews to Enns</td>
<td>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.</td>
<td>1</td>
</tr>
<tr>
<td>05/07/1964</td>
<td>Enns to Martens</td>
<td>Same as above.</td>
<td>2</td>
</tr>
<tr>
<td>03/14/1997</td>
<td>Martens to Ensz</td>
<td>Same as above.</td>
<td>1</td>
</tr>
<tr>
<td>06/27/2005</td>
<td>Ensz to Sisson</td>
<td>Same as above.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Property containing the southern private grain storage bins</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/06/1944</td>
<td>Balzer to Balzer</td>
<td>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.</td>
<td>1</td>
</tr>
<tr>
<td>12/29/1966</td>
<td>Balzer to Willems</td>
<td>Same as above.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Property associated with the former CCC/USDA grain storage facility (from 1940s to present)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/09/1947</td>
<td>Pankratz to Pankratz</td>
<td>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).</td>
<td>2</td>
</tr>
<tr>
<td>05/01/1954</td>
<td>Pankratz lease to CCC/USDA</td>
<td>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.</td>
<td>2</td>
</tr>
<tr>
<td>07/30/1955</td>
<td>Pankratz lease to Sinclair oil and gas company</td>
<td>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.</td>
<td>4</td>
</tr>
<tr>
<td>07/31/1956</td>
<td>Release of oil and gas lease from Sinclair</td>
<td>Same as above.</td>
<td>2</td>
</tr>
<tr>
<td>06/25/1956</td>
<td>Plankratz to Froese</td>
<td>Same as above (96 acres).</td>
<td>2</td>
</tr>
<tr>
<td>05/01/1957</td>
<td>Froese lease to CCC/USDA</td>
<td>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).</td>
<td>2</td>
</tr>
</tbody>
</table>
### TABLE B.1 (Cont.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction</th>
<th>Property Description</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/24/1957</td>
<td>Froese lease to Burry Oil and Gas Corp.</td>
<td>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.</td>
<td>2</td>
</tr>
<tr>
<td>02/18/1960</td>
<td>Release of oil and gas lease</td>
<td>Same as above.</td>
<td>1</td>
</tr>
<tr>
<td>05/01/1958</td>
<td>Froese lease to CCC/USDA</td>
<td>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.</td>
<td>–</td>
</tr>
<tr>
<td>06/28/1963</td>
<td>Froese lease to CCC/USDA</td>
<td>Same as above (1964-1969).</td>
<td>2</td>
</tr>
<tr>
<td>04/30/1965</td>
<td>Discharge of lease</td>
<td>Same as above.</td>
<td>1</td>
</tr>
<tr>
<td>02/08/1967</td>
<td>Froese to Unified School #448</td>
<td>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).</td>
<td>1</td>
</tr>
</tbody>
</table>

### Properties associated with the commercial grain storage facilities (from 1940s to present)

#### Property containing the southern grain elevator

<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction</th>
<th>Property Description</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/02/1947</td>
<td>Enns Milling Company to Buhler Mill and Elevator Company</td>
<td>Includes Block 11 in Original Town of Inman.</td>
<td>1</td>
</tr>
<tr>
<td>01/20/1956</td>
<td>Buhler Mill and Elevator lease to Rohesh Mills</td>
<td>Known by reference in 05/21/1984 lease.</td>
<td>–</td>
</tr>
<tr>
<td>05/21/1984</td>
<td>Nabisco Brands, Inc., to ADM Milling Co.</td>
<td>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.</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Property containing the middle and northern grain elevators

<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction</th>
<th>Property Description</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/14/1968</td>
<td>Chicago, Rock Island and Pacific RR Co. to Chase Grain Co.</td>
<td>Parcels #1 and #2, RR right-of-way, east side of the RR track.</td>
<td>4</td>
</tr>
<tr>
<td>03/08/1982</td>
<td>The Chase Grain Co. to Nabisco Brands, Inc.</td>
<td>Same as above.</td>
<td>3</td>
</tr>
<tr>
<td>05/21/1984</td>
<td>Nabisco, Inc., to ADM Milling Co.</td>
<td>Parcels #1 and #2, plus lots 8 and 9, block 4; lots 23 and 24, block 10.</td>
<td>2</td>
</tr>
<tr>
<td>Date</td>
<td>Transaction</td>
<td>Property Description</td>
<td>Pages</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------</td>
<td>---------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>07/24/2002</td>
<td>Union Pacific RR Co. to City of Inman</td>
<td>RR right-of-way north of parcel #1.</td>
<td>4</td>
</tr>
<tr>
<td>09/09/2002</td>
<td>City of Inman to Inman Industrial, Inc.</td>
<td>Same as above.</td>
<td>2</td>
</tr>
</tbody>
</table>

*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.*

*No information available on when the property was conveyed to Nabisco from Buhler Mill and Elevator, or through other entities.*
DEED RECORD NO. 116 p19509

I hereby certify, that this instrument was filed for record the 13th day of May, 1944.

[Signature]
Recorder of Deeds

THIS INDENTURE, Made this 13th day of May, 1944, A.D. 1944, between

A. B. Johnson and B. C. Smith

WITNESSES: That said parties, of the first part, in consideration of the sum of

Three Thousand, Five Hundred and Twenty-five Dollars, received

the receipt whereof is hereby acknowledged, do, by these presents, Grant, Bargain, Sell and Convey unto said parties, of the second part,

the following described Real Estate, situated in the County of [County Name], and State of Kansas, namely:

Commencing at the southwest corner of the northeast quarter of the northeast quarter of Section 15, Township 6 North, Range 2 West,

and running thence north twenty (20) yards, thence west twenty (20) yards, thence south twenty (20) yards, thence east twenty (20) yards to

the point of beginning, containing and bounding the above described Real Estate, as the same

shall appear from plat and record of said Section 15, Township 6 North, Range 2 West, McPherson County, Kansas.

TO HAVE AND TO HOLD THE SAME, Together with all and singular the attornment, heritably and appurtenances thereunto

belonging to and in any wise appertaining, forever.

And said parties, for themselves and heirs, executors or administrators, do, by these presents, warrant, covenant, promise and agree to

and with said parties of the second part, that at the delivery of these presents

they are

lawfully seized in

their own right, of an absolute and undivisible estate of inheritance, in fee simple, and in all and singular the above grants and described premises, with the appurtenances thereto appertaining; that the same are free, clear, discharged and unencumbered of and from

all former and other grants, grants, enfeoffments, judgments, taxes, assessments and inquisitions, of what nature or kind soever;

and that

they

will WARRANT AND FOREVER DEFEND the same unto said parties of the second part,

for themselves, heirs and assigns, against said parties of the first part, their

heirs, and all and every person or person whatsoever, lawfully claiming or to claim the same.

IN WITNESS WHEREOF, The said parties of the first part have hereunto set their hands and seals at the day

and year first above written.

[Signature]

[Signature]

STATE OF KANSAS, McPherson COUNTY, ss.

BE IT REMEMBERED, That on this 13th day of October, 1944, before me, the undersigned

A. D. 1944, Notary Public

In and for the County and State aforesaid, came

A. B. Johnson and

[Signature]

who, personally known to me to be the same persons, did execute the within instrument of writing, and who did hereby acknowledge the execution of the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal.

[Signature]

A. D. 1944, Notary Public

[Signature]
JOINT TENANCY
WARRANTY DEED
Individual Deed

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,

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,

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

Part of the Southeast Quarter of the Northeast Quarter (SE 1/4 NE 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)

(Marie M. Enns)

STATE OF KANSAS 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

and acknowledged the execution of the within instrument. Said instrument was received from said party, to-wit:

the same as their free and voluntary act and deed for the uses and purposes therefor set forth.

In witness whereof, I have hereunto set my hand and seal the day and year last above written.

Dorothy F. Sitts
Notary Public

August 11, 1964
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 the 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

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

as 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 or of a person who cannot write his name must be witnessed by two witnesses, one of whom must write lessee's name.
KANSAS WARRANTY DEED
(STATUTORY FORM)

Edward Martens and Billie Jean Martens, husband and wife
convey(s) and warrant(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

Billie Jean Martens

STATE OF KANSAS, County of MCPHERSON, ss:

On this 14th day of March, 1997, 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 therefor 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

Notary Public - State of Kansas
My Appl. Expires Jan 26, 2020

"Richard W. Ediger"
GENERAL WARRANTY DEED – JOINT TENANCY
(Following Kansas Statutory Warranty Form)

The 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 ¼ NE ¼) 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 ¼ NE ¼, said Section 17, thence West 24 rods, thence North 20 rods, thence East 24 rods to the East line of said SE ¼ NE ¼ of Section 17, to the center of the road thence South 20 rods to the point of beginning, McPherson County, Kansas.

2385 x

State of Kansas, McPherson Co., DD:
This instrument was filed for record on the 27 day of June, A.D. 2005
at 8:25 a.m. and duly recorded in book 628 on page 346,
for the sum of One Dollar and other Valuable Consideration

EXCEPT AND SUBJECT TO:
Easements, Restrictions and Reversions of record, in any.

Pearl Y. Ensz

STATE OF KANSAS, McPherson COUNTY, ss.

BE IT REMEMBERED, That on the 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 a person 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

Eulbia J. Schueller, Notary Public

NOTARY PUBLIC
STATE OF KANSAS
M. No. 1-95984

[Stamp]

[Signature]
I hereby certify, that this instrument was filed for record the 6th day of December A.D. 1944,

at 3:00 o'clock P.M.,

Susie M. Rogers, Register of Deeds.

This indenture, made the 8th day of November, A.D. 1944,

between Albert M. Bolger and Matthew Bolger,

of the first part, and

Matheson County, in the State of Kansas,

of the second part,

WITNESSETH, that the said parties of the first part, in consideration of the sum of $140.00

EXCEPT RESERVE and joining thereunto,

the receipt whereof is hereby acknowledged, do, by these presents, Grant, Bargain, Sell and Convey unto said parties, of the second part,

hers 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 Six (6) T14N R49W principal meridians of Kansas, more particularly described as follows:
Commencing at a point 762.00 feet South of the Northwest corner of said
South Quarter at the place of beginning, thence East 104.00 feet, thence South 104.00 feet, thence West 104.00 feet, thence North 104.00 feet to the place of beginning.

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

Albert M. Bolger
Matthew Bolger

STATE OF KANSAS, McPherson County, ss.
BE IT REMEMBERED, That on the 8th day of December A.D. 1944,

before me, the undersigned, a Notary Public,

in and for the County and State aforesaid, came

Albert M. Bolger and Matthew Bolger,

Sworn in and duly sworn, personally known to me to be the said parties, who executed the foregoing instrument of writing, and such parties do thereby acknowledge 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.

Edna M. Baer
Notary Public.

This instrument expires March 5th, 1946.
JOINT TENANCY WARRANTY DEED (Following Kansas Statutory Warranty Form)

Arnie D. Balzer and Martha Balzer, his wife

CONVEY AND WARRANT TO

Aaron A. Miller and Emma L. Miller, his wife

as JOINT TENANTS and not as tenants in common, with all 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 Leavenworth and the State of Kansas to-wit: A part of the Southeast Quarter (SE) of section Seventeen (17), Township twenty-one (21), Range Four (4), Leavenworth County, Kansas, more particularly described as follows: Commencing at a point 196 feet South of the southwest corner of said Southeast Quarter as the place of beginning, thence West 400 feet, thence due South 150 feet, thence East 400 feet, thence due North 160 feet to the place of beginning.

for the sum of Ten Dollars and Other Valuable Considerations

EXCEPT AND SUBJECT TO:

Dated December 29, 1966

STATE OF KANSAS, HICK COUNTY, ss.

BE IT REMEMBERED, that on the 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

who is personally known to me to be the sameperson 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 sealed my seal as Notary Public in and for the State of Kansas this 29th day of December, 1966.

Notary Public in and for the State of Kansas.

[Signature]

Date: 12/29/66

[Stamp]

748

State of Kansas, McPherson Co. SS.

The foregoing was read to me on the 5th day of November, 1967 at a public and audible hearing in the presence of the present witness who then and there signed the said instrument.

[Signature]

Subscribed and sworn to before me this 5th day of November, 1967.

[Stamp]
THIS INDENTURE, Made this 9th day of December A.D. 1947 between Velma L. Speech and Julius H. Speech, her husband; Howard G. Pankrats and Flora Ellen Pankrats, his wife; and Orlando E. Pankrats, 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;

WITNESSES, 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 (½) of the Northwest Quarter (¼) and the Southwest Quarter (¼) of the Northwest Quarter (¼), Less Five (5) acres out for school purposes in the Northwest corner, described as follows: Beginning at the Northwest corner of said Southwest Quarter (¼) of the Northwest Quarter (¼) and running East Six Hundred Fifty (650) feet, thence South Three hundred thirty (330) feet, thence West Six Hundred Fifty (650) 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 unencumbered 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. Speech
Orlando E. Pankrats
H. G. Pankrats
Flora Ellen Pankrats
Velma L. Speech

STATE OF KANSAS,
County of BARTON

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. Speech and Julius H. Speech, 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 hereto set my hand and affixed my Notarial Seal seal the day and year last above written.

Malvin O. Nosse Notary Public
Term Expires January 16th, 1950.

ACKNOWLEDGMENT

STATE OF KANSAS, COUNTY OF STAFFORD, KS:

BE IT REMEMBERED, That on this 24th day of December A.D., 1947, before me, the undersigned, a Notary Public in and for said County and State, came Howard A. Pankratz and Phoea Ellen Pankratz, 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 hereto subscribed my name and affixed my official seal the day and year last above written.

My commission expires: Sept 23, 1951
A. H. Watson

ACKNOWLEDGMENT

STATE OF OKLAHOMA, COUNTY OF TULSA, OK.

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. Pankratz, 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 hereto set my hand and affixed my Notarial Seal the day and year last above written.

My commission expires March 1, 1949
W. E. Howell
Notary Public
Tulsa, Oklahoma

STATE OF KANSAS, McPHerson COUNTY.

+ Love Proof of Original as Filed on the ___ day
+ 8 0
+ 8 0
+ 8 0
+ 8 0

[Signature]
Registrar of Deeds
LEASE OF PROPERTY

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

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 Southeast corner of the SW1/4 of the NW1/4, 15-21-14, 185 feet North; thence 120 feet East; thence 185 feet South; thence 120 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 whatsoever.

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 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.

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
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 1931 at 1:30 P.M.

Noticer of Deeds
AGREEMENT, made and entered into at McPherson, Kansas, this 30th day of July, 1945, by and between J. F., Pankratz, a single man, of Stafford, Kansas, and Chas. M. Oates of Wichita, Kansas, to be satisfied by the delivery of oil and gas leases in accordance with the provisions hereinafter contained and described as follows:

Part of the first part, hereinafter called lessee (whether one or more) and

Part of the second part, hereinafter called lessor.

PARTIES. This is the said lessor, for and in consideration of the sum of One Hundred and 00/100 Dollars, which sum is hereby acknowledged, and of the covenants and agreements hereinafter contained on the part of the lessee to be paid, kept and performed, has granted, demised, bound and let and by these presents, does grant, lease and hereby does lease, for the use and to the use of said lessee, for the sole and whole 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 thereto, situated in the County of McPherson, State of Kansas, described as follows:

East Half of the Northwest Quarter (SE 1/4) and Southwest Quarter of the Northwest Quarter (SW 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 Snydale Addition to the City of Inman; Also excepting therefrom a tract now platted as Snydale 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 3-9-16 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 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 SW 1/4 NW 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 Feb. 1, 1944, for a term of five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that this lease shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

ADDITIONAL.

TOWNSHIP: ___________________

BANK: _______________________

and containing: ___________________ acres more or less.

It is agreed that this lease shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.

It is agreed that the lessee shall remain in full force for five years from date covering the lands described as follows: Beginning at a point on the Northwest corner of said SW 1/4 NW 1/4, Section 16, thence 440 feet North, thence 120 feet East, thence 440 feet South, thence 120 feet West to point of beginning. Which last described tract is said to contain 1.5 acres more or less.
ASSIGNMENT OF OIL AND GAS LEASE

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned,

Chas. H. 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:

SYNGAIRL OIL & GAS COMPANY

(hereinafter called Assignee), all right, title and interest in and to the oil and gas lease dated July 30, 1955, from

P. J. Rockwell, a single man

the lessor.

received in book page _______ inserer as said lease covers the following described land in

McPherson County, State of Kansas

East Half of the Northwest Quarter and South Half of the Southwest Quarter of the Northeast Quarter of Section 16, Township 21 South of Range 4 West of Sixth Principal Meridian, excepting therefrom a tract now platted as Ainsley Addition to the City of Inman; also excepting therefrom a tract now platted as Sympolice 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 1/4 NW/4 Section 12-21S-4W, 6th P.M., described as follows: Beginning at a point on Section line 216 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 600 feet, thence North about 216 feet to the South line of said Morgan Street in the City of Inman, thence West 650 feet on South line of said Morgan Street to the West line of said Section 15, thence South on Section line about 216 feet to place of beginning.

(The last above described tract contains about 20 feet more or less off the North side thereof, which is loaded in the NW/4 SW/4 of said Section 15)

(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 the covering the lands described as follows: Beginning 50 feet North of the Southeast corner of said SW/4 NW/4 Section 16, thence 485 feet north, thence 128 feet East, thence 125 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, 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 lands 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 whatsoever, lawfully claiming or to claim the same.

EXECUTED, this 8th day of August, 1955

Chas. H. Coats

[Signature]
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, 1955, personally appeared Charles Coats.

and

I, the above-named individual, know the above-named person, who executed the within and foregoing instrument and acknowledged to me that he executed the same for the uses and purposes therein set forth.

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

My commission expires July 25, 1956

[Signature]
Lorraine Colaw Notary Public

STATE OF KANSAS ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans., Okla. and Colo.)
COUNTY OF
Before me, the undersigned, a Notary Public, within and for said County and State, in this day of __________, 1955, personally appeared.

and

I, the above-named individual, know the above-named person, who executed the within and foregoing instrument and acknowledged to me that he executed the same for the uses and purposes therein set forth.

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

My commission expires

Notary Public

STATE OF KANSAS ss. ACKNOWLEDGMENT FOR CORPORATION
COUNTY OF
Be it remembered that on this day of __________, 1955, before me, the undersigned, a Notary Public, duly commissioned, in and for the county and state aforesaid, came

and

president of the above-mentioned corporation, personally known to me to be such officer, and to be the same person who executed 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 heretounto set my hand and official seal the day and year last above written.

My commission expires

Notary Public

ASSIGNMENT OF OIL AND GAS LEASE FROM

NOTE: When signature by mark is Kansas, said mark to be witnessed by at least one person and also acknowledged.

For acknowledgment by mark, use regular Kansas acknowledgment.

STATE OF KANSAS 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 __________, 1955, personally appeared.

and

I, the above-named individual, know the above-named person, who executed the within and foregoing instrument and acknowledged to me that he executed the same for the uses and purposes therein set forth.

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

My commission expires

Notary Public

36218
This instrument, executed by us, the undersigned party
herein referred to as "the Corporation," is made by us
for the purpose of conveying to "the Lessee," the
above described property for the purpose stated
below.

The property to be conveyed is described as follows:

A tract of land located in the County of [County], State of
[State], and situated in the Township of [Township], Range [Range], Section [Section], and
is bounded on the north by [North Boundary], on the east by [East Boundary], on the
south by [South Boundary], and on the west by [West Boundary].

The property is subject to any and all liens or encumbrances,
and is free and clear of any claims or encumbrances.

The corpus of this instrument is vested in the Corporation,
and the Corporation agrees to convey the property to the
Lessee as hereinbefore described.

The consideration for the conveyance is the sum of
$[Consideration], to be paid in the manner agreed upon.

This instrument is executed on the [Date], 19__
by the undersigned party, [Name], who is the
President of the Corporation.

[Signature of President]

J. N. JOHNSON, VICE-PRESIDENT

[Signature of 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 [Date] day of [Month], 19__, personally appeared

[Name], to me known to be the identical person who
subscribed the name of [Corporation Name], 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.

[Signature of Notary Public]

R. W. FRAMPTON

[Commission Expires: July 27, 19__]
354-01. Lease dated July 29, 1955, executed by Peter M. Freas and Della Freas, his wife, et al., as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 270; records of McPherson County, Kansas, covering:

W/4 SW/4 Section 16, Twp. 21 S., Range 4 W., containing 80 acres, more or less.

355-01. Lease dated July 29, 1955, executed by Peter M. Freas, his wife, et al., as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 273; records of McPherson County, Kansas, covering:

W/4 SW/4 Section 16, Twp. 21 S., Range 4 W., containing 80 acres, more or less.

356-01. Lease dated July 29, 1955, executed by Jake R. 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/2 NW/4 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 293; records of McPherson County, Kansas, covering:

W/2 NW/4 Section 16, Twp. 21 S., Range 4 W., containing 80 acres, more or less.

359-01. Lease dated July 29, 1955, executed by P. J. Pankrate, 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/2 SW/4, S/4 SW/4 of Section 16, Twp. 21 S., Range 4 W., of the

361-01. Lease dated July 29, 1955, executed by John H. Klassen and Katie Klassen, as lessors, in favor of Chas. M. Coats, as lessee; recorded in Book Misc. 122, Page 553; records of McPherson County, Kansas, covering:

W/2 NW/4 Section 16, 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. 122, Page 557; records of McPherson County, Kansas, covering:

N/2 NW/4 Section 16, Twp. 21 S., Range 4 W., containing 80 acres, more or less.

364-01. Lease dated July 29, 1955, executed by Isaac J. Priessen, 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:

N/2 SW/4, S/2 SW/4 S/4 of Section 16, Twp. 21 S., Range 4 W., containing 80 acres, more or less.
WITNESSETH, That said parties of the first part, in consideration of the sum of Ten Dollars and other good and valuable considerations, the receipt of which is hereby acknowledged, do, 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 of the Northwest Quarter (E NW) and Southwest Quarter of the Northwest Quarter (SW NW) of Section Sixteen (16), Township Twenty-One (21), North, Range Four (4) West of the Sixth Principal Meridian, excepting therefrom the A NW NW of NE of said Section 16, also excepting therefrom a tract now platted as Euclid 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 West, thence South on Section line 4 miles, thence East 660 feet, thence South 460 feet, thence West 660 feet, thence North 460 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 easements, hereditaments, and appurtenances thereunto belonging or in anywise pertaining forever.

And said Grantors

for and in his own right, of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above described and conveyed premises and all appurtenances thereto, with all appurtenances thereunto belonging or in anywise pertaining forever.

and that he, will warrant and forever defend the same unto said party of the second part, his heirs, assigns against said party of the first part, his heirs and assigns, for or in any manner, lawfully claiming or to claim the same.

IN WITNESS WHEREOF, the said party of the first part, his hand - the day and year first above written.

__________

P.J. Gardner
STATE OF Kansas

McPherson COUNTY, ss.

BE IT REMEMBERED, That on this 26th day of June, A.D. 1956
before me the undersigned, a Notary Public
in and for said County
and State aforesaid came P.J. Pankratz, 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 thesaid day and year last above written.

Term expires Sept 13, 1958

[Signature] Notary Public

STATE OF

McPherson COUNTY, ss.

BE IT REMEMBERED, That on this 26th day of June, A.D. 1956
before me the undersigned, a Notary Public
in and for said County
and State aforesaid came

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 thesaid day and year last above written.

Term expires Sept 13, 1958

[Signature] Notary Public

DEED

[Text of deed]

[Signature]

[Notary Public]
LEASE OF PROPERTY

THIS LEASE, made and entered into this 1st day of May, 1957,
by and between E. Eddie Fowke of [Redacted], Lea.,
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
[Redacted] and state of [Redacted];

Beginning 50 feet due North of the Southwest corner of the SE 1/4 of the NW 1/4
16-23-4, 195 feet North; thence 128 feet East; thence 128 feet South; thence
128 feet West to the point of beginning
containing 15 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 30th day of
May, 1959, with the right of the Lessee, during such term of 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 whosoever.

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 structure 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 Lessor 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
12-5-54

[Signature]
LEASE OF PROPERTY

CL Form-58 (reverse) (12-6-54)

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 escrow 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) ____________________________ Lessor

COMMODITY CREDIT CORPORATION, LESSEE

(Seal) ____________________________ Lessee

(Seal) ____________________________ Lessor

by

Chairman, McPherson County
ASC Committee

[Signature]

[Date]

[County]

[Signature]

[Date]

[County]

[Signature]

[Date]
ASSIGNMENT OF OIL AND GAS LEASE

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

N. Fred Froese and Verna Froese, his wife, Lessor.
And Loren W. Hallam, Lessor.

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

Southwest quarter of northwest quarter (SW1/4 NW2) Sec. 16, Range 4 West,
Twp. 21 excepting therefrom NW1/4 SW2 of NW1/4 of said Sec. 16, also
excepting therefrom the tracts now platted as Sunnyside Add. and
McPherson 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. 3, 9, 16, 17, Twp. 21, Range 4, then south on section
line 1854 feet to place of beginning thence east 660 feet, thence
South 662 feet, thence west 660 feet, thence North 662 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 K 141, Page 481; and

WHEREAS, the said lease and all rights thereunder or incident thereto are now owned by

The Bury 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

convey the said assignee, _, heirs, successors or assigns, that the lawful owner of the said lease and rights and interest thereunder and of the personal property therein 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 assignee, _, signed and sealed this instrument this

14th day of August, 1958.

The Bury Oil & Gas Corp.

Walter Adams, President.
ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF KANSAS

Before me, the undersigned, a Notary Public in and for said County and State, on this ______ day of ______, 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

Before me, the undersigned, a Notary Public in and for said County and State, on this ______ day of ______, 1958, personally appeared

and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires on ______

Notary Public.

Assigning of Oil and Gas Lease

FROM

TO

Date

Township

Range

County

State of

This instrument was filed for record on the 20th day of ______, 19__.

Return to

Deed to

Register of Deeds

Register of Deeds

Return to
RELEASE OF OIL AND GAS LEASE

FORM NO. 19

D. A. Sutton

Know all men by these presents: That

H. Eddie Froese and Verna Froese, his wife,

hereby, 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

and

Loren W. Hallam, as lessee, dated the 24th Day

of October, 1967, covering the following described land:

Southwest Quarter of Northwest Quarter (SW/4 NW/4) Sec. 16, Twp. 21, Range 4 West,
excepting therefrom N 1/4 NW/4 SW/4 of NW/4 of said Sec. 16, also excepting therefrom
the tracts now platted as Sunnyside add. and Wiers 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 Secs. 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
and lease being recorded in
the office of the Register of Deeds in and for said County, in Book M 441 Page 481

Witneses the following signatures of the present owners, the 18th Day of February, 1969

STATE OF KANSAS
COUNTY OF SEDGWICK

Before me, the undersigned, a Notary Public, in and for said County and State, on this 18th day
of February, 1969, personally appeared O. A. Sutton

and

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

My commission expires March 1, 1969

Tommie Chafin
Notary Public

ACKNOWLEDGMENT FOR CORPORATION

The instrument was filed for record on the 13th day of March, 1969, and duly recorded in

Return No. 8

The Kansas Blue Print Co.

ACKNOWLEDGMENT FOR CORPORATION

The instrument was filed for record on the 13th day of March, 1969, and duly recorded in

Return No. 8

The Kansas Blue Print Co.
THIS LEASE, made and entered into the 28th day of June, 1953, by and between

H. Eddie Pressa, of #1, Topeka, Kansas
(hereinafter called the "Lessor"), and Commodity Credit Corporation, (hereinafter called the "Lessee")

WITNESSETH THAT:

1. The Lessee leases to the Lessor, and the Lessor hereby leases from the Lessee, 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

 contains 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, 1953, and ending the 30th day of April, 1958, with the right of the Lessee, during each year 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 if 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 whatsoever.

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 hereunder laid out, 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 Lessor, may, however, sell the structures on the premises leased herewith, or any one or more of them for the term of the lease or any part thereof upon such terms and conditions as the Lessor may wish to so sell.

7. The Lessee, if required by the Lessor, shall upon the expiration of this lease, 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 Lessor has no control excepted. Provided, however, That if the Lessee requires such restoration, the Lessor shall give written notice of required restoration 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 acknowledged, the Lessee grants and gives the Lessor 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 ($3,000.00). 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 may institute. The Lessee agrees that the rental hereunder shall be increased upward by the amount of any such increased tax assessment which the Lessee and Lessor 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 in 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 such consideration or payment has been or will be made. Breach of this warranty shall give the Lessor the right to cancel the lease, or, in its discretion, to deduct from the rental or purchase price any 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 Lessee for the purpose of leasing or selling his property.

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

COMMODITY CREDIT CORPORATION, LESSOR

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

H. Eddie Fozee
LESSEE

VERNA Fozee
LESSEE

Carol Ruth Fozee
WITNESS

ACKNOWLEDGMENT

I, (name), do hereby certify that H. Eddie & Verna Fozee 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 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, 1964.

My commission expires March 12th, 1966.

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 as a true copy thereof was recorded or filed for record on (Chattel Mortgage or real estate records, or other) Volume Page (If Filed) County of County Recording Official
DISCHARGE OF LEASE OF PROPERTY

KNOW ALL MEN BY THESE PRESENTS:

That the Commodity Credit Corporation does hereby acknowledge and certify that the certain lease agreement referred to dated June 28th, 1963 relating to the following described real estate situated in the County of McPherson, State of Kansas to wit:

Beginning 50 feet due North of the Southwest corner of the 50th of the NW 36-21-4; 605 feet North; thence 128 feet East; thence 485 feet South; thence 128 West to the point of beginning.

Which lease agreement was recorded in the records of McPherson County, State of Kansas in Book M-362 of the Register of Deeds Records at Page 177 has been cancelled and is no longer effective due to the fact that said lease agreement is hereby terminated and shall be of no further force or effect.

IN WITNESS WHEREOF, the Commodity Credit Corporation has caused these presents to be signed this 30th day of April, 1965, by the Chairman of the McPherson County ASC Committee, pursuant to authority delegated to Chairman of County ASC Committees by the Commodity Credit Corporation, dated January 30, 1951, and published in 14 F.R. 7689.

COMMODITY CREDIT CORPORATION

BY /s/ Clyde L. Chiles
Chairman of McPherson County ASC Committee

ACKNOWLEDGEMENT

STATE OF Kansas ___
COUNTY OF McPherson ___

On this 30th day of April, 1965, before me the undersigned Notary Public in and for said county, personally appeared the above named Clyde L. Chiles, Chairman of the McPherson County ASC Committee, who is personally known to me and personally known to be such Chairman of McPherson County ASC Committee and the identical person whose name is affixed to the above instrument and he acknowledged that he executed the same as his voluntary act and deed and as the voluntary act and deed of the Commodity Credit Corporation, pursuant to authority duly conferred upon him.

WITNESS my hand and notarial seal the date last aforesaid.

/s/ Jacob A. Wedel
Notary Public

My commission expires on the 12th day of March, 1966.
WARRANTY DEED (Kansas Statutory Form)

H. Eddie Froese and Verna Froese, husband and wife

CONVEY AND WARRANT TO

INMAN UNIFIED SCHOOLS No. 1

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

A part of the Northwest Quarter (NW) 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 NW of Section 16, thence South 534.2 feet to the Southwest corner of said NW of Section 16, thence East on quarter section line 660 feet, thence North 534.99 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, 1967

STATE OF KANSAS, McPherson COUNTY

BE IT REMEMBERED, That on the 8th day of February A.D. 1967, 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

who, being duly sworn, said to me that they are the same persons who executed the within instrument of writing and said person(s), duly acknowledged the execution of the same

in witness whereof, I have hereunto set my hand and seal, this 8th day of February, 1967.

Notary Public

Term expires 12-17-69

STATE OF KANSAS

McPherson County

This instrument was filed for record on the 8th day of February A.D. 1967 at 11 o'clock A.M. and duly recorded in book 169 of Deeds at page 113.

Register of Deeds

Deputy

[Stamp] Board of County Commissioners 4th Day of December 1967
CORPORATION DEED—GENERAL WARRANTY

This Indenture, made the 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 therefor, 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, co-wis:

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 (NEQ) 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 northerly 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 southerly 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 thereto belonging, free and clear, discharged and unimbursed of and from all former grants, titles, charges, estates, judgments, taxes, assessments and incumbrances, of what nature and kind soever.

AND IT IS AGREED, and the said party of the second part hereby warrants and assigns, against said party of the first part, its successors, and assigns, and all and every person or persons whatsoever lawfully claiming or in anywise claiming, the same.

IN WITNESS WHEREOF, the said party of the first part has hereunto caused this Deed to be signed, sealed and delivered, by and for the use and benefit of the Enns Milling Company, its successors and assigns, at Inman, in the State of Kansas, on the day of January, A.D. 1947, and the said party of the second part has hereunto affixed its seal, the day and year last above written.

THE ENNS MILLING COMPANY

By

C. M. Hiebert
President.

Attest:

H. M. Negler
Secretary.

of THE ENNS MILLING COMPANY

State of KANSAS
McPherson County, KS.

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

H. M. Negler
Notary Public

(State expires: My commission expires Jan. 21, 1960)

STATE OF KANSAS, McPherson County,

A True Copy, the 7th day of March, 1947, at 7:48 M.
SPECIAL STATUTORY WARRANTY DEED
(Statutory Farm Corporation)

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

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

______________________________
Vice President
acting by its President, being thereunto duly authorized

BUYER(S): ADM Milling Co., a Minnesota Corporation, 4666 Fairview Parkway,
P.O. Box 1470, Decatur, Illinois 62500

LEGAL DESCRIPTION: See Schedule A annexed hereto.

THE DEED conveys 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 _______ day of May, 1994.

Attest: _________________________ Nabisco Brands, Inc.

______________________________ Assistant Secretary.

______________________________ Assistant Secretary.

______________________________ Vice President.

STATE OF _______ COUNTY of ____________

BE IT REMEMBERED, That on this _______ day of May, 1994,
before me, a Notary Public in and for said County and State of _______ above written.

My Commission Expires: ____________

______________________________ Notary Public

______________________________ Notary Public

______________________________ Notary Public

Lawyers Title Insurance Corporation
400 N. Broadway, Kansas City, MO
(314) 232-9134

______________________________ McDowell

______________________________ McDowell

______________________________ McDowell
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 Northerly 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 60 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 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 200 feet, more or less, to a point on a line being 50 feet Southerly of and parallel with the centerline of said Railroad Company's main track; thence Southwesterly parallel with and 20 feet Southwesterly 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 20 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.

KANSAS Quitclaim DEED
(Corporation to Corporation)

GRANTOR: 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 Iman 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 be paid by said party of the second part (the receipt of which is hereby acknowledged), does by these presents, 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 sitting in the Village of Iman, 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 Iman, 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 southeasterly line of Front Street in the Village of Iman; thence southeasterly along said southeasterly right of way line 175 feet, more or less, to a point on the north line of Center Street, Iman; 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 northerly 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 southerly 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 15 feet; thence southeasterly at right angles 50 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 Iman; thence northwesterly along said southeasterly right of way line 200 feet, more or less, to a point on the south line of Center Street, Iman; 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 128 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 southeasterly of a line located 30 feet northwesterly of and parallel with the most southeasterly 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 Iman; 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 northwesterly 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 ___________________________
Vice President

By ___________________________
Assistant Secretary
STATE OF ILLINOIS  

)  

) SS  

COUNTY OF COOK  

BE IT REMEMBERED, That on this 14th day of November, 19__ before me, the undersigned, a Notary Public in and for the County and State aforesaid, came William J. Benson, 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. Kaselnak, 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 person 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.

______________________________  
Notary Public  
Gail L. Benegas  

Term Expires:  
June 28, 1972
CORPORATION WARRANTY DEED (Kansas State-Warrant)

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:

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 500 feet; thence southeasterly at right angles 50 feet to the right of said railroad main track; thence along last described line 1000 feet, more or less, to a point on the southwesterly line of said Railroad Company's right of way, which is also the northwesterly line of Front Street in the Village of Inman; thence southeasterly 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 southeasterly at right angles 50 feet to the point of beginning; thence continuing southeasterly along last described line 35 feet; thence southeasterly 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 southeasterly 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.

EXCEPT AND SUBJECT TO:

The Chicago, Rock Island and Pacific Railroad Company has previously reserved unto itself, its successors or assignees, its trackages and easements for railroad right of way and across the portions of the above described premises lying northeasterly 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 said track, and replacement or removal of 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 southeasterly of a line located 30 feet northeasterly of and parallel with the most southeasterly boundary of said parcel and extending from the northeasterly line of Front Street 65 feet, more or less, to the northeasterly 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 southerly parallel with and 50 feet southeasterly of said centerline, 500 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, 1962.

IN WITNESS WHEREOF, THE CHASE GRAIN CO., INC., has hereunto caused this Deed to be signed on its behalf by its President, therunto 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.

[Signature]
By
Jack E. Beebe, President

Martha Wiggins, Asst. Secretary
STATE OF KANSAS
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.

[Signature]
Notary Public

Term Expires:
March 10, 1985
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) to Buyer(s) the hereinafter described real estate.

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 President, being thereunto duly authorized

BUYER(S): W4 Milling Co., a Minnesota corporation, 4500 Parkview Pkwy, P.O. Box 1470, Decatur, Illinois 62505

LEGAL DESCRIPTION: See Schedule A annexed hereto.

THE BENEFACTIVE 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.

[Signature]
Agnes L. DelPrete
Nabisco, Inc.

[Signature]
Keith C. Thompson
Vice President

STATE OF New Jersey, County of Morris

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, 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:

[Signature]
Jean M. Caffrey
Notary Public in New Jersey
No. 105224
Expires: November 10, 1982

[Signature]
Lawyers Title Insurance Corporation
400 N. Broadway, Wichita, Kansas 67201
(316) 263-9170

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SCHEDULE A

Tract I:

Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 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 Southwesterly 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 59.515 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.
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 24th day of July, 2002.

Attest:

[Seal]

UNION PACIFIC RAILROAD COMPANY

By: [Signature]

Assistant Vice President

ENTERED IN TRANSFER RECORD IN
MY DEEDS THIS 24TH DAY
OF JULY 2002.
ACKNOWLEDGMENT

STATE OF NEBRASKA  
) ss. 
COUNTY OF DOUGLAS  
)

On this 24th day of July, 2002, before me, a Notary Public in and for said County and State, personally appeared R. D. Uhrich and C. J. Meyer, who are the President and the Assistant Secretary, respectively, of Union Pacific Railroad Company, a Delaware corporation, and who are personally known to me (or proved to me on the basis of satisfactory evidence) to be the persons whose names are subscribed to in the within instrument, and acknowledged to me that they executed the same in their authorized capacities, and that by their signatures on the instrument the persons, or the entity upon behalf of which the persons acted, executed the instrument.

WITNESS my hand and official seal.

[Signature]
Stanley C. Misfeldt, Notary Public

(Seal)
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 68178 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.

[Signature]
Title: Assistant Vice President
Date: 7/24/2002

City of Omaha, NE
City of Omaha
6/28/02

[City of Omaha]
[Signature]
CORPORATION WARRANTY DEED
(Following Kansas Statutory Warranty Form)

This 9th 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.

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

SIGNED, SEAL'D, AND DELIVERED in the presence of

STATE OF KANSAS, McPherson COUNTY, ss.

BE IT REMEMBERED, That on this 9th day of September, A.D. 2002, before me, the
undertaken, 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. 31, 2005

LORETTA V. BROWN Notary Public

LORETTA V. BROWN Notary Public - State of Kansas
My Appt Expires 12.31.2015
EXHIBIT A

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.
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”)\(^1\) 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.\(^2\)

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.

\(^1\) 42 USC (United States Code) 9601 *et seq.*
\(^2\) 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)\(^3\) 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).\(^4\) 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).\(^5\) 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, \textit{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

\begin{itemize}
  \item \textit{Published in the} \textit{Federal Register} \textit{on March 8, 1990 (55 FR 8666) and codified in Part 300 of Title 40 of the} \textit{Code of Federal Regulations (40 CFR 300).}
  \item \textit{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).}
  \item \textit{40 CFR 300.430(d)(3).}
\end{itemize}
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. 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.

---

6 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\(^7\) 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.\(^8\)

The Off-Site Rule (OSR)\(^9\) 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.

\(^7\) Section 121(d)(3).
\(^8\) Preamble to final Off-Site Rule (OSR), 58 FR 49200, 49201, September 22, 1993.
\(^9\) 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.
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<th>Title</th>
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<tbody>
<tr>
<td>Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)</td>
<td>42 USC 9601 <em>et seq.</em></td>
<td>Provides the federal government’s blueprint for responding to both oil spills and hazardous substance releases.</td>
<td>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.</td>
</tr>
<tr>
<td>National Oil and Hazardous Substances Pollution Contingency Plan (NCP)</td>
<td>40 CFR Part 300</td>
<td>Off-Site Rule establishes procedures for planning and implementing off-site response actions (40 CFR 300.440).</td>
<td>Applicable to response actions involving off-site transfers of hazardous substances, pollutants, or contaminants.</td>
</tr>
<tr>
<td>Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)</td>
<td>67 FR 71169 (Nov. 29, 2002)</td>
<td>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.</td>
<td>Suggested for use at National Priorities List and Superfund Alternative Sites.</td>
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<tr>
<td>Safe Drinking Water Act (SDWA) (Public Health Service Act)</td>
<td>42 USC 300(f) <em>et seq.</em></td>
<td>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.</td>
<td>Applicable to organic groundwater contamination in a sole-source aquifer.</td>
</tr>
<tr>
<td>National Primary Drinking Water Standards</td>
<td>40 CFR Part 141, Subparts B and G</td>
<td>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.</td>
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</tr>
<tr>
<td>National Secondary Drinking Water Regulations (NSDWRs)</td>
<td>40 CFR Part 143</td>
<td>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.</td>
<td>Applicable if groundwater is a source of drinking water and if the NSDWRs have been adopted as enforceable standards by the state.</td>
</tr>
<tr>
<td>Maximum Contaminant Level Goals (MCLGs)</td>
<td>40 CFR Part 141, Subpart F</td>
<td>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.</td>
<td>May be relevant and appropriate if a more stringent standard is required to protect human health and the environment.</td>
</tr>
<tr>
<td>Standards for Owners and Operators of Public Water Supply Systems</td>
<td>40 CFR Part 141</td>
<td>Provides treatment requirements for public water supply systems (i.e., systems that serve at least 25 people or have at least 15 connections).</td>
<td>Relevant and appropriate in the establishment of cleanup goals for groundwater contamination.</td>
</tr>
<tr>
<td>Sole-Source Aquifers</td>
<td>40 CFR Part 149</td>
<td>Prohibits activities, including drilling, in an area designated a sole-source aquifer without special permission of the U.S. Environmental Protection Agency (EPA).</td>
<td>Applicable if the aquifer in the area is a sole-source aquifer.</td>
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## TABLE C.1  (cont.)

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<th>Title</th>
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<tr>
<td>Clean Water Act (Federal Water Pollution Control Act)</td>
<td>33 USC 1251 <em>et seq.</em></td>
<td>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 &quot;...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. ...&quot; 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.</td>
<td>Developed for some organic constituents in groundwater; may be relevant and appropriate.</td>
</tr>
<tr>
<td>Ambient Water Quality Criteria</td>
<td>40 CFR Part 131</td>
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<tr>
<td>National Pollutant Discharge Elimination System (NPDES)</td>
<td>40 CFR Parts 122, 124, and 125</td>
<td>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.</td>
<td>Discharge limits will be established if effluent is discharged to a surface water body.</td>
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<tr>
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<td>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.</td>
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<tr>
<td>Clean Water Act (cont.)</td>
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<tr>
<td>Water Quality Standards</td>
<td>40 CFR Part 131</td>
<td>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.</td>
<td>Applicable to surface water discharges.</td>
</tr>
<tr>
<td>National Pretreatment Standards</td>
<td>40 CFR Part 403</td>
<td>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.</td>
<td>Applicable if a response alternative involves discharge to publicly owned treatment works.</td>
</tr>
<tr>
<td>Dredge or Fill Requirements</td>
<td>40 CFR Parts 230–233 (40 CFR Part 6.302(a))</td>
<td>Requires permits for discharge of dredged or fill material into navigable waters.</td>
<td>Applicable if a response alternative requires discharge of dredged or fill material into navigable waters.</td>
</tr>
<tr>
<td>Executive Order on Protection of Wetlands</td>
<td>Executive Order 11,990</td>
<td>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.</td>
<td>Applicable if a response alternative has a negative effect on a wetland.</td>
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<tr>
<td>Rivers and Harbors Act of 1899</td>
<td>33 USC 401 et seq.</td>
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<tr>
<td>Section 10 Permit</td>
<td>33 CFR Parts 320–330 (40 CFR Part 6.302(a))</td>
<td>Requires permit for structures for work in or affecting navigable waters.</td>
<td>Applicable if a response alternative affects a navigable waterway.</td>
</tr>
<tr>
<td>Executive Order on Floodplain Management</td>
<td>Executive Order No. 11,988</td>
<td>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.</td>
<td>Applicable if activities are located in a 100-yr floodplain.</td>
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TABLE C.1  (cont.)

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<tr>
<td>Clean Air Act</td>
<td>42 USC 7401 <em>et seq.</em></td>
<td>Establishes national primary and secondary ambient air quality standards under Section 109 of the Clean Air Act to protect public health and welfare.</td>
<td>Applicable if contaminants are discharged to the air during treatment.</td>
</tr>
<tr>
<td>National Primary and Secondary Ambient Air Quality Standards</td>
<td>40 CFR Part 50</td>
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</tr>
<tr>
<td>National Emissions Standards for Hazardous Air Pollutants (NESHAPs)</td>
<td>40 CFR Parts 61 and 63</td>
<td>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 Federal Register 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.</td>
<td>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).</td>
</tr>
<tr>
<td>Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act [RCRA])</td>
<td>40 USC 6901 <em>et seq.</em></td>
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<tr>
<td>Criteria for Classification of Solid Waste Disposal Facilities and Practices</td>
<td>40 CFR Part 257</td>
<td>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 &quot;only if there is no reasonable probability of adverse effects on health or the environment . . .&quot; [Section 4004(a) of RCRA]. Provides for protection of surface water and groundwater at solid waste disposal facilities (40 CFR 257.3-3 and -4).</td>
<td>Applicable if a response alternative involves land disposal of solid waste.</td>
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*Note: Table continues on the next page...*
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<tr>
<td>Solid Waste Disposal Act (cont.)</td>
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<tr>
<td>Criteria for Municipal Solid Waste Landfills</td>
<td>40 CFR Part 258</td>
<td>Establishes minimum national criteria for municipal solid waste landfill units.</td>
<td>Applicable if municipal solid waste is placed in a municipal solid waste landfill.</td>
</tr>
<tr>
<td>Identification and Listing of Hazardous Wastes</td>
<td>40 CFR Part 261</td>
<td>Identifies solid wastes that are subject to regulation as hazardous wastes under 40 CFR Parts 124, 262-265, 268, 270, and 271.</td>
<td>Applicable if a material at the site is defined as a solid and hazardous waste; requires handling as a hazardous waste.</td>
</tr>
<tr>
<td>Standards Applicable to Generators of Hazardous Waste</td>
<td>40 CFR Part 262</td>
<td>Establishes standards for generators of hazardous waste.</td>
<td>Applicable if hazardous wastes are generated as a result of on-site activities.</td>
</tr>
<tr>
<td>Standards Applicable to Transporters of Hazardous Waste</td>
<td>40 CFR Part 263</td>
<td>Establishes standards that apply to transporters of hazardous waste within the United States if the transportation requires a manifest under 40 CFR Part 262.</td>
<td>Applicable if a response alternative involves off-site transportation of hazardous wastes.</td>
</tr>
<tr>
<td>Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities</td>
<td>40 CFR Part 264</td>
<td>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.</td>
<td>Applicable or relevant and appropriate if hazardous waste is disposed of on-site.</td>
</tr>
<tr>
<td>Standards for Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities</td>
<td>40 CFR Part 266</td>
<td>Establishes requirements that apply to recyclable materials.</td>
<td>No substances are expected to be present at CCC/USDA sites in quantities to warrant recycling.</td>
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<tr>
<td>Solid Waste Disposal Act (cont.)</td>
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<tr>
<td>Land Disposal Restrictions</td>
<td>40 CFR Part 268</td>
<td>Identifies hazardous wastes that are restricted from land disposal; defines limited circumstances under which an otherwise prohibited waste may continue to be land disposed.</td>
<td>Applicable or relevant and appropriate if hazardous waste are disposed of on-site.</td>
</tr>
<tr>
<td>Hazardous Waste Permit Program</td>
<td>40 CFR Part 270</td>
<td>Establishes provisions covering basic EPA permitting requirements.</td>
<td>No permit is required for on-site CERCLA response actions. Substantive requirements are addressed in 40 CFR Part 264.</td>
</tr>
<tr>
<td>Universal Wastes</td>
<td>40 CFR Part 273</td>
<td>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).</td>
<td>Applicable if universal wastes are generated or managed on-site in the course of investigation or response operations.</td>
</tr>
<tr>
<td>Occupational Safety and Health Act (OSHA)</td>
<td>29 USC 651 et seq.</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Occupational Safety and Health Standards</td>
<td>29 CFR Part 1910</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Noise Control Act of 1972</td>
<td>42 USC Sect. 4901 et seq.</td>
<td>Prohibits federal activities resulting in noise that would jeopardize the health or welfare of public.</td>
<td>Applicable for activities such as drilling near a public access point.</td>
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<tr>
<td>Hazardous Materials Transportation Act</td>
<td>49 USC 5101 <em>et seq.</em></td>
<td>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.</td>
<td>Applicable if an alternative involves transportation of hazardous materials. Does not apply to on-site response operations.</td>
</tr>
<tr>
<td>Hazardous Materials Transportation Regulations</td>
<td>49 CFR Parts 106–180</td>
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</tr>
<tr>
<td>National Historic Preservation Act</td>
<td>16 USC 470 <em>et seq.</em></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Protection of Historic Properties</td>
<td>36 CFR Parts 800 (40 CFR 6.301(b))</td>
<td>Defines how federal agencies meet the statutory responsibilities.</td>
<td>Applicable if a district, site, building, structure, or object listed on or eligible for the National Register is on or adjacent to the site.</td>
</tr>
<tr>
<td>Executive Order on Protection and Enhancement of Cultural Environments</td>
<td>Executive Order 11,593</td>
<td>Requires federal agencies to preserve, restore, and maintain the nation’s historic and cultural environment in their activities.</td>
<td></td>
</tr>
<tr>
<td>Executive Order on Preserve America</td>
<td>Executive Order 13,287</td>
<td>Formulates policy to promote intergovernmental cooperation and partnerships for the preservation and use of historic properties.</td>
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<tr>
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<tr>
<td>Historic Sites, Buildings and Antiquities Act (Historic Sites Act)</td>
<td>16 USC 461 et seq. (40 CFR 6.301(a))</td>
<td>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.</td>
<td>Applicable if an entity on the National Register of National Landmarks is on or adjacent to the site.</td>
</tr>
<tr>
<td>Archaeological and Historic Preservation Act</td>
<td>16 USC 469 et seq. (40 CFR 6.301(c))</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Antiquities Act</td>
<td>16 USC 431 et seq.</td>
<td>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.</td>
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</tr>
<tr>
<td>Preservation of American Antiquities</td>
<td>43 CFR 3 (40 CFR Sect. 6.301(b)) Executive Order 11,593</td>
<td>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.</td>
<td>Applicable if site operations affect antiquities on federal lands.</td>
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<tr>
<td>Archaeological Resources Protection Act</td>
<td>16 USC 470aa <em>et seq.</em></td>
<td>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.</td>
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<tr>
<td>Protection of Archaeological Resources</td>
<td>43 CFR Part 7, 36 CFR Part 296 (40 CFR 6.301(b))</td>
<td>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.</td>
<td>Applicable if site operations affect archaeological resources on public or Indian lands.</td>
</tr>
<tr>
<td>American Indian Religious Freedom Act</td>
<td>42 USC 1996 <em>et seq.</em></td>
<td>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.</td>
<td>Applicable if site operations affect access to sacred Indian sites.</td>
</tr>
<tr>
<td>Executive Order on Indian Sacred Sites</td>
<td>Executive Order 13,007</td>
<td>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.</td>
<td>Applicable if site operations affect access to sacred Indian sites.</td>
</tr>
<tr>
<td>Native American Grave Protection and Repatriation Act</td>
<td>25 USC 3001 <em>et seq.</em></td>
<td>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.</td>
<td>Applicable if site operations involve excavation or discovery of Native American cultural items on federal or tribal lands.</td>
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<tr>
<td>Native American Grave Protection and Repatriation Act (cont.)</td>
<td>43 CFR Part 10</td>
<td>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.</td>
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</tr>
<tr>
<td>Native American Graves Protection and Repatriation Regulations</td>
<td></td>
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</tr>
<tr>
<td>Endangered Species Act</td>
<td>16 USC 1531 et seq.</td>
<td>Provides for the conservation of threatened and endangered plants and animals and the habitats in which they are found.</td>
<td></td>
</tr>
<tr>
<td>Interagency Cooperation</td>
<td>50 CFR Part 402 (40 CFR 6.302(h))</td>
<td>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).</td>
<td>Applicable if threatened or endangered species or critical habitats are identified at the site.</td>
</tr>
<tr>
<td>Migratory Bird Treaty Act</td>
<td>16 USC 703 et seq.</td>
<td>Requires a permit from the U.S. Fisheries and Wildlife Service for the taking of protected migratory birds.</td>
<td>Applicable if a response alternative will affect a migratory pathway.</td>
</tr>
<tr>
<td>Migratory Bird Permits</td>
<td>50 CFR Parts 10 and 21</td>
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<td></td>
</tr>
<tr>
<td>Executive Order on Responsibilities of Federal Agencies to Protect Migratory Birds</td>
<td>Executive Order 13,186</td>
<td>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.</td>
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</tr>
<tr>
<td>Bald and Golden Eagle Protection Act</td>
<td>16 USC 668 et seq.</td>
<td>Requires a permit from the U.S. Fisheries and Wildlife Service to move nests because of construction or operation of project facilities.</td>
<td>Applicable if project activities affect bald and golden eagle populations, including construction or operation of facilities that call for the moving of nests.</td>
</tr>
<tr>
<td>Eagle Permits</td>
<td>50 CFR Parts 10 and 22</td>
<td></td>
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</tr>
<tr>
<td>Fish and Wildlife Conservation Act</td>
<td>16 USC 2901 et seq.</td>
<td>Encourages states to develop conservation plans for nongame fish and wildlife of ecological, educational, aesthetic, cultural, recreational, economic, or scientific value.</td>
<td>Applicable if significant populations are present at a site or are affected by site response activities.</td>
</tr>
<tr>
<td>Fish and Wildlife Coordination Act</td>
<td>16 USC 661 et seq. (40 CFR 6.302(g))</td>
<td>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.</td>
<td>Applicable if a response alternative will cause damage to or loss of wildlife by modifying a stream or body of water.</td>
</tr>
<tr>
<td>Wilderness Act</td>
<td>16 USC 1311 et seq.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilderness Preservation and Management</td>
<td>50 CFR Part 35, 43 CFR Part 6300</td>
<td>Describes the activities allowed and banned in wilderness areas and uses requiring authorization.</td>
<td>Applicable if a wilderness area exists on-site or adjacent to the site.</td>
</tr>
<tr>
<td>National Wildlife Refuge System Administration Act</td>
<td>16 USC 668dd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Order on the Management and General Public Use of the National Wildlife Refuge System</td>
<td>Executive Order 12,996</td>
<td>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.</td>
<td>Applicable if a wildlife refuge area exists on-site or adjacent to the site.</td>
</tr>
<tr>
<td>Title</td>
<td>Citation</td>
<td>Description</td>
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</tr>
<tr>
<td>Wild and Scenic Rivers Act</td>
<td>16 USC 1271 et seq.</td>
<td>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).</td>
<td></td>
</tr>
<tr>
<td>Wild and Scenic Rivers</td>
<td>36 CFR Part 297 (40 CFR 6.302(e))</td>
<td>Requires a notification process for federally assisted water resource projects in any portion of a designated river.</td>
<td>Applicable to on-site water resource projects located within, above, below, or outside a wild and scenic river or study river.</td>
</tr>
<tr>
<td><em>Kansas State Laws</em></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Kansas Voluntary Cleanup and Property Redevelopment Program</td>
<td>KSA, Chapter 65, Article 34, Sections 164 et seq. KAR, Title 28, Article 71</td>
<td>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 &quot;no further action&quot; 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.</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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)].</td>
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</tr>
<tr>
<td>Title</td>
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<td>Description</td>
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<tr>
<td>Environmental Use Control</td>
<td>KSA, Chapter 65, Article 1, Sections 1,221 et seq. KAR, Title 28, Article 73</td>
<td>Provides a way for landowners to achieve site closure by addressing environmental concerns caused by residual contamination.</td>
<td>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.</td>
</tr>
<tr>
<td></td>
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<td>An <em>environmental use control</em> 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)].</td>
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<td>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).</td>
<td></td>
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</table>
TABLE C.1 (cont.)

<table>
<thead>
<tr>
<th>Title</th>
<th>Citation(^b)</th>
<th>Description</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Kansas Air Quality Control Act; Kansas Air Quality Regulations</td>
<td>KSA, Chapter 65, Article 30; KAR, Title 28, Article 19</td>
<td>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. Provides emission standards for HAPs (KAR 28-19-200 (\text{et seq.})), 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). 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). Requires operating permits for certain stationary sources (28-19-500 (\text{et seq.})). Prohibits open burning (28-19-645 (\text{et seq.})). 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 (\text{et seq.})). Establishes emission standards for major source HAPs (28-19-750 (\text{et seq.})).</td>
<td>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.</td>
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<tr>
<td>Title</td>
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<tr>
<td>Underground Storage, Disposal Wells, and Surface Ponds</td>
<td>KSA, Chapter 65, Article 1; KAR, Title 28, Article 13</td>
<td>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.</td>
<td>Applicable if a response alternative requires underground storage reservoirs, disposal wells, or surface ponds.</td>
</tr>
<tr>
<td>Drinking Water Regulations</td>
<td>KSA, Chapter 65, Article 33; KAR, Title 28, Article 15a</td>
<td>Establishes primary drinking water regulations. Adopts federal MCLs pertaining to public water supplies.</td>
<td>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.</td>
</tr>
<tr>
<td>Water Pollution Control Regulations</td>
<td>KSA, Chapter 65, Article 33; KAR, Title 28, Article 16</td>
<td>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 et seq.). 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 28-16-28(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)].</td>
<td>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.</td>
</tr>
<tr>
<td>Title</td>
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<tr>
<td>Water Pollution Control Regulations (cont.)</td>
<td></td>
<td>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.) Establishes procedures relating to the discharge of wastewaters under the NPDES program (KAR 28-16-57 et seq.). National effluent standards are adopted by reference. Requires water management planning for water quality management areas deemed critical by state authorities (KAR 28-16-69 et seq.). 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 et seq.). Applicable if investigation or response operations involve discharge into “waters of the state.”</td>
<td></td>
</tr>
<tr>
<td>Kansas Water Well Contractor’s License Regulations; Water Well Construction and Abandonment Regulations</td>
<td>KSA, Chapter 82a, Article 12; KAR, Title 28, Article 30</td>
<td>Establishes requirements for licensing of well drillers and standards for construction, operation, and plugging of wells (KAR 28-30-3 et seq.). Applicable if investigation or response involves drilling of monitoring wells or other wells.</td>
<td></td>
</tr>
<tr>
<td>Kansas Water Appropriation Act; Kansas Water Appropriation Act Rules</td>
<td>KSA, Chapter 82a, Sections 701 et seq.; KAR, Title 5, Articles 1 et seq.</td>
<td>Establishes requirements for obtaining, maintaining, and transferring water appropriations. Applicable if water appropriations are required for groundwater remediation.</td>
<td></td>
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<tr>
<td>Title</td>
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<tr>
<td>Underground Injection Control Regulations</td>
<td>KSA, Chapter 65, Article 1; KAR, Title 28, Article 46</td>
<td>Governs discharges into underground injection wells (KAR 28-46-1 <em>et seq</em>.). In general, federal SDWA regulations are adopted by reference.</td>
<td>Applicable if investigative or response wastes are introduced into wells for discharge or disposal.</td>
</tr>
<tr>
<td>Solid Waste Regulations</td>
<td>KSA, Chapter 65, Article 34; KAR, Title 28, Article 29</td>
<td>Establishes standards for management activities and facilities relative to solid wastes (KAR 28-29-21 <em>et seq</em>.).</td>
<td>Applicable if nonhazardous materials discarded as a result of the investigation or response are landfilled on-site.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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 <em>et seq</em>.). 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).</td>
<td>Applicable if a municipal solid waste landfill is used.</td>
</tr>
<tr>
<td>Hazardous Waste Management Standards and Regulations</td>
<td>KSA, Chapter 65, Article 34; KAR, Title 28, Article 31</td>
<td>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)].</td>
<td>Applicable if investigation or response operations generate solid wastes.</td>
</tr>
<tr>
<td>Title</td>
<td>Citationb</td>
<td>Description</td>
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</tr>
<tr>
<td>Hazardous Waste Management Standards and Regulations (cont.)</td>
<td></td>
<td>Establishes standards for hazardous waste generators and transporters and for storage, treatment, and disposal facilities (KAR 28-31-4 et seq.). 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).</td>
<td>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.</td>
</tr>
<tr>
<td>Kansas Storage Tanks Act</td>
<td>KSA Chapter 65, Article 34</td>
<td>Governs storage tanks.</td>
<td>Applicable if universal wastes are generated or managed on-site in the course of investigation or response operations.</td>
</tr>
<tr>
<td>Kansas State Board of Technical Professions</td>
<td>KSA, Chapter 74, Article 70 KAR, Title 66, Number 66-6-1 through Number 66-14-12</td>
<td>Establishes requirements for licensing of engineers, land surveyors, geologists, and others.</td>
<td>Applicable if the services of engineers, land surveyors, and geologists are required for site investigation and response activities.</td>
</tr>
<tr>
<td>Kansas Nongame and Endangered Species Conservation Act; Kansas Nongame and Endangered Species Conservation Regulations</td>
<td>KSA, Chapter 32, Article 9; KAR, Title 115, Article 15</td>
<td>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).</td>
<td>Applicable if threatened or endangered species are identified at or near the site.</td>
</tr>
</tbody>
</table>
## TABLE C.1 (cont.)

<table>
<thead>
<tr>
<th>Title</th>
<th>Citation</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kansas Levee Law</td>
<td>KSA, Chapter 24, Article 1; KAR, Title 5, Article 45</td>
<td>Requires prior approval of chief engineer before construction of floodplain fills and levees (KSA 24-126).&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Applicable if site activities involve construction of floodplain fills.</td>
</tr>
<tr>
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<td></td>
<td><em>Floodplain fill</em> 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).</td>
<td></td>
</tr>
<tr>
<td>Kansas Historic Preservation Act</td>
<td>KSA, Chapter 75, Article 27; KAR, Title 118, Article 3</td>
<td>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).</td>
<td>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.</td>
</tr>
<tr>
<td>Kansas Unmarked Burial Sites Preservation Act</td>
<td>KSA Chapter 75, Article 27; KAR Title 126, Article 1</td>
<td>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).</td>
<td>Applicable if investigation or remediation activities encounter a burial site.</td>
</tr>
</tbody>
</table>
In addition to the ARARs listed here, the following advisory levels are to be considered:

- **EPA Health Advisories (2004 Edition)**

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

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

<table>
<thead>
<tr>
<th>Carbon Tetrachloride</th>
<th>Chloroform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tap water (µg/L)</td>
<td>1.6E-01</td>
</tr>
<tr>
<td>Ambient air (µg/m³)</td>
<td>1.2E-01</td>
</tr>
<tr>
<td>Fish (mg/kg)</td>
<td>2.4E-02</td>
</tr>
<tr>
<td>Soil, industrial (mg/kg)</td>
<td>2.2E+01</td>
</tr>
<tr>
<td>Soil, residential (mg/kg)</td>
<td>4.9E+00</td>
</tr>
</tbody>
</table>

**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 1910.1000TABLEZ-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 1910.1000TABLEZ-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°C (-109.3°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 \(-78.5^\circ C\). 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.

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

<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.