

Site Name: Green Plains Grain, Spencer

Brownfield Initial Site Screening (ISS)

Project Manager: John Woodland

Date: 12/28/2011

3931 - Phase II Assessment Review - standard

Phase II submitted as part of standard real estate development, pre-purchase agreement, or other due diligence, not a part of a community grant project, or

3837 - Phase II Assessment – grant funded

Phase II submitted as part of an EPA grant funded community-wide or targeted assessment project – see Mel Pins if questions on this determination

Location:

Latitude: 43.144387 Longitude: -95.151126 County: Clay
(Decimal Degree format)

USGS Quadrant: _____

Site Size: 1.23 (approx.)

Site Dimension: Acres Square Feet
 Feet Square Miles Miles

Site Alias Name(s): N/A

Congressional District: 5

Grant Recipient Name, Address & Contact: N/A

Current Owner & Address: Green Plains Grain Company LLC
450 Regency Parkway
Suite 400
Omaha, Nebraska 68114

Responsible Party Name(s) & Address, if different from current owner:
Unknown at this time

Site Street Address or Tier, Range, Section & Subsections (if street address is unknown)

Green Plains Grain
309 West 7th Street
Spencer, Iowa 51301

Directions to site:

Travel on I-35 N. Take exit 142B to merge onto US-20 W toward Fort Dodge. Turn right onto IA-4 N/Marshall Ave. Keep left at the fork and continue to follow IA-4 N. Turn left onto US-18 W/370th St/Main St. and continue to follow US-18 W. Turn right onto S Grand Ave. Turn left onto W 7th St. Take the 2nd right onto 4th Ave W. Destination will be on the left

Summarize the site history (past usages, past ownerships, wastes, known or suspected contamination pathways such as tanks, septic tank/tile field, lagoon, land applications, S.W. burial, etc)

This site is located at 309 West 7th Street in Spencer, Iowa. It is located to the east of the larger Green Plains Grain facility located at 701 4th Avenue West. The site property contains a feed mill, two warehouses, and an office. A bulk oil storage facility was once located on the property. There are two 10,000 gallon underground storage tanks (USTs) located on the property, which are used to store gasoline. The site has leaking underground storage tank (LUST) histories: 8LTV76 and 9LTO10.

Based on the historical uses of the property and the unknown condition of the bulk oil storage facility, the Phase II Environmental Site Assessment lists the former use and storage of petroleum fuel as a recognized environmental condition (RECs).

A Canadian Pacific Railway line is located along the north side of the property.

Briefly describe the site assessment that was conducted (number of borings, monitoring wells, number of samples, depth of soil samples and monitoring wells, analysis, etc.)

The Phase II field activities were conducted on November 21, 2011. Three soil borings, B-1 through B-3 were completed on the site properties to a depth up to 15 feet below ground surface (bgs).

The soil samples collected were field-screened using a photoionization detector (PID) to indicate the presence of volatile organic compounds. Soil samples collected from all three boring locations were submitted to the laboratory for analysis of benzene, toluene, ethyl benzene and xylenes (BTEX) and total extractable hydrocarbons (TEH).

Groundwater was encountered in the three temporary monitoring wells at depths ranging from approximately 6 to 10 feet below grade. Groundwater samples were submitted for laboratory analysis of BTEX and TEHs.

Summarize the findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values to known criteria such as statewide standards, MCLs, water quality standards, background levels or other benchmarks used to determine site priority.

Analysis of soil sample B-1 and B-3 did not detect BTEX or TEH contaminants. Analysis of soil sample B-2 identified toluene, ethylbenzene, xylenes and TEH as diesel at concentrations below applicable statewide standards. Note that TEH as waste oil and TEH as gasoline were also detected in B-2, but there are no statewide standards for these contaminants in soil.

Analysis of groundwater sample B-2 identified benzene at a concentration above the statewide standard. Analysis of all three groundwater samples identified TEH as diesel at a concentration above the Iowa Tier 1 Look-Up Value, Actual Ingestion. Analysis of groundwater samples B-2 and B-3 identified TEH as motor oil at concentrations above the Iowa Tier 1 Look-Up Value, Actual Ingestion. Those concentrations and standards are shown in Table-1.

Table 1: Groundwater Sample Analytical Results Summary

Sample ID	BTEX (ug/L)			TEH (ug/L)		
	Analyte	Result	Statewide Standard*	Analyte	Result	Iowa Tier 1 Look-Up Value, Actual Ingestion
B-1	Benzene	4.1	5	TEH as diesel	2,150	1,200
	Toluene	<10	1,000	TEH as motor oil	<345	400
	Ethylbenzene	132	700	TEH as gasoline	4,020	NS
	Xylenes	697	10,000			
B-2	Benzene	14.8	5	TEH as diesel	67,800	1,200
	Toluene	<10	1,000	TEH as motor oil	1,650	400
	Ethylbenzene	18.5	700	TEH as gasoline	45,000	NS
	Xylenes	46.5	10,000			
B-3	Benzene	3.79	5	TEH as diesel	18,100	1,200
	Toluene	18.3	1,000	TEH as motor oil	1,380	400
	Ethylbenzene	61.0	700	TEH as gasoline	7,200	NS
	Xylenes	231	10,000			

Bold indicates concentrations that exceed the applicable statewide standard

*: Statewide Standard for a Protected Groundwater Source

NS – No statewide standard

Identify on-site or off-site potential and actual targets (e.g., municipal wells, private wells, drinking water intakes). What is known of the neighboring area, i.e., are there residences, businesses, public use areas, etc.? Are there utility lines that could be impacted by site contaminants? Identify any other use/location issues that deserve consideration.

There is one plugged well on the site. Within a ¼ mile radius beyond the site, there are eighteen plugged wells, one commercial well that is thirty-two feet deep (dug in 1950), one inactive well of unknown depth, and one well registered for testing with an unknown depth. Within a ½ mile radius (beyond the ¼ mile radius), there are two wells used for heat pumps that are 160 and 255 feet deep, one private well that is 25 feet deep (dug in 1900), ten plugged wells, one commercial well that is 361 feet deep, and one well registered for testing that is 18 feet deep.

Rate the site on a scale of 1 to 4, in decreasing order of severity or priority.

3

Summarize the reasoning, knowledge or any other information used in determining your recommendation regarding the priority assigned to this site.

Contaminants detected in soil samples were at concentrations below statewide standards.

Benzene was detected at a concentration above the statewide standard in groundwater sample B-2. TEH as diesel was detected at concentrations above the Iowa Tier 1 Look-Up Value, Actual Ingestion in all

three groundwater samples. TEH as motor oil was detected at concentrations above the Iowa Tier 1 Look-Up Value, Actual Ingestion in groundwater sample B-2 and B-3.

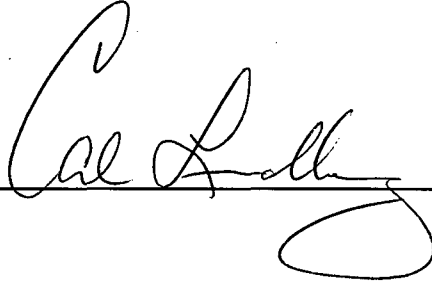
The IDNR LUST Section reviewed available data for this location. They report the initial release, 8TLV76 was closed in 2001. Additional investigation (for TEH in particular) was done under 9LTO10 in 2011. LUST issues were closed for 9LTO10 based on concentrations. The IDNR LUST Section reports that the high TEH as diesel concentrations are not associated with the historic LUSTs because two investigations were done at the LUST location and the current Phase II Environmental Site Assessment was conducted further east and the TEH as diesel concentrations are higher than what was discovered at the historic LUST location. Therefore; the IDNR LUST Section will not pursue this contamination (given the unclear bulk storage facility location). Based on these new contaminant levels reported, the concentrations are below Protected Groundwater Source target levels, which are used for this site.

No further action will be required; because there are no nearby receptors and the apparent source of contamination (bulk tanks) are no longer onsite.

Site recommended for:

- No further action
- Additional investigation under state program (activity code 2824)
- Additional investigation under CERCLA (Extended Site Screening)
- Additional investigation by responsible party
- Transfer to LUST/UST

Form Reviewed:

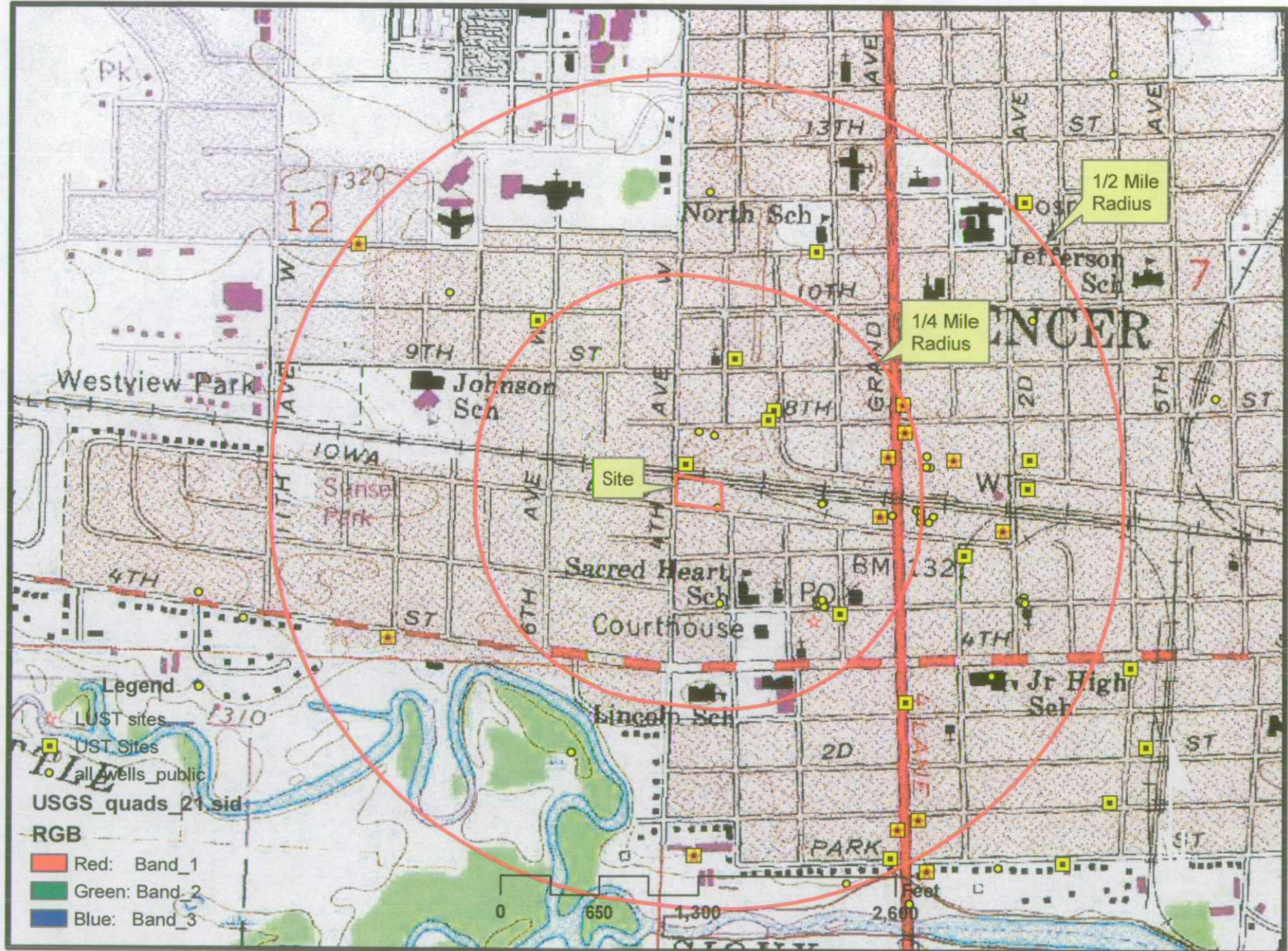


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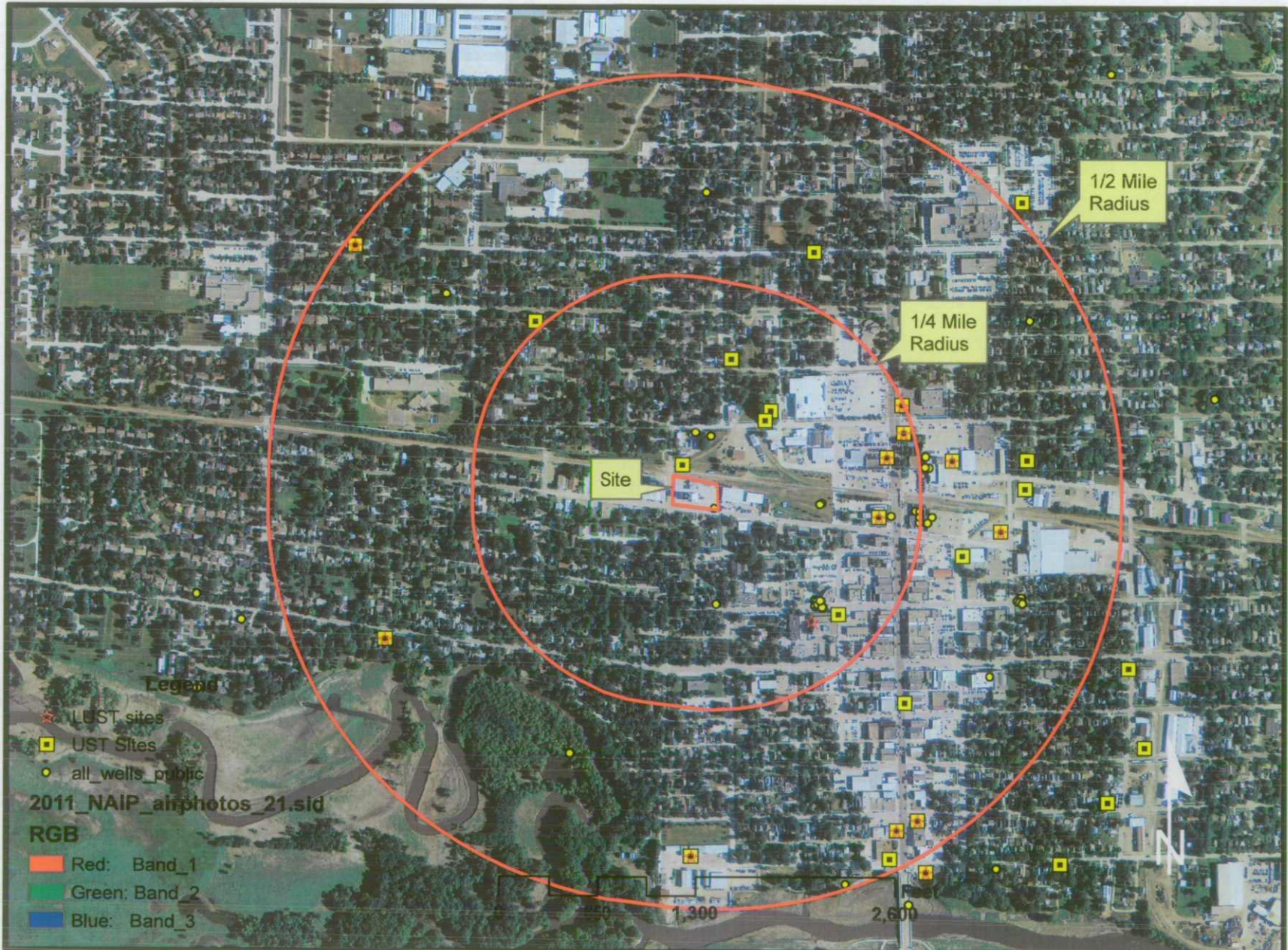
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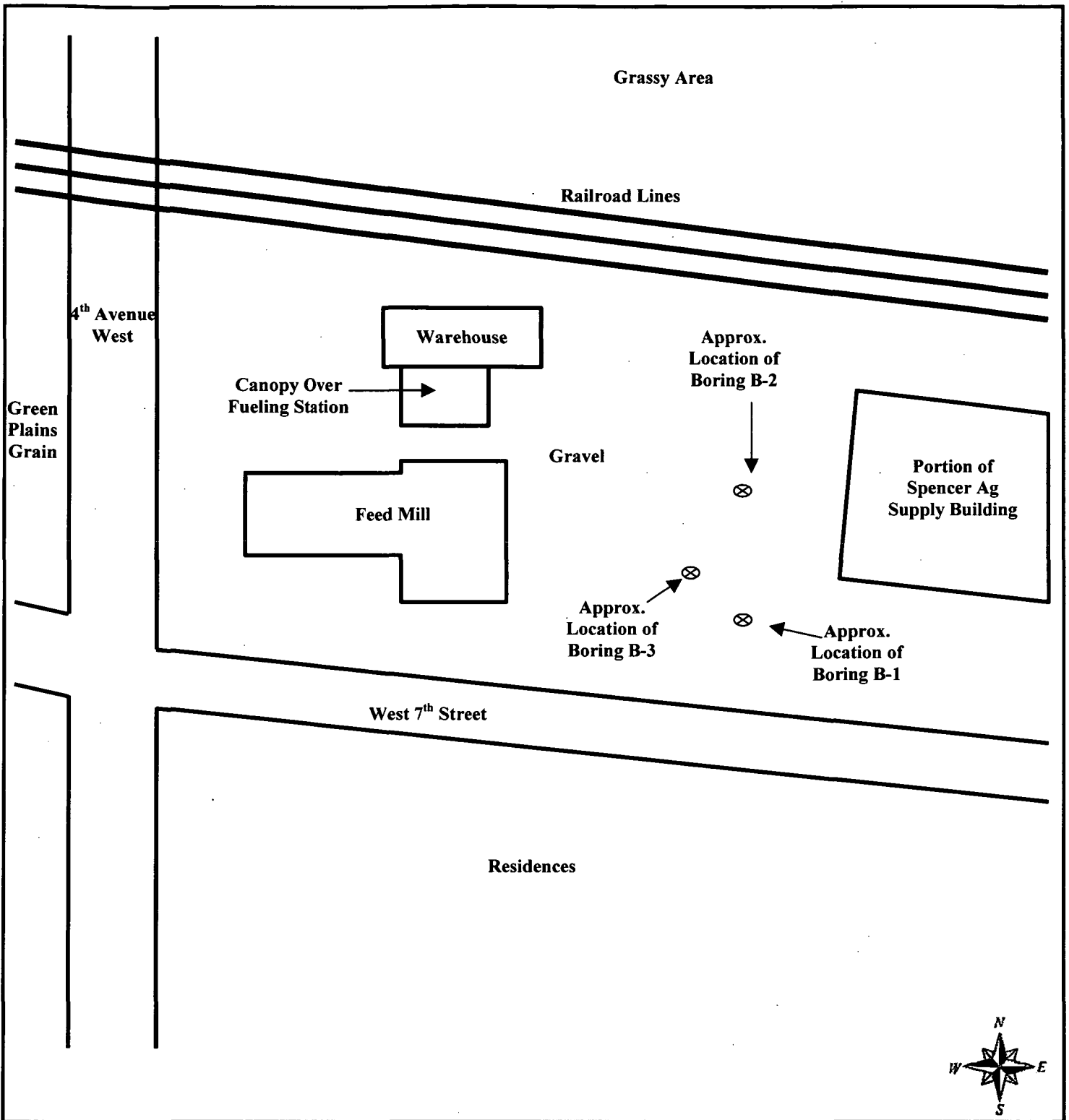
Revised 7/2007

Green Plains Grain, Spencer



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SITE MAP

**Green Plains Grain
Spencer Main Site
701 4th Avenue West
Spencer, Iowa**



PROJECT #: 353.40020.0001	FIGURE: SITE MAP
DRAWN BY: ACC	REVIEWED BY: AE
DATE: 12/20/11	SCALE: 1" ≈ 60'