

DRAFT: Site Name: Brownfields Cluster #4, Council Bluffs

Brownfield Initial Site Screening (ISS)

Project Manager: Unassigned

Date: 2007

**CON 12-15
Doc #31163**

☐ **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: 41. 2523 Longitude: -95. 8544
(Decimal Degree format)

County: Pottawattamie

USGS Quadrant: Council Bluffs North and Council Bluffs South

Site Size: 2.28

Site Dimension:

☒ Acres ☐ Square Feet
☐ Feet ☐ Square Miles ☐ Miles

Site Alias Name(s): None

Congressional District: 3

Grant Recipient Name, Address & Contact: City of Council Bluffs, 209 Pearl Street, Council Bluffs, Iowa 51503, Attn: Tina Hochwender

Current Owner(s) & Addresses:

- 645 9th Avenue: Habitat for Humanity, P.O. Box 213, Council Bluffs, Iowa 51502
- 721 9th Avenue: Frank & Susan Grund, 721 9th Avenue, Council Bluffs, Iowa 51501
- 900 S. 7th Street: Midwest Sporting Goods, Inc., 305 East Broadway, Council Bluffs, Iowa 51503
- 925 S. 7th Street: MSGA Enterprises Inc., 925 South 7th Street, Council Bluffs, Iowa 51503
- 1025 S. 7th Street: Linda Whisler, 228 9th Avenue, Council Bluffs, Iowa 51503
- S. 7th Street between 10th & 11th Avenues: Utilicorp United Inc., P.O. Box 1188, Houston, Texas 77251-1188

Responsible Party Name(s) & Address, if different from current owner:

Unknown

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

900, 925, and 1025 South 7th Street, 645 and 721 9th Avenue, and South 7th Street between 10th and 11th Avenues

Directions to site: Take I-80 west from Des Moines heading towards Council Bluffs. Take the US-6 exit- Exit 8- toward Council Bluffs / Oakland. Merge onto East Kanessville Boulevard / US-6 west toward Council Bluffs / Community College. Turn left onto North 7th Street / IA-192 South. Continue to follow North 7th Street. Turn right onto 9th Avenue. The site encompasses several properties located south of 9th Avenue and west of the South Expressway.

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)

The site consists of six properties located at 900, 925, and 1025 South 7th Street, 645 and 721 9th Avenue, and South 7th Street between 10th and 11th Avenues in Council Bluffs. Current site usages are unknown. The surrounding area currently and historically has consisted of industrial and commercial properties. The South Expressway (Hwy F92) is located east of the site. Brownfield Cluster #3 is located just south of the properties located at 721 9th Avenue and 900 South 7th Street and Brownfield Cluster #2 is located east of the site just across the South Expressway.

A Phase I was conducted on the site in December of 2006, which noted the following recognized environmental conditions:

1. UST/LUST site, former Farm Service Company, located at 1020 South 8th Street,
2. Former Citizens Gas and Electric Co. MGP site located at 11th Av and 7th Street,
3. Historic railroad located at 645 and 721 9th Avenue, and 900 South 7th Street,
4. Former coal yard and railroad located at 925 South 7th Street,
5. Former Citizen Gas & Electric Company located at 1025 South 7th Street where buried oil tanks were discovered in Sanborn Fire Insurance Maps.

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.)

Eight soil borings were conducted onsite and four of the borings were converted into temporary monitoring wells. A total of eleven soil samples were collected and analyzed for a combination of RCRA metals, total extractable hydrocarbons (TEH using method OA-2), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and cyanide. Four groundwater samples were collected and analyzed for a combination of RCRA metals, total extractable hydrocarbons (TEH using method OA-2), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), cyanide, and total dissolved solids (TDS). Both filtered and non-filtered groundwater samples were collected for RCRA metal analysis. The non-filtered groundwater samples were collected using low flow technologies to limit the amount of sediment in the samples.

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.

Arsenic and polycyclic aromatic hydrocarbons (PAHs) were detected in soil samples at concentrations exceeding the applicable Statewide Standards (SWS). Specifically, arsenic was detected at concentrations ranging from 2.39 mg/kg to 22.4 mg/kg. See Table 1 below for PAH soil exceedances. Several other contaminants were detected in soil at concentrations below the applicable SWS. Coal tar was encountered onsite in boring SB-8 between 25 feet and 27 feet below ground surface.

Table 1 – PAH Concentrations in Soil (mg/kg)

	SB-3 (0-2')	SB-5 (0-2')	SB-6 (0-2')	SB-6 (2-3')	SB-7 (0-2')	SB-7 (10-12')	SB-8 (0-2')	Statewide Standards
Benzo(a)anthracene	3.29	0.681	0.939	3.07	3.68	5.72	0.285	3.1
Benzo(b)fluoranthene	2.36	0.809	0.824	3.6	8.62	3.31	0.456	3.1
Benzo(a)pyrene	2.56	1.12	1.4	5.93	6.92	4.78	0.484	0.31
Dibenz(a,h)anthracene	<0.312	0.145	0.134	0.573	1.49	0.315	<0.194	0.31
Indeno(1,2,3-cd)pyrene	1.63	0.537	0.772	2.85	3.64	1.75	0.341	3.1

*Values in bold exceed the applicable statewide standard

Arsenic, benzene, methylene chloride, naphthalene, and 2-methylnaphthalene were detected in groundwater at concentrations exceeding the applicable SWS (see Table 2 below). Several laboratory detection limits exceeded the applicable standards including: acrylonitrile, 1, 2-dibromoethane, 1, 2-dibromo-3-chloropropane [in MW-4 only], 1,3-dichloropropane [in MW-4 only], hexachlorobutadiene [in MW-4 only], and 1,1,2,2-tetrachloroethane [in MW-4 only]. Several other contaminants were detected in groundwater at concentrations below the applicable SWS. See Table 2 for additional information.

Table 2 – Groundwater Concentrations Exceeding SWS (mg/L)

	MW-2	MW-4	Statewide Standards
Arsenic (non-filtered)	0.013	0.00112	0.01
Arsenic (filtered)	0.0165	0.00113	0.01
Benzene	0.00042	8.51	0.005
Methylene chloride	0.00054	0.0052	0.005
Naphthalene	0.285	1.88	0.1
2-methylnaphthalene	0.00106	0.0895	0.028

*Values in bold exceed the applicable statewide standard

Aquifer tests were performed on monitoring wells MW-1, MW-2, and MW-4D resulting in hydraulic conductivities ranging from 0.1093 to 9.188 meters/day. Total dissolved solids (TDS) concentrations onsite ranged from 580 to 1,260 mg/L. Based on the hydraulic conductivities and TDS concentrations, the groundwater onsite is considered a Protected Groundwater Source. Groundwater flow is generally to the southwest.

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.

~~2007:~~ There is one retired commercial well located immediately adjacent west of the site and seven plugged wells located within a quarter-mile radius. In addition, there is one active heat pump well and six plugged wells between a quarter-mile and a half-mile radius of the site. It is unknown if the retired commercial well was properly plugged. Indian Creek is located about 2,850 feet west of the site and eventually flows into the Missouri River which is located about 16,800 feet west of the site. The site is not located within a source water protection area and the installation of private wells is prohibited within city limits. A portion of the former Council Bluffs Coal Gas site is located on the southern portion of the Brownfields Cluster #4 (see the attached site map).

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

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

Arsenic and polycyclic aromatic hydrocarbons (PAHs) were detected in soil samples at concentrations exceeding the applicable statewide standards. Specifically, arsenic was detected at concentrations ranging from 2.39 mg/kg to 22.4 mg/kg, generally within the range of naturally occurring arsenic determined to be present in Iowa soils (17 mg/kg or less).

It was noted in the report that coal tar was encountered onsite in boring SB-8 between 25 feet and 27 feet below ground surface. The PAHs detected in soil borings SB-6 from shallower depths of 2 to 3 feet deep and at SB-7 from 0 to 2 feet deep fail the risk calculator utilized in the Iowa Administrative Code (I.A.C.) Chapter 137 for cumulative cancer risk to a site resident.

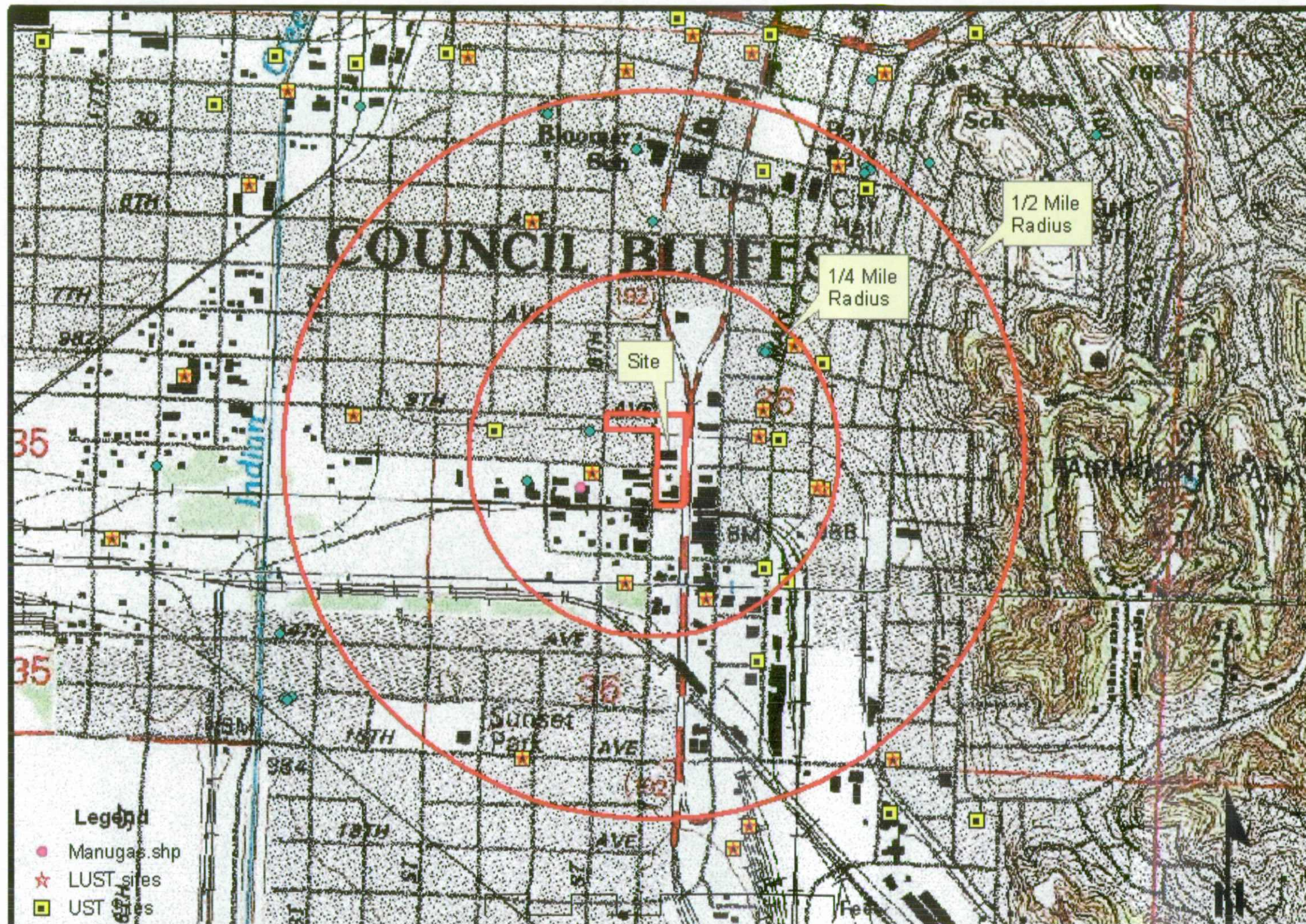
Arsenic, benzene, methylene chloride, naphthalene, and 2-methylnaphthalene were detected in groundwater at concentrations exceeding SWS. Benzene was detected in MW-4 at 8.51 mg/L, which exceeds the standards for groundwater ingestion (0.005 mg/L), groundwater vapor to enclosed space (1.54 mg/L), groundwater to plastic water line (0.29 mg/L), and surface water (0.29 mg/L). The appropriate receptor surveys have not been conducted to rule out any impacts from the benzene contamination. The source of the benzene contamination has not been definitively located; however, the nearest known potential source is from migration of coal tar from the former manufactured gas plant site located immediately north of the monitoring well.

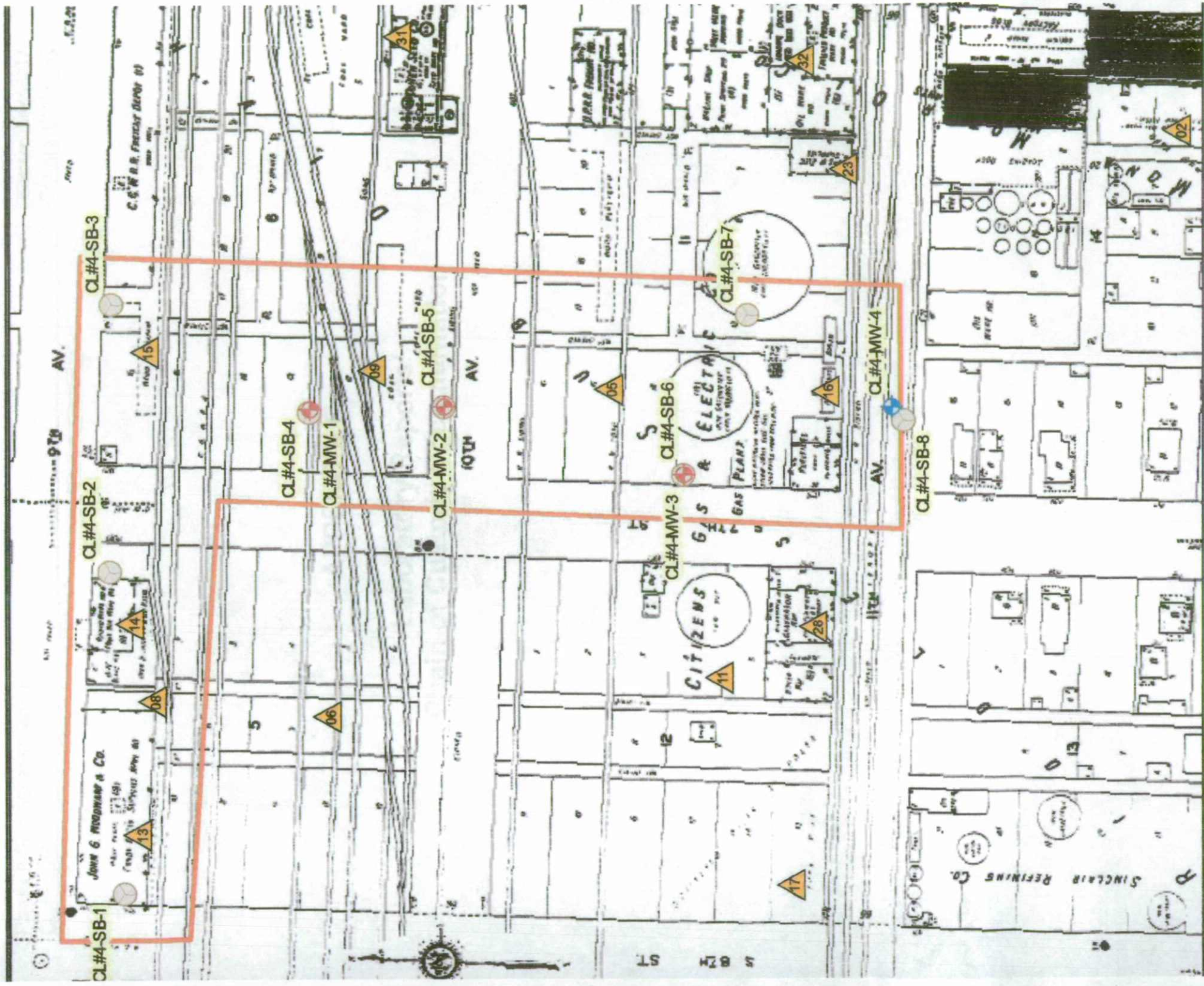
Site recommended for:

- ☒ **No further action – (Site Transferred to EPA)**
- ☐ 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: Not Reviewed **Date:** _____







RECS*

Water Table Wells
Deep Wells
Soil Borings
Cluster #4

C List following Figure 2 for location of each REC location.

FIGURE 5C HISTORICAL PERSPECTIVE 1928 SANBORN

South Main Brownfields Project
Cluster #4

Council Bluffs, Iowa



Howard R. Green Co