Three Rivers Cooperative, Epworth **CON 12-15**

Extended Site Screening (ESS) **Doc #5958**

Project Manager: Matthew Culp

Date: 3/22/07

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 Three Rivers FS facility has been in operation for more than 25 years. Historically, fertilizer (dry) was delivered to the facility by rail car on the south side of the facility. Local testimony indicated spills were common from this method of delivery. This handling practice ceased in 1997 and fertilizer is now delivered by truck and delivered to the north side of the facility with a concrete pad to catch spills. Spillage from past handling practices from rail car delivery is suspected of causing or contributing to the detection of nitrate-nitrogen in excess of the drinking water standard of 10 PPM in the city well #3 located 300 feet from the Three Rivers Coop site. Suspected pathway for contamination migration is through soil and a shallow sand layer that overlies a till layer that overlies fractured limestone bedrock, which serves as the aquifer used by Epworth City well #3. The #3 well receives most of the water from a void at 128 feet that was observed in a videotape of the well. A packer test performed April 1999 on the well isolated the primary water source in the well from this void and water production dropped from 240 gpm to 20 gpm. The site was also the subject of an underground (fuel) storage tank (UST) removal in the 1990s.

In 2001, this site was referred to Contaminated Sites Section from Water Supply Section of IDNR because of nitrate detection in the Epworth city well No. 3 in excess of drinking water standard of 10 mg/L as N. Due to elevated nitrate the city has had to take the well off line.

IDNR conducted an initial site visit in 7/10/01 to discuss options to restore well #3 with representatives from the city and local coop (Three Rivers FS) and arranged for continued monitoring of the affected city well. Several special ground water sampling events of the city well have been conducted on 3/25/02, 9/23/02, 8/25/03 and 8/02/04 the last of which detected 14.8 PPM of nitrate. City wells #1 and #2 and #4 are located 600 feet and 1000 feet and 1,800 feet from the contaminated well and are finished in the same aquifer as the #3 well. These wells are monitored quarterly. Results for these wells are below the drinking water standard for nitrate and they are still used by the city.

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.)

In addition to the assessment related to the UST removal, the site has had three site assessments related to the investigation of contamination to the city well. The objective of the ESS was to conduct additional ground water assessment to attempt to find a way to connect the contamination observed in shallow ground water on the subject site to the bedrock aquifer that supplies the city well. The first assessment was conducted by IDNR on March 2, 2006 with the collection of soil and ground water samples that included one soil boring on the south side of the fertilizer warehouse in the area previously described as the location of fertilizer loading

from rail cars. A soil core to a depth of 20 feet was sampled at two-foot intervals to determine if residual nitrate was present in soil at this location. A second boring was completed on the north side of the fertilizer warehouse utilizing the shielded well screen point to obtain a ground water sample. The soil boring was terminated at a depth of 40 feet at apparent refusal. Ground water was extracted from this second soil boring and field screened for nitrate and nitrite with a Hach® *water quality test strip.* The test strip indicated a value over 50 PPM for nitrate and no detection for nitrite. Based on the field screen results a water sample was collected and submitted for analysis utilizing EPA method 353.2. Lab results of the ground water sample collected by IDNR indicated nitrate at 140 PPM. Based on the results for that ground water test the Three Rives Coop was directed to conduct further assessment of soil and ground water.

Three Rivers contracted for an expanded site assessment, which was conducted on April 20, 2006. Three additional soil borings were completed and six soil samples collected from each soil boring. No ground water samples were collected. Results for soil nitrate test indicated concentrations ranging from 90 PPM in soil down to 8 feet decreasing to 20 PPM as deep as 22 feet. IDNR review of the report (5/22/06) cited the elevated soil concentrations as a concern and responded that ground water samples would be required.

In November 2006 a third assessment was conducted by the PRP. Two soil borings were advanced to a terminal depth of 80 feet that encountered dark gray impermeable glacial till at approximately 50 feet and weathered limestone bedrock at approximately 80 feet. Five monitoring wells were installed to determine lateral and vertical extent of nitrate contamination and the direction of shallow ground water movement on the property, which is to the west toward Hogan Creek. The direction of deeper ground water flow in the bedrock aquifer at this well and the other two city wells has not been determined. Permeability test of the shallow ground water determined that ground water meets the definition of protected water (>.44 m/day). The maximum concentration of nitrate was observed in MW2 at 202 mg/L which was located in the same vicinity and depth as the IDNR ground water sample results of 140 mg/L. Other monitoring wells, however, revealed nitrate concentrations in shallow ground water decline rapidly laterally to below 10 PPM. The results of ESS assessment of this site indicate rapid decline of nitrate laterally in shallow ground water and an impermeable (aquitard) layer 30 feet thick that separates shallow ground water from the bedrock aquifer that supplies water to the contaminated city well.

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.

The extent of nitrate ground water contamination exceeding state standards appears to be limited to a small area of soil and ground water on site. Low permeability of the underlying (clay) till above the bedrock aquifer appears to be an effective barrier to vertical migration of nitrate to the bedrock aquifer and suggests the ground water sampled in the on-site monitoring wells is not hydraulically connected to the deeper aquifer that serves the city well. It is possible that a combination of an unidentified point source of nitrate coupled with regional surface application of nitrogen fertilizer on area farm fields could be contributing to the elevated concentrations observed in well #3.

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.

The concern at the site is the off site Epworth city well #3, which has demonstrated elevated nitrate since 2001. To the east and north are agricultural fields with shallow bedrock conditions and sinkholes (karst) 3,800 feet away. Ground water movement in karst carbonate aquifers is very difficult to determine.

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

The additional ground water assessment conducted under the ESS has increased the level of knowledge of the hydrologic conditions at the site beyond that known from previous assessments by identification of a thick impermeable clay layer that separates the contaminated sand layer from the fractured carbonate aquifer. Based on this new information and the difficulty in characterizing a fractured bedrock aquifer, the IDNR has determined that Three Rivers Cooperative is not a likely source of contamination observed in the nearby city. The ESS identified a 30 foot thick (till) layer above the bedrock on the site that restricts vertical movement of shallow ground water to the bedrock aquifer. It is therefore recommended that no further assessment be conducted under CERCLA and that ground water conditions be monitored under state authority.

Form Reviewed: _____ **Date Reviewed:** 4/4/07 CL ~~4/27/07~~

REGION VII U.S. EPA SUPERFUND

SITE DISCOVERY ENTRY FORM

Discovery Lead *(choose one)*:

Discovery Date: 7/1/01 ☐ F-EPA Fund Fin ☒ S-State Fund Fin ☐ FF-Fed Fac ☐ EP-EPA-In-house ☐ TR Tribal Lead - Fund Fin.
Removal **Check if,** ☐ FUD Site

Site Name: Epworth City Well #3 **Initiated Date** 2/7/07 **Identified By:** ☐ Removal ☒ Site Assessment ☐
States

☐ Fed. Facilities ☐ Other Fed. Agency

Address: 303 North Center Street County Name: Dubuque

City, State, Zip: Epworth Iowa State ID (if one exists):_____ Congressional District:

NPL Status: ☐ Currently on the Final NPL ☒ Not on the NPL ☐ Deleted on the final NPL ☐ Pre-Proposal Site ☐ Site is Part of NPL Site
☐ Proposed for NPL ☐ Removed from Proposed NPL ☐ Withdrawn

Section: ☐ C-(STAR) SPFD Technical Assistannce/Re-Use Branch ☒ L-(EFLR) Enfr/Fund Lead RV Branch **Fed Fac Ind:** ☐ Federal Facility
☐ F-(FFSE) Federal Facilities/Apecial Emphasis Brnach ☐ M-(MOKS) MO/KS Remedial Branch ☐ Not a Federal Facility
☐ I-(IANE) IA/NE Remedial Branch ☐ O-(ER&R) Emergency Response & RV Branch ☐ Status Undetermined

List Site Alias Name (s): Three Rives cooperative

Directions to Site: From Des Moines travel east on Interstate 80 to interstate 380 north to highway 30. Go east on highway 30 to highway 13 north. Go north on highway 13 to highway 20 east. Take highway 20 east to Epworth exit. Go north into town on Center Street to the site located at 303 North Center. The facility is on the west side of the street, north of the R.R. tracks.

Site Description: The facility consists of one large warehouse building.

Site Size: 1

Site Dimension: ☒ Acres ☐ Square Feet ☐ Feet ☐ Square Miles ☐ Miles

USGS Quadrant: Epworth USGS Hydro Unit: _____

Latitude:42. 4470 **Longitude:** 90.9313
(Decimal Degree format/with release of 3.17 see attached required location data form)

Owner Operator Type
☐ Bank/Loan Company
☐ County Owned
☐ District Owned
☐ Federally Owned
☐ Former Federally Owned or Operated
☐ Government Owned/Contractor Operated
☐ Privately Owned/Government Operated
☐ Property Defaulted Back to Government
☐ Municipality
☐ Indian Lands
☐ Other
☒ Private
☐ Mixed Ownership
☐ State Owned
☐ Trustee, Federal
☐ Trustee, State

Operational Status: ☒ Active ☐ Inactive ☐ Unknown

Non-NPL Status (Choose one):
☐ Addressed as part of NPL site (AX)
☐ Combined PA/SI Ongoing (CO)
☐ Deferral of NPL Listing Dec. While States Oversee Resp. (SD)
☐ ESI Ongoing (EO)
☐ ESI Start Needed (ES)
☐ Fed Fac ESI Review Start Needed(FE)
☐ Fed Fac Prelim Assessment Rev Ongoing (PG)
☐ Fed Fac Prelim Assessment Rev Start Needed(PN)
☐ Fed Fac Site Inspection Rev Ongoing (FG)
☐ Fed Fac Site Inspection Rev Start Needed (FS)
☐ HRS Ongoing (HO)
☐ HRS Package Completed-Further Eval. Needed (HN)
☐ HRS Start Needed (HS)
☐ Integrated ESI RI Ongoing (IO)
☐ Integrated ESI/RI Start Needed (IS)
☐ Integrated Removal/Remedial Eval Ongoing (IN)
☐ Integrated Removal/Remedial Eval Start Needed (IR)
☒ NFRAP (NF)
☐ Other Cleanup Activity: Fed Fac-lead Cleanup (OF)
☐ Other Cleanup Activity: Private Party-Lead Cleanup(OP)
☐ Other Cleanup Activity: State-Lead Cleanup (OS)
☐ Other Cleanup Activity: Tribal-lead Cleanup (OT)
☐ PA Ongoing (PO)
☐ PA Start Needed (PS)
☐ Ref to Rvl-Further Assess Needed (RW)
☐ Referred to Rvl - NFRAP (RR)
☐ Removal Only Site (No Site Assess Work) (RO)
☐ SI Ongoing (SO)
☐ SI Start Needed (SS)
☐ SIP Ongoing (SG)
☐ SIP Start Needed (SN)
☐ Site Reassessment Ongoing (SR)
☐ Status Not Specified (SX)
☐ Site Reassessment Start Needed (RN)

Site Type: (Choose all that apply - for every main category chosen in bold at least one sub-category must be selected; if more than one main and sub category is selected indicate which is primary):
Primary designation: OT

☐ **MP-Manufacturing/Processing/Maintenance** - *Applicable sub-categories:*
- ☐ CA-Chemicals and allied products
- ☐ CG-Coal gasification
- ☐ CP-Coke production

☐ EP-Electric power generation and distribution.
- ☐ EE-Electronic/electrical equipment
- ☐ FT-Fabrics/textiles
- ☐ WP-Lumber and wood products/wood preserving/treatment
- ☐ MF-Metal fabrication/finishing/coating and allied industries
- ☐ OR-Oil and gas refining
- ☐ OP-Ordnance production
- ☐ PR-Plastics and rubber products
- ☐ PM-Primary metals/mineral processing
- ☐ RA-Radioactive products
- ☐ TA -Tanneries ☐ OT-Other-Description(needed):_____
- ☐ TS-Trucks/ships/trains/aircraft and related components

☐ **MI-Mining** - *Applicable sub-categories*
- ☐ CO-Coal ☐ ME-Metals ☐ NM-Non-metal minerals
- ☐ OG-Oil and Gas ☐ OT-Other-Description(needed):_____

☐ **WM-Waste Management** - *Applicable sub-categories*
- ☐ CL-Co-disposal landfill (municipal and industrial)
- ☐ ID-Illegal disposal/open dump
- ☐ IF-Industrial waste facility (non-generator)
- ☐ IL-Industrial waste landfill
- ☐ MD-Mine tailings disposal ☐ OT-Other-Desc.(needed):_____
- ☐ RW-Radioactive waste treatment, storage, disposal (non-generator)

☒ **OT-Other** - *Applicable sub-categories*
- ☒ AG-Agricultural (e.g., grain elevator)
- ☐ CS-Contaminated sediment site with no identifiable source
- ☐ DC-Dust control ☐ OT-Other-Desc.(needed):_____
- ☐ GP-Ground water plume site with no identifiable source
- ☐ MO-Military/Other Ordinance
- ☐ PS-Product storage/distribution
- ☐ RD-Research, development, and testing facility
- ☐ RC-Retail/commercial
- ☐ SE-Spill or other one-time event
- ☐ TP-Transportation (e.g., railroad yards, airport, barge docking, site)
- ☐ TW-Treatment works/septic tanks/other sewage treatment

☐ **RE-Recycling** - *Applicable sub-categories*
- ☐ AT-Automobiles/tires ☐ DT-Drums/tanks ☐ WO-Waste/used oil
- ☐ BS-Batteries/scrap metals/secondary smelting/precious metal recovery
- ☐ CC-Chemicals/chemical waste (e.g., solvent recovery)
- ☐ OT- Other-Description (needed):_____

(NOTE: Data analysts will send form to Records Center after data entry and QA.)

Updated by System Research Group
17FEB 05

Signatures:

State: Cal Lobby Date: 4/4/07 RPM/OSC/SAM: _____ Date: ___/___/___

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

I. SITE NAME AND LOCATION:					
NAME:	Three Rivers FS				
ADDRESS OR OTHER LOCATION IDENTIFIER:					
CITY:	Epworth	**STATE:**	Iowa	**ZIP:**	52054
DIRECTIONS TO SITE:			**MAP ATTACHED:**		yes
From Des Moines travel east on Interstate 80 to Interstate 380 north to highway 30. Go east on Highway 30 to highway 13 north. Go north on Highway 13 to Highway 20 east. Take Highway 20 east to Epworth exit. Go north into town on Center Street to the site located at 303 North Center. The facility is on the west side of the street, north of the R.R. tracks. The facility consists of one large warehouse building.					

II. PROGRAM CONTACTS:					
REQUESTED BY:	Ron King		**DATE OF REQUEST:**		4-5-06
AGENCY/OFFICE:	Region 7				
MAILING ADDRESS:	901 North 5th Street				
CITY:	Kansas City	**STATE:**	Kansas	**ZIP:**	66101
TELEPHONE:	1-913-551-7568	**FAX:**	1-913-551-4568		
EVALUATOR:	Matt Culp				
AGENCY/OFFICE:	Iowa DNR				
MAILING ADDRESS:	Wallace State Office Building				
CITY:	Des Moines	**STATE:**	Iowa	**ZIP:**	50319
TELEPHONE:	515-242-5087	**FAX:**	(515) 281-8895		

III. SITE INFORMATION:			
TYPE OF FACILITY:	Agriculture (fertilizer warehouse)	**TYPE OF OWNERSHIP:**	Private
OWNER/OPERATOR INFORMATION: Three Rivers FS			
SITE STATUS (active/inactive):	Active	**YEARS OF OPERATION:**	Over 25
OPERATIONAL HISTORY: (How was the site identified):			
The Three Rivers FS facility has been in operation for more than 25 years. Historically, fertilizer (dry) was delivered to the facility by rail car on the south side of the facility. Local testimony indicated spills were common from this method of delivery. This practice ceased in 1997. Since then fertilizer is delivered by truck. Fertilizer is now delivered on the north side of the facility and a concrete pad has been constructed to catch spills. Spillage from past handling practices from rail car delivery is suspected of causing or contributing to the detection of nitrate-nitrogen in excess of the drinking water standard of 10 PPM in the city well #3 located 300 feet from the Three Rivers Coop site. The site was identified by IDNR Water Supply and referred to Contaminated Sites and the PRP for further assessment of elevated nitrate in public drinking water well.			

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

IV. SUPERFUND SITE SCREENING CRITERIA

A. REMEDIAL CRITERIA

1. SOURCE AND WASTE CHARACTERISTICS

KNOWN OR SUSPECTED SOURCE TYPES AND LOCATIONS:
The agricultural fertilizer facility was a suspected source of contaminated ground water observed in the city well located 300 feet north of impacted well. Subsequent ESS field work identified impermeable aquitard layer that separates contaminated sand layer from the bedrock aquifer.

SIZE OF SOURCES AND QUANTITIES (Volume, Area):
Unknown

WASTE TYPES OR HAZARDOUS SUBSTANCES KNOWN OR SUSPECTED TO BE PRESENT:
Spilled (dry) nitrogen fertilizer

2. GROUNDWATER PATHWAY

What is the likelihood that a release to groundwater has occurred at the site?
(If a release is not suspected proceed to A.3)
A release to ground water has occurred at this site based on concentrations in ground water samples collected by the IDNR and confirmed by the PRP.

a. USE AND CHARACTERISTICS

GENERAL STRATIGRAPHY AND HYDROLOGY:
The general stratigraphy of the area is characterized by approximately five feet of fill over silt (loess) and silty-clay with a water filled sand layer at 40 feet. Below the sand layer is hard impermeable glacial till and carbonate (Silurian) bedrock is encountered at 80 feet. The bedrock serves as the local aquifer.

PRESENCE OF KARST TERRAIN:	Yes
DEPTH TO SHALLOWEST AQUIFER:	40 feet to sand aquifer bedrock aquifer and 80 feet to casrbonate aquifer.

PRIVATE WELLS WITHIN 4 MILES (location and population served):
Fifteen private wells are located within four--mile radius, the population served is unknown

MUNICIPAL WELLS WITHIN 4 MILES (location and population served):
Four public wells are located in the four-mile radius that serve the community of Epworth population 1500

DISTANCE TO NEAREST DRINKING WATER WELL:	300 feet to Epworth city well #3

WELLHEAD PROTECTION AREAS:
The site is within the wellhead protection area of the city of Epworth

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

3. SURFACE WATER PATHWAY		
What is the likelihood that a release to surface water has occurred at the site? **(If a release is not suspected proceed to A.4)** The likelihood of nitrogen release to surface water is low because of the distance to the nearest water body which is over 1,000 feet		
a. USE AND CHARACTERISTICS		
FLOOD FREQUENCY	Low the site is located in an upland location outside of the 500 year flood zone	
DISTANCE TO NEAREST SURFACE WATER:	1,000 feet	
SURFACE WATER BODIES WITHIN 15 DOWNSTREAM MILES: Hogan Creek a tributary to Little Maquoketa River is located 1,000 feet from the site. Hogan Creek lead to the Little Maquoketa River, which is 10,000 feet down stream of the site		
DESIGNATED AND/OR PROTECTED USES OF SURFACE WATER BODIES: Hogan Creek is a high quality resource Class B cold water stream. The Little Maquoketa River is a Class B warm water stream		
FISHERIES WITHIN 15 DOWNSTREAM MILES:	Unknown	
KNOWN OR POTENTIAL SENSITIVE ENVIRONMENTS AND WETLANDS WITHIN I5 DOWNSTREAM MILES: Not determined		
4. SOIL EXPOSURE PATHWAY		
What is the likelihood of exposure to hazardous substances at the site?		
There is a low potential for exposure to hazardous soil. Soil contaminated with nitrate has been detected at the site but below the surface.		
a. CHARACTERISTICS		
NUMBER OF PEOPLE LIVING WITHIN 200 FEET:	50	
SCHOOLS OR DAY-CARES:	None	
POPULATIONS WITHIN 1 MILE:	1500 (Epworth)	
NUMBER OF WORKERS AT THE FACILITY OR ADJACENT FACILITIES WHOSE CONTAMINATION IS SUSPECTED:		10
LOCATIONS OF KNOWN OR POTENTIAL TERRESTIAL SENSITIVE ENVIRONMENTS: none		

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

5. AIR PATHWAY	
What is the likelihood that a release of hazardous substances is migrating from the site to the air? (If a release is not suspected proceed to B.) No likelihood of air exposure as nitrate fertilizer has very low vapor pressure	
A Characteristics	
POPULATION WITHIN 4 MILES:	
DISTANCE TO NEAREST INDIVIDUAL:	
LOCATIONS OF KNOWN OR POTENTIAL SENSITIVE ENVIRONMENTS:	
WITHIN 0 TO ¼ MILE:	
WITHIN ¼ TO ½ MILE:	

B. REMOVAL CRITERIA	
IS THERE A RELEASE AS DEFINED BY THE NCP? (Yes/No)	yes
(A **RELEASE** is defined as any spilling, leaking, pumping, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant), but excludes: workplace exposures; engine exhaust; nuclear releases otherwise regulated; and the normal application of fertilizer. For purposes of the NCP, release also means threat of release. [40 CFR 300.410(e)])	
EXPLAIN THE RELEASE: Incidental spillage of nitrogen fertilizer may have produced elevated nitrate in ground water	
IS THE SOURCE A FACILITY AS DEFINED BY THE NCP? (Yes/No)	yes
(A FACILITY is defined as any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or POTW), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft or any site or area, where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise comes to be located; but does not include any consumer product in consumer use or any vessel. [40 CFR 300.410(e)])	
EXPLAIN THE SOURCE: The source is contaminated ground water from nitrogen fertilizer release(s)	

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

B. REMOVAL CRITERIA (continued):	
DOES THE RELEASE INVOLVE A HAZARDOUS SUBSTANCE, POLLUTANT, OR CONTAMINANT AS DEFINED BY THE NCP? (Yes/No)	Yes
(A **HAZARDOUS SUBSTANCE** means any substance, element, compound, mixture, solution, hazardous waste, toxic pollutant, hazardous air pollutant, or imminently hazardous chemical substance or mixture designated pursuant to the CWA, CERCLA, SDWA, CAA or TSCA. The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas. The definition of **POLLUTANT** or **CONTAMINANT** includes but is not limited to, any element, substance, compound, or mixture, including disease-causing agent, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through the food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunction or physical deformation, in such organisms or their offspring. . The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas.). [40 CFR 300.410 (e)]	
EXPLAIN WHICH HAZARDOUS SUBSTANCES, POLLUTANT OR CONTAMINANT: nitrate fertilizer	
IS THE RELEASE SUBJECT TO THE LIMITATION ON RESPONSE? (Yes/No)	no
(The **LIMITATIONS ON RESPONSE** provisions of the NCP (40 CFR 300.400(B) states that removals shall not be undertaken in response to a release: of a naturally occurring substance in its unaltered or natural form; from products that are a part of the structure of, and result in exposure within, residential buildings or business or community structures; or into public or private drinking water supplies due to deterioration of the system through ordinary use.).[40 CFR 300.410(e)]	
EXPLAIN THE LIMITIATION ON RESPONSE:	
DOES THE QUANTITY OR CONCENTRATION WARRANT RESPONSE? (Yes/No)	no
EXPLAIN: A removal response not warranted unless or until a more concentrated soil source is identified	
HAS A PRP BEEN IDENTIFIED? (Include name, address and telephone number)? (Yes/No)	yes
EXPLAIN: The PRP is the Three Rivers FS located 300 feet north of the affected well. Telephone: # 1-563-876-3394 Address 305 Center Avenue Epworth IA, 52045. The PRP conducted two additional site investigation to determine the extent of contamination.	
IS THERE AN ACTUAL OR POTENTIAL EXPOSURE TO HAZARDOUS SUSTANCES OR POLLUTANTS, OR CONTAMINANTS? (Yes/No)	yes
EXPLAIN: Potential exposure through drinking water has been severed by taking well off line.	

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

B. REMOVAL CRITERIA (continued):	
IS THERE ACTUAL OR POTENTIAL FOR CONTAMINATION OF DRINKING WATER SUPPLIES? (Yes/No)	yes
EXPLAIN: There is actual contamination but the well is now offline. Continued potential contamination still exists	
ARE THERE HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN DRUMS, BARRELS, OR BULK STORAGE CONTAINERS? (Yes/No)	no
EXPLAIN:	
ARE THERE HIGH LEVELS OF HAZARDOUS SUBSTANCES, POLLUTANTS OR CONTAMINANTS IN NEAR-SURFACE SOILS? (Yes/No)	no
EXPLAIN:	
ARE THERE CONDITIONS ON SITE WHICH MAY BE SUSCEPTIBLE TO IMPACT FROM ADVERSE WEATHER CONDITIONS? (Yes/No)	no
EXPLAIN:	
IS THERE A THREAT OF FIRE OR EXPLOSION? (Yes/No)	no
EXPLAIN: Contaminant is not flammable or has low explosive potential	
IS THERE A POTENTIAL FOR OTHER FEDERAL OR STATE RESPONSE MECHANISMS? (Yes/No)	no
IF YES, IDENTIFY THE APPROPRIATE PROGRAM AND EXPLAIN:	
ARE THERE OTHER SITUATIONS OR FACTORS WHICH WARRANT FURTHER SUPERFUND RESPONSE? (Yes/No)	no
EXPLAIN: Any further assessment should be of non-point sources	

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

V. SUPERFUND SITE SCREENING FINDINGS AND RECOMMENDATIONS	
FURTHER SUPERFUND RESPONSE ACTION REQUIRED; SUPERFUND CERCLIS ENTRY WARRANTED. (Yes/No)	

(Cite the appropriate criteria from SECTION IV as the basis for the above determination. If No Further Superfund Response, skip sections on removal or integrated assessment recommendations)

Issue	Yes	No	Unknown
Groundwater Pathway Threat	X		
Surface Water Pathway Threat		X	
Release or Threat of Release	X		
A facility or a Vessel	X		
Actual or Potential Exposure Threats	X		
High Levels of Contaminants in Surface Soil		X	
Threat of Fire or Explosion		X	
Direct Exposure Pathway Threat		X	
Air Pathway Threat		X	
Subject to Response Limitations		X	
Willing/Capable PRP Response	X		
Drums, Barrels or Bulk Containers Present		X	
Site Susceptible to Adverse Weather Conditions		X	
Referred to Another Program		X	

COMMENT:

REMOVAL ACTION RECOMMENDED (Yes/No)	No

(Cite one or more of the conditions or factors from Section IV. Removal Criteria, as a basis for recommending that a removal action be conducted)

Issue	Yes	No	Unknown
Exposure to Hazardous Substances or Pollutants or Contaminants		X	
Contaminated Drinking Water	X		
Contaminated Soil		X	
Other Response Mechanism		X	
Adverse Weather Impact		X	
Fire/Explosion Threat		X	
Drums, Barrels or Containers		X	
Other Factors		X	

COMMENT:

IOWA DNR SUPERFUND SITE PRE-CERCLIS SCREENING FORM

ADDITIONAL INTEGRATED ASSESSMENT RECOMMENDED (Yes/No)	No

(Cite the appropriate criteria from SECTION IV as the basis for recommending that additional site evaluation be performed)

Issue	Yes	No	Unknown
Groundwater Pathway Threat			
Surface Water Pathway Threat			
Release of hazardous Substances or Pollutant or Contaminants			
CERCLA Limitations on Response Provisions do not Apply			
Actual or Potential Exposure Threats			
High Levels of Contaminants in Surface Soil			
Threat of Fire or Explosion			
Direct Exposure Pathway Threat			
Air Pathway Threat			
Willing/Capable PRPs Willing to Respond at this Time			
Drums, Barrels or Bulk Containers Present			
Site Susceptible to Adverse Weather Conditions			
The Site is a Source as Defined by the NCP			
Contaminants Present in Sufficient Quantity or Concentration			
Endangered Species, Wetlands, or Other Sensitive Environments Which may be Impacted by the Site			
Other Federal, State, or Other Response Mechanisms Available to Investigate the Site			

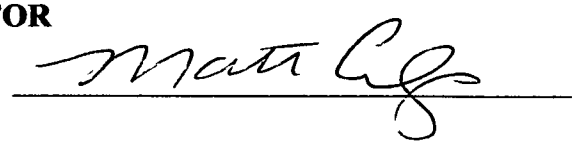
OTHER (DESCRIBE):

VI. ADDITIONAL INFORMATION OR COMMENTS

The extent of ground water contamination exceeding state standards appears to be limited to a small area of soil and ground water on site. Low permeability of the underlying (clay) till above the bedrock aquifer appears to be an effective barrier to vertical migration of nitrate to the bedrock aquifer and suggests the ground water sampled in the on-site monitoring wells is not hydraulically connected to the deeper aquifer that serves the city well. It is possible that a combination of an as yet identified point source of nitrate coupled with regional surface application of nitrogen fertilizer on area farm fields could be contributing to the elevated concentrations observed in well #3.

Recommendation:
The site has been placed on long-term semi-annual ground water sampling from all on site wells to monitor contamination and will be reviewed on five year basis or until other sources of contamination are found to account for the contamination observed in the city well.

VII. EVALUATOR

SIGNATURE: 

DATE:
TITLE: Environmental Specialist Senior
AGENCY: Iowa DNR