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Draft
Fourth
Five-Year Review Report

White Farm Equipment Company Site
Charles City
Floyd County, Iowa

January 2014

Region 7
United States Environmental Protection Agency
Lenexa, Kansas

Approved by:

_____ _____

Cecilia Tapia
Superfund Division Director
U.S. EPA, Region 7

Date:

Executive Summary

The fourth five-year review has been completed at the White Farm Equipment Company Site located in Charles City, Floyd County, Iowa.

The White Farm Equipment Company Site occupies approximately 20 acres and is covered by a vegetated soil cap which is sloped to provide runoff. The site is located in a former sand and gravel pit which was utilized by the White Farm Equipment Company as a solid waste landfill for the disposal of approximately 650,000 cubic yards (cy) of wet scrubber sludges, foundry sands, baghouse dusts, and other industrial wastes from 1971 until 1985.

The final remedy identified in the 1990 Record of Decision (ROD) for the White Farm Equipment Company site included installation of a protective cap over the landfill material to prevent direct contact and minimize infiltration and the transport of contaminants by surface water runoff. Groundwater sampling was conducted as part of the remedial design and no groundwater contamination above the groundwater performance standards was detected. Therefore, in accordance with the Statement of Work in the 1991 Consent Decree, groundwater treatment was not implemented. An Explanation of Significant Differences (ESD) was issued in 1992 which modified the type of cap to be installed, revised the time frame to complete construction of the cap, and clarified the groundwater point of compliance. The remedy selected in the ROD required long-term groundwater monitoring with the 1994 Operation and Maintenance (O&M) Plan establishing the groundwater sampling to occur at the time of the five-year reviews or on a 10-year frequency based on the results of the first five-year review sampling.

A site visit was performed on August 27, 2013 and it was determined the cap continues to prevent direct contact with the landfill materials and minimize infiltration and the transport of contaminants by surface water runoff. Review of the analytical data from groundwater monitoring efforts indicate that remedial action objectives (RAOs) identified in the Record of Decision (ROD), as amended by the ESD, have been achieved. Specifically, the groundwater contamination levels observed in previous sampling events have remained below the

groundwater performance standards. Due to the low levels of contamination, the United States Environmental Protection Agency (EPA) and Iowa Department of Natural Resources (IDNR) agreed that a 10-year sampling frequency would be acceptable for this fourth five-year review; therefore sampling did not occur as part of this five-year review.

Originally a Potentially Responsible Party (PRP) Site, the responsible party declared bankruptcy in late 2000, and the site is now Fund-lead. To insure the integrity of the cap, continued maintenance should be conducted by IDNR. Damage to two monitoring wells was observed during the 2004 five-year review. Further damage to monitoring wells was identified during the most recent site visit. It is recommended these wells be repaired or abandoned to reduce the risk of vandalism and the introduction of contaminants to the ground water.

It is required that five-year reviews of the White Farm Equipment Company site continue because contaminants remain at the site above levels which would allow for unlimited use and unrestricted exposure. However, due to the limited risk posed by the site, the site was designated Ready-for-Reuse and purchased under a contract for deed by a *bona fide purchaser* December 20th, 2012.

The remedy at the White Farm Equipment site is protective of human health and the environment. All threats at the site have been addressed through capping of contaminated soils and wastes on site, long-term groundwater monitoring, and an environmental covenant (Attachment C) which imposes activity and use limitations to maintain the protectiveness of the remedy.

Due to the limited risks posed by the site, it was designated as Ready-for-Reuse and sold under a contract for deed to a *bonafide purchaser*. The purchaser (to be referred to as 'land user' in this report), intends to utilize the site for grazing of livestock, specifically sheep, and potentially seasonal haying. These land use changes have been accepted by EPA and IDNR and do not affect the protectiveness of the remedy.

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List of Acronyms

ARARs	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cy	cubic yards
EPA	Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study
IAC	Iowa Administrative Code
IDNR	Iowa Department of Natural Resources
IEUBK	Integrated Exposure Uptake Biokinetic Model for Lead in Children
LDL	Laboratory Lowest Detection Limit
MCL	maximum contaminant level
NA	not applicable
NCP	National Contingency Plan
NPL	National Priorities List
NS	not sampled
O&M	operation and maintenance
PQL	Practical Quantitation Limit
PRP	Potentially Responsible Party
PVC	polyvinyl chloride
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act
ug/L	micrograms per liter

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: White Farm Equipment Company Site		
EPA ID: IAD065210734		
Region: 7	**State:** IA	**City/County:** Charles City/Floyd County

SITE STATUS	
NPL Status: Deleted	
Multiple OUs? No	**Has the site achieved construction completion?** Yes

REVIEW STATUS
Lead agency: State
Author name (Federal or State Project Manager): Shelley Brodie
Author affiliation: U.S. EPA Region 7
Review period: 06/22/2009 – 06/22/2014
Date of site inspection: 12/11/2013
Type of review: Policy
Review number: 4
Triggering action date: 06/22/2009
Due date *(five years after triggering action date)*: 06/22/2014

Issues/Recommendations

Issues and Recommendations Identified in the Five-Year Review:

	Issue Category: Monitoring
	Issue: Damage to protective casing and well cap on Monitoring Well WFE-5B
	Recommendation: Repair protective casing and well cap on WFE-5B

Affect Current Protectiveness	Affect Future Protectiveness	Implementing Party	Oversight Party	Milestone Date
No	No	State	EPA/State	September 2016

	Issue Category: Monitoring			
	Issue: Damage to protective casing and rising on Monitoring Well WFE-6A			
	Recommendation: Abandon Monitoring Well WFE-6A			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	No	State	EPA/State	September 2016

	Issue Category: Site Access/Security			
	Issue: Missing hazardous chemical warning signage			
	Recommendation: Affix chemical warning signage per the environmental covenant.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	No	Other	EPA/State	September 2019

Sitewide Protectiveness Statement (if applicable)

Protectiveness Determination:
Protective

Protectiveness Statement:
The remedy at the White Farm Equipment site is protective of human health and the environment. All threats at the site have been addressed through capping of contaminated soils and wastes on site, long-term groundwater monitoring, and an environmental covenant which imposes activity and use limitations to maintain protectiveness of the remedy.

1.0 Introduction

The purpose of five-year reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports. In addition, five-year review reports identify issues found during the review, if any, and recommendations to address them.

The EPA is preparing this five-year review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121(c) and the National Contingency Plan (NCP). CERCLA § 121(c) states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

EPA interpreted this requirement further in the NCP; 40 CFR § 300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

EPA Region 7 has conducted a five-year review of the remedial actions implemented at the White Farm Equipment Company Site in Charles City, Floyd County, Iowa. This review was conducted from May 2013 through June 2014. This report documents the results of the review.

This is the fourth five-year review for the White Farm Equipment Company Site. The triggering action for this review is five years after the date of the third five-year review for the site, which was completed June 2009. The five-year review is required due to the fact that metals and volatile organic contamination remains on site above levels that allow for unlimited use and unrestricted exposure.

2.0 Site Chronology

A chronology of significant site events and dates is included in Table 1.

Table 1: Chronology of Site Events

Event	Date
Site discovery following complaints from the Floyd County Board of Health.	1980
Preliminary assessment completed.	10/30/1985
Site inspection completed.	09/19/1986
Site proposed for the National Priorities List (NPL).	06/24/1988
An Administrative Order on Consent was signed by EPA and two responsible parties requiring completion of a site investigation.	04/14/1989
Remedial investigation (RI) completed by the responsible parties.	11/09/1989
Feasibility study (FS) and risk assessment completed.	06/1990
EPA-prepared focused FS completed.	07/1990
Final listing on the NPL.	08/30/1990
Record of Decision (ROD) was signed.	09/28/1990
A Consent Decree was signed by the responsible parties requiring that they design and perform the site cleanup.	11/12/1991
Explanation of Significant Difference (ESD) changing the capping material and groundwater treatment requirements was issued.	07/13/1992
Remedial design completed.	03/30/1994
Remedial action consisting of capping the landfill materials was initiated.	06/27/1994
Remedial action completed.	09/08/1995
First Five-Year Review	09/29/1999
EPA deleted the site from the NPL.	10/30/2000
Second Five-Year Review	09/29/2004
Third Five-Year Review	06/22/2009
Environmental Covenant recorded	10/16/2009
Ready for Reuse Determination	06/15/2011
Property sold under a contract for deed to *bonafide purchaser*	12/20/2012
Fourth Five-Year Review	*07/22/2014*

3.0 Background

3.1 Physical Characteristics

The White Farm Equipment Company site is located along the northern edge of the city of Charles City in Floyd County, Iowa. The site occupies approximately 20 acres at the southeast corner of Kellogg Avenue and Rotary Park Road. The site is in the location of a former oxbow lake formed by a cutoff meander of the Cedar River. Remnants of the oxbow lake still exist northwest and south of the site. The site is covered by a vegetated soil cap and is sloped to provide runoff. The site drains to the wetlands (remnants of the oxbow lake) to the northwest and south of the site and ultimately the Cedar River. The Cedar River is approximately 2,200 feet west-southwest of the site. Site maps showing the limits of the cap and locations of monitoring wells are provided in Attachment A.

The 1989 RI included an evaluation of the groundwater aquifers present at the site. An alluvial unconfined aquifer exists directly beneath the landfill area. A confined Cedar Valley aquifer, which is used as a source of potable water by Charles City, is located below the unconfined aquifer. A clay till layer exists between the two aquifer systems and no evidence of a hydraulic connection between the systems has been found. Furthermore, the hydraulic gradient of the alluvial unconfined aquifer is west-southwest, away from the Charles City municipal wells.

3.2 Land and Resource Use

The site is currently unoccupied and covered by a vegetated soil cap. A request was made by the land user to graze calves in 2011, the request was granted conditional approval by the EPA so long as the calves do not impair the protectiveness of the soil cap by causing erosion or creating conditions which may damage the soil cap including destruction of the vegetative cover. The land user began to graze livestock on the property in 2013, but sheep were grazed instead of calves. Additionally, the land user has requested permission to install a water well on the property, upgradient and outside the limits of the site but within the property boundary, which would supply drinking water for the sheep. The well would be installed by the land user, secured with a lock, and operate on a portable generator to prevent the ability for others to pump water from the well. The land user has also expressed interest in haying the field. The land user would

hay the field by using non-intrusive methods in order to maintain and protect the cap. The land user may discontinue grazing livestock and instead only hay the field, in which case no well would need to be installed. Installation of the water well was approved by the EPA and IDNR. The use of the water well for livestock would not violate the environmental covenant which prohibits "the construction, installation, maintenance, and use of any wells on the property for the purpose of extracting water for human drinking purposes or for the irrigation of food or feed crops".

The land use of the surrounding area is mainly agricultural and residential. A salvage yard is located adjacent to the northeast portion of the landfill. The land use for the site, prior to being purchased, and surrounding areas has not changed significantly since the Record of Decision (ROD) and Explanation of Significant Differences (ESD) were issued.

3.3 History of Contamination

White Farm Equipment Company operated the disposal site on this property, which it leased from H.E. Construction Company. In 1971, White Farm Equipment Company began disposing of foundry sand, bag house dust, and other industrial wastes at the site. Disposal activities ended in 1985.

In 1984, the (IDNR) required the White Farm Equipment Company to install monitoring wells for assessing whether environmental impacts from disposal activities had occurred. In 1985, EPA performed a preliminary assessment and from 1989 to 1990 a remedial investigation (RI), feasibility study (FS), and risk assessment were prepared to identify the nature and extent of contamination at the site.

The ROD, signed in 1990, specified a remedy including upgrading the landfill, installation of additional groundwater monitoring wells, extraction and treatment of groundwater, and long-term maintenance and monitoring. The site was added to the National Priorities List (NPL) in 1990. Additional groundwater sampling conducted as part of the Remedial Design indicated that there was no groundwater contamination above the groundwater performance criteria at the

point of compliance. Therefore, as discussed in the Statement of Work of the 1991 Consent Decree, groundwater treatment and extraction was not implemented. An ESD was signed in 1992 which modified the type of cap, revised the cap construction time frame, and clarified the groundwater point of compliance.

3.4 Initial Response

In 1984 the IDNR required that the White Farm Equipment Company install monitoring wells to assess whether disposal activities at the site had impacted the environment. An RI/FS was performed by the responsible parties from 1989 to 1990.

3.5 Basis for Response Action

The landfill materials at the site were found to contain elevated levels of metals and low levels of some organic contaminants. The contaminants of concern at the site identified in the risk assessment included benzene in the groundwater and lead in the soil and landfill material. The risk assessment identified ingestion of groundwater and direct contact with landfill material as exposure pathways which posed unacceptable risks at the site.

4.0 Remedial Actions

4.1 Remedy Selection

The ROD for the White Farm Equipment Company site was signed on September 28, 1990, to address the risks identified in the risk assessment. These risks included direct contact with landfill material and ingestion of contaminated groundwater. The ROD selected a remedy to: 1) control surface water runoff and infiltration through installation of a low permeability cap, and 2) restore groundwater to allow its use as a potable water supply through extraction and treatment. The 1991 Consent Decree required additional groundwater monitoring during the remedial design to confirm the need for groundwater extraction and treatment. The remedial design sampling indicated that no groundwater contamination existed above the groundwater performance criteria at the point of compliance. Therefore, groundwater extraction and

treatment was not implemented. An ESD was issued July 13, 1992 that modified the type of cap to be installed, revised the construction time frame, and clarified the groundwater point of compliance. The major components of the final remedy for the site included the following:

- Implementation of institutional controls, including a restrictive covenant (replaced by an environmental covenant in 2009).
- Regrading the landfill to reduce runoff and erosion.
- Capping of the landfill in accordance with State of Iowa solid waste landfill closure requirements.
- Conducting groundwater monitoring during the five-year reviews (did not occur during this five-year review).
- Performing operation and maintenance (O&M) of the fencing and landfill cover.

4.2 Remedy Implementation

In a Consent Decree in 1991, Allied Products Corporation agreed to perform the remedial design and construct the remedial action. The remedial design and construction of the remedial action were conducted in accordance with the ROD as modified by the ESD. The remedial design was approved by EPA on March 30, 1994.

The remedial action construction activities consisted of installing the compacted cap, vegetating the cap, installing perimeter fencing, and instituting deed restrictions. A restrictive covenant for the property was recorded and filed on October 5, 1992, in Floyd County. The restrictive covenant was replaced by an environmental covenant on October 16, 2009. The environmental covenant currently imposes the following activity and use limitations for the property:

- The construction, installation, maintenance, and use of any wells on the property for the purpose of extracting water for human drinking purposes or for the irrigation of food or feed crops.
- The soil cap located on the property shall be maintained in good repair in order to prevent direct contact with the landfill materials, reduce infiltration and leaching of contaminants and minimize run-off transport of contaminants.

- The soil cap located on the property shall not be excavated or disturbed except for minor excavations necessary to install, maintain, or repair fences unless approved in advance in writing by the EPA or its assigns.
- The fence located on the property shall be maintained in good condition and repair. The hazardous chemical warning signs shall continuously be displayed in a conspicuous place on said fence, and such signs shall be maintained in legible condition.

These restrictions run with the land and are binding on all owners. The remedial action was constructed from mid-1994 to mid-1995. Construction completion was achieved when the Site Closeout Report was completed on September 8, 1995. A copy of the environmental covenant is included in Attachment C.

4.3 Operational and Functional Activities

O&M activities at the site since construction completion have been performed in accordance with the O&M plan prepared for the site in January 1994. Post-closure site activities were conducted by the responsible party since completion of the remedial action construction and included inspection of the following items:

- Final cover
- Groundwater monitoring wells
- Drainage facilities
- Storm water retention areas
- Access road
- Perimeter fencing, gates, and signs

Under the O&M Plan, groundwater monitoring is to be performed concurrently with the five-year review process. The O&M Plan allowed for the sampling frequency to be to a 10 year period should the first five-year review sampling event show no parameter values over the Practical Quantitation Limits (PQL). The sampling event for the first five-year review resulted in none detects for all contaminants which demonstrates none of the contaminants exceeded the PQLs. Shortly after the October 2000 post closure site inspection, Allied Products Corporation filed for bankruptcy. The site became Fund-lead with EPA and IDNR taking over responsibility for maintenance of the site. Sampling was not performed for this five-year review with EPA and

IDNR agreeing to use a 10-year frequency due to the limited detections from previous sampling events.

Until Allied Products Corporation declared bankruptcy in 2000, they complied with a Consent Decree which stated:

> Within thirty (30) days after entry of this consent decree, the Owner Settling Defendant shall submit for recording by the Recorder of Deeds, Floyd County, Iowa, a restrictive covenant which shall run with the property comprising the Site and which prohibits the construction, installation, maintenance, or use of any wells on the described property for the purpose of extracting water for human drinking purposes or for the irrigation of food or feed crops. Thereafter, each deed, title, or other instrument of conveyance for property included in the Site shall contain such a restrictive covenant.

A restrictive covenant for the property was recorded and filed on October 5, 1992, in Floyd County. An environmental covenant replaced the restrictive covenant October 16, 2009.

5.0 Progress Since Last Review

The protectiveness statement provided in the last five-year review in 2009:

> The remedy at the White Farm Equipment site is protective of human health and the environment. All threats at the site have been addressed through capping of contaminated soils and wastes on site, long-term groundwater monitoring, and a restrictive covenant that prohibits the installation of any wells for the purpose of extracting water for human drinking purposes or for the irrigation of food or feed crops.

Three issues were identified in the last five-year review. None of these issues were considered to have an impact on the current or future protectiveness of the remedy. The current status of these issues is as follows:

Issue 1: Damaged protective casing to monitoring well WFE-5B.

The third five-year review in 2009 recommended that the casing on WFE-5B be repaired. Originally this recommendation was made in the second five-year review in 2004. Based on the site inspection, repairs to WFE-5B were not completed. Additionally, the well cap was found to be missing, with the well open to the environment.

Issue 2: Damaged protective casing and riser on monitoring well WFE-6A.

The third five-year review recommended that well WFE-6A be abandoned. Originally this recommendation was made in the second five-year review in 2004. During the most recent site inspection, the well riser was found detached and laying in the underbrush nearby, likely due to a vehicle striking the well casing and dislodging the pad, casing, and riser. It is recommended the remaining portion of the well below the ground surface be abandoned, as the well is beyond repair.

Issue 3: Missing well labels.

The third five-year review recommended that labels be attached to the monitoring wells. During the site inspection, no labels were observed on wells WFE-5B, WFE-5A, or WFE-6B. Well WFE-6A was found to be destroyed, and wells WFE-7A and WFE-7B could not be visually inspected due to overgrowth and standing water which prevented access to the wells. It is recommended a permanent well label be affixed to all monitoring wells.

Other significant items that have occurred since the 2009 five-year review include:

- EPA has completed the Ready-for-Reuse process for the site
- An Environmental Covenant has been issued for the site
- A *bonafide prospective purchaser* has entered a contract for deed to purchase the site from H.E. Construction Company

6.0 Five-Year Review Process

6.1 Administrative Components

The five-year review process was conducted by Shelley Brodie, the EPA Region VII Remedial Project Manager (RPM) for the site, supported by Kenneth Kamp, Paul Speckin, and Cathy Forgét of the U.S. Army Corps of Engineers, Kansas City District.

6.2 Community Involvement

A public notice regarding the initiation of the FYR was placed in the Charles City Press on <date needed once the notice is published>, notifying the public of the start of the FYR process. The completed FYR report will be available at the Site information repository, the Charles City Public Library, 106 Milwaukee Mall, Charles City, IA 50616; the EPA Superfund Division Records Center, 11201 Renner Boulevard, Lenexa, Kansas 66219; and IDNR offices, 502 E. 9th Street, Des Moines, IA 50319. A copy of the public notice can be found in Attachment D.

6.3 Document Review

The following documents were reviewed as part of the current five-year review:

- Final Draft Remedial Investigation Report, November 9, 1989.
- Operation and Maintenance Plan for the White Farm Equipment Landfill Site, January 1994.
- Groundwater monitoring results from 1999, 2004, and 2008
- Record of Decision, September 28, 1990.
- Explanation of Significant Differences, July 13, 1992.
- Second Five-Year Review Report, September, 2004.
- Consent Decree, lodged July 14, 1992, filed September 18, 1992, signed by the Defendants November 1991.
- Third Five-Year Review Report, June, 2009.
- Environmental Covenant, October 2009.
- Contract for Deed, December 20, 2012.

6.4 Data Review

Due to the low levels of contamination in previous sampling events, EPA and IDNR have agreed a 10-year sampling frequency will be used. No groundwater monitoring was performed for this

five-year review, the next groundwater sampling event will occur with the next five-year review in 2019. A 10-year sampling frequency was allowed under the 1994 O&M Plan if contaminant levels were demonstrated to be below the PQL during the first five-year review. All samples from the first five-year review were shown to be non-detect, which demonstrates the values to be below the Quantitation Limit. Groundwater monitoring at the White Farm Equipment Company Site was completed as part of the previous five-year reviews in June 1999, May 2004, and December 2008 for inclusion in the first, second, and third five-year reviews.

Groundwater samples were collected in 2008, from four of the six existing monitoring wells (WFE-5A, WFE-6B, WFE-7A, and WFE-7B). These groundwater samples were analyzed for the presence of benzene, cadmium, chromium, and lead and the results were compared with the groundwater performance criteria set for the site. Low flow sampling techniques were used for the first two wells sampled (WFE-5A and WFE-7A). Low flow sampling was initiated on WFE-6B, but a bailer was used to actually collect the sample due to failure of the flow control panel prior to collecting the sample using this technique. Failure of the control panel was thought to be caused by the extreme low temperatures. A bailer grab sample was also collected from well WFE-7B due to the inoperable control panel. These samples were not filtered in the field and were preserved and containerized in accordance with the Quality Assurance Project Plan (QAPP).

Table 2 presents the results of the samples collected for the first, second, and third five-year reviews as well as the groundwater performance standards. The groundwater performance standard for benzene was set in the ROD. The groundwater performance standards for cadmium, chromium, and lead were set in the 1991 Consent Decree.

As presented in Table 2, the levels of benzene, cadmium, chromium, and lead in the groundwater have continuously remained well below the groundwater performance standards set for the site. The four monitored analytes have rarely had detections above the quantitation limits. The limited number of low detections of metals were from the side gradient wells and likely not site related. Additionally, in the 2008 sampling event, the field crew disturbed the sedimentation

within the well while measuring the depth prior to sampling WFE-7A. This increase in sedimentation in the well is likely the source of the very low levels of chromium and lead detected.

Table 2: Monitoring Well Sampling Results

Monitoring Well	Analyte (ug/L)											
	Benzene			Cadmium			Chromium			Lead		
	1999	2004	2008	1999	2004	2008	1999	2004	2008	1999	2004	2008
WFE-5A	1.0 U	1.0 U	0.50 U	0.44 U	3.0 U	1.00 UJ	0.88 Bu	15.0 U	2.00 U	1.9 U	50.0 U	1.00 U
WFE-5B	1.0 U	1.0 U	NS	0.44 U	3.0 U	NS	0.97 Bu	15.0 U	NS	1.9 U	50.0 U	NS
WFE-6A	1.0 U	1.0 U	NS	0.44 U	3.0 U	NS	0.88 Bu	15.0 U	NS	1.9 U	50.0 U	NS
WFE-6B	1.0 U	NS	0.50 U	0.44 U	NS	1.00 UJ	0.96 Bu	NS	2.00 U	1.9 U	NS	1.00 U
WFE-7A	1.0 U	NS	0.50 U	0.44 U	NS	1.00 UJ	0.88 Bu	NS	2.04	1.9 U	NS	1.12
WFE-7B	1.0 U	NS	0.50 U	0.44 U	NS	3.1	1.1 Bu	NS	2.00 U	1.9 U	NS	1.00 U
Performance Standard	1.0			5.0			100.0			50.0		

Notes:

- * The groundwater performance standard for benzene was set in the ROD. The groundwater performance standards for cadmium, chromium, and lead were set in the 1991 Consent Decree.
- 1999 samples were collected by the responsible party's contractor on June 22 and 23, 1999.
- 2004 samples were collected by EPA's contractor, on March 30 and 31, 2004.
- 2008 samples were collected by US Army Corps of Engineers on Dec. 4 and 5, 2008
- All values are in micrograms per liter (ug/L).
- NS - No sample was collected. In 2008 sampling event, well WFE-5B cap was not functional and frozen shut and WFE-6A was damaged and could not be sampled.
- U - Not detected above reporting limit listed.
- J - The identification of the analyte is acceptable; the reported value is an estimate.

6.5 Site Inspection

A site inspection was conducted on August 27, 2013. The purpose of the site inspection was to identify the existing condition of the remedy and any changes which could negatively affect the protectiveness of the remedy. The site inspection included visual assessment of the final cover, the groundwater monitoring wells, the drainage channels and storm water retention areas, the access road, the perimeter fencing, gates, and signs. Photos from the site inspection are included in Attachment F.

The cover was inspected by walking the site perimeter and assessing the condition and coverage of vegetation, as well as to identify any small erosion features along the slopes. The cover appeared to be in good condition with few volunteer trees in the central area of the site. The land user intends to remove the volunteer trees in order to hay the field. Some volunteer trees were also noted along the perimeter of the landfill, outside of the drainage swales, and near the sedimentation basins. Both the EPA and Iowa DNR had no concerns regarding the presence of the volunteer trees. It is not believed these present an imminent risk to the integrity of the landfill cover. The perimeter fence and gates were in good condition and "No Trespassing" signs were present and legible.

The land user had grazed sheep for two months prior to the site inspection; the landfill cap integrity and vegetative cover did not appear to be impacted from the grazing of the sheep. The land user identified the desire to use the site for haying instead of grazing due to a lack of precipitation to sustain vegetation for grazing. The land user would utilize a non-intrusive seeding method which would not impact the landfill cap. The EPA and Iowa DNR had no concerns regarding this use of the site.

Two of the monitoring wells located along Kellogg Road, west of the site, were damaged. Monitoring well WFE-6A has been destroyed from above ground surface. Monitoring well WFE-5B is missing the well casing locking cover, as well as the PVC riser cap. The monitoring wells located south of the site, WFE-7A and 7B were not able to be visually inspected due to vegetative overgrowth and standing water. The previous site inspection noted the wells were in

good condition. Based on the distance of wells WFE-7A and 7B from the road and difficulty to access the wells, it is unlikely substantial damage or vandalism would have occurred at the wells. Well WFE-5A was observed to be in good condition.

The Charles City Library was visited to check the status of the administrative record; all files were current including the most recent five-year review performed in 2009. The Floyd County Recorder's Office was also visited to check the status of the deed and to verify the environmental covenant was attached. All documents found at the County Recorder's Office identified cross-references which led to the environmental covenant. All documentation was found to be current and reflected the environmental concerns which exist at the site.

6.6 Interviews

Interviews with Shelley Brodie, EPA RPM; Bob Drustrup IDNR PM; and Matt Ross, the current land user, were conducted through discussions during the site inspection; a formal interview form was not drafted for this five-year review due to the limited comments. Since the last FYR, EPA, IDNR, and the current land user have received no complaints or concerns from the community or adjacent land owners regarding the site. Mr. Ross indicated there has been no vandalism or unauthorized intrusion onto the site since he has been under contract to purchase the property. Mr. Ross also indicated he had originally intended to graze sheep on the site but found the lack of precipitation during the summer months did not support enough vegetative growth to support this activity. He was proposing instead to hay the site and indicated he would use a no-till drilling method to plant the seed to minimize disturbance of the cover. Ms. Brodie, EPA and Mr. Drustrup, IDNR did not have any concerns with this proposed use of the site but indicated Mr. Ross should submit a request in writing so that this site use could be formally documented and approved. There were no other issues or concerns expressed during the site inspection regarding current and proposed use of the site or protectiveness of the remedy.

7.0 Technical Assessment

The five-year review must determine whether the remedy at a site is protective of human health and the environment. The EPA guidance describes three questions used to provide a framework for organizing and evaluating data and information and to ensure all relevant issues are considered when determining the protectiveness of a remedy. These questions are assessed for the site in the following paragraphs. At the end of the section is a summary of the technical assessment.

7.1 Question A

Is the remedy functioning as intended by the decision documents?

YES

7.1.1 Remedial Action Performance

Review of documents, ARARs, risk assumptions, and the results of the site inspection indicate the remedy for the site is functioning as intended by the ROD, and as modified by the ESD. The landfill cap has prevented direct contact with contaminated landfill materials and minimized surface water runoff and infiltration. Analytical results from the previous five-year review groundwater sampling efforts indicate groundwater has not exceeded performance criteria.

7.1.2 System Operations and Maintenance

The operation and maintenance of the cap has been effective. The land user has initiated removal of vegetative growth along the fence line, as well as removal of volunteer trees. "No Trespassing" signs along the fence line were legible and in good condition, but a hazardous chemical warning sign was not present at the entry gate which had been present during the previous five-year review. The environmental covenant requires chemical warning signs be present at the site. Repairs to damaged wells or abandoning the wells are recommended to minimize any risk of vandalism or introduction of contaminants to the groundwater. Although sampling has not been performed as part of this five-year review, the results of previous sampling events were found to be below the performance criteria with no evidence of off-site transport. The O&M Plan allows for a 10-year sampling frequency due to the low contaminant levels originally detected during the first five-year review, and further supported by the

subsequent sampling events. EPA and IDNR have consented to a 10-year sampling frequency. Consideration should be given to to re-developing the well network prior to the next sampling event, which would occur during the next five-year review in 2019, due to the time between sampling events. Brush clearing in the area of WFE-7A and WFE-7B would allow for easier access to the wells for sampling.

7.1.3 Implementation of Institutional Controls and Other Measures

The environmental covenant went into effect on October 16, 2009. The environmental covenant imposes the following activity and use limitations for the property:

- The construction, installation, maintenance, and use of any wells on the property for the purpose of extracting water for human drinking purposes or for the irrigation of food or feed crops.
- The soil cap located on the property shall be maintained in good repair in order to prevent direct contact with the landfill materials, reduce infiltration and leaching of contaminants and minimize run-off transport of contaminants.
- The soil cap located on the property shall not be excavated or disturbed except for minor excavations necessary to install, maintain, or repair fences unless approved in advance in writing by the EPA or its assigns.
- The fence located on the property shall be maintained in good condition and repair. The hazardous chemical warning signs shall continuously be displayed in a conspicuous place on said fence, and such signs shall be maintained in legible condition.

These restrictions run with the land and are binding on all owners. The Floyd County Recorder's Office was visited during the five-year review site visit to check the status of the deed and to verify the environmental covenant was attached. All documents found at the County Recorder's Office identified cross-references which led to the environmental covenant. All documentation was found to be current and reflected the environmental concerns which exist at the site. A copy of the environmental covenant is included in Attachment C.

Although "No Trespassing" signs were documented at the site and in good condition, no hazardous chemical warning signs were observed. Due to the historical low levels of contamination at the site, current use of the site, and lack of exposure pathways, this issue is not considered to be significant or a concern to the protectiveness of the remedy.

7.2 Question B

Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

YES

7.2.1 Changes in Standards and To-Be-Considered Criteria

The cleanup goals identified in the ROD for the soil at the site were calculated from the risk assessment and assume direct contact and ingestion of soil and a hazard index of 1. All these levels were achieved with the completion of the cap construction. Additionally, the contaminant concentrations in the groundwater at the point of compliance continue to meet site ARARs which are the site specific groundwater performance criteria as noted in Table 2.

EPA set the cleanup goals in the ROD for groundwater at the lower of either MCLs or groundwater action levels set in the Iowa Administrative Code. The groundwater action level for lead has changed from 50 micrograms per liter (ug/L) to 15 ug/L because the maximum contaminant level (MCL) set in the Safe Drinking Water Act was changed. However, the remedy remains protective because the groundwater monitoring conducted during the five-year reviews, remedial design, and the RI, has consistently found the groundwater lead concentrations at the point of compliance to be well below the MCL. Furthermore, the risk assessment indicated that lead contamination did not drive the groundwater ingestion risks at the site. Therefore, preparation of an ESD documenting the changed action level is not recommended.

7.2.2 Changes in Exposure Pathways, Toxicity, and Other Contaminant Characteristics

The risk assessment completed for the site identified benzene as the sole driver of the groundwater exposure pathway and lead as the sole driver for the soil exposure pathway. With

the transfer of ownership in 2013, a new exposure pathway was qualitatively evaluated as part of the five year review. The new landowner will be using the site for grazing sheep or other livestock as well as for growing feed for livestock. Based on the site information provided, this land use change in exposure pathways will not pose an unacceptable risk at the site for the following reasons.

- The landfill is still well protected by the cap, and therefore the direct contact with contaminated soil pathway is incomplete.
- The cap also eliminates the complete pathway due to ingestion of crops grown in contaminated soil, as well as incidental ingestion of soil by the grazing livestock.
- The 2013 site visit determined that the cap was intact, and as long as the cap is adequately maintained all pathways involving direct contact with soil by animals or humans should be considered incomplete.

Additionally, the new landowner is proposing to install a new livestock water well on the property but outside and upgradient of the landfill cap, and outside of the limits of the landfill cover. However, this is still protective because:

- It is upgradient of any potential contamination
- It will not be used for human consumption or irrigation, in accordance with the environmental covenant
- Since 1991, there have been very low levels of any contamination detected in groundwater

Lead risks are now evaluated by estimating blood-lead levels using the Integrated Exposure Uptake Biokinetic Model for Lead in Children (IEUBK Model), rather than calculating a hazard index for exposure to lead-contaminated soil as was done in the 1990 risk assessment prepared for the White Farm Equipment Company site. However, the cap at the site had no signs of degradation at the site visit in 2013, and is still adequate to prevent exposure to the landfill materials and minimize surface water runoff and infiltration. Therefore, since there is no complete exposure pathway to potentially contaminated soils, recalculation of the cleanup levels for the site using the IEUBK Model is not necessary.

The EPA toxicity values for benzene have been modified since the risk assessment at White Farm was completed. The cancer slope factor for benzene used in the 1990 risk assessment for the White Farm Equipment Company site was $2.9x10^{-2}$ $(mg/kg\text{-}day)^{-1}$. Toxicity information for benzene was modified in 2000; however, the slope factor used in 1990 falls within the current range of oral slope factors published by EPA, which is $1.5x10^{-2}$ $(mg/kg\text{-}day)^{-1}$ to $5.5x10^{-2}$. Additionally, benzene does not affect the protectiveness of the remedy since it has not been detected in the monitoring events, and there are land use controls at the site to prevent human consumption of groundwater under the landfill.

Some state entities, notably, the New Jersey Department of Environmental Protection, have released new toxicity values for chromium. Chromium was not identified as a COC in the ROD after being characterized in the 1989 RI as having no chromium release at the site. EPA chromium toxicity values have not changed since the risk assessment was completed and the State of Iowa has not revised the IAC to address new toxicity values for chromium. The new chromium toxicity values being used by New Jersey do not impact the protectiveness of the remedy at the site at this time. There are no receptors using the groundwater which would create a complete pathway for chromium exposure and the land use controls at the site prevent human consumption of groundwater under the landfill.

Table 3: Summary of Toxicity Changes for Contaminants of Concern

Contaminant	Medium	Remedial action objectives – MCL or Iowa ARARs	Slope Factor (oral) used in risk assessment	Current oral slope Factor (EPA, 2013)
Benzene	Groundwater	1 ug/L	$2.9x10^{-2}$ $(mg/kg\text{-}day)^{-1}$	1.5×10^{-2} to 5.5×10^{-2} $(mg/kg\text{-}day)^{-1}$

EPA, Integrated Risk Information System (IRIS), Online version retrieved 8/29/2013.

7.3 Question C

Has any other information come to light that could call into question the protectiveness of the remedy?

NO

No new ecological targets have been identified at the site. Because of the bankruptcy of the responsible party the site is Fund-lead and O&M is conducted by IDNR. No other events have occurred within the last 5 years which would affect the protectiveness of the remedy. No evidence of flooding or other natural disaster was observed or reported for the site. The new land user has utilized the site in compliance with the environmental covenant. There is no other information which calls into question the protectiveness of the remedy.

7.4 Technical Assessment Summary

Based on the data reviewed and the site inspection, the remedy is functioning as intended by the ROD, and as revised by the ESD. There have been no changes in the physical conditions of the site which would affect the protectiveness of the remedy. The concentrations of benzene, cadmium, chromium, and lead have continually been below the groundwater performance standards. Wells WFE-5B and WFE-6A, in their current condition, are an open conduit for potential introduction of contaminants to the groundwater. It is recommended damage to monitoring well WFE-5B be repaired so that the well may be utilized for long-term monitoring of the groundwater. It is recommended monitoring well WFE-6A be abandoned since the well is beyond repair and all above ground portions of the well have been destroyed. Permanent well labels should be attached to monitoring wells.

8.0 Issues

Table 4: Issues

Issue #	Issue	Affects Protectiveness (Y/N)	
		Current	Future
1	Damage to protective casing and missing well cap on Monitoring Well WFE-5B	N	N
2	Destruction to protective casing and riser on Monitoring Well WFE-6A	N	N
3	Missing hazardous chemical warning signs	N	N

9.0 Recommendations and Follow-Up Actions

Below is a list of recommended actions to address the issues identified in section 7.0 above.

Table 5: Recommendations and Follow-Up Actions

Issue #	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
1	Repair protective casing and well cap on WFE-5B	IDNR	EPA	Sep. 2016	N	N
2	Abandon Monitoring Well WFE-6A	IDNR	EPA	Sep. 2016	N	N
3	Post hazardous chemical warning signs at site boundary	Site Owner	EPA/IDNR	Sep. 2019	N	N

10.0 Protectiveness Statements

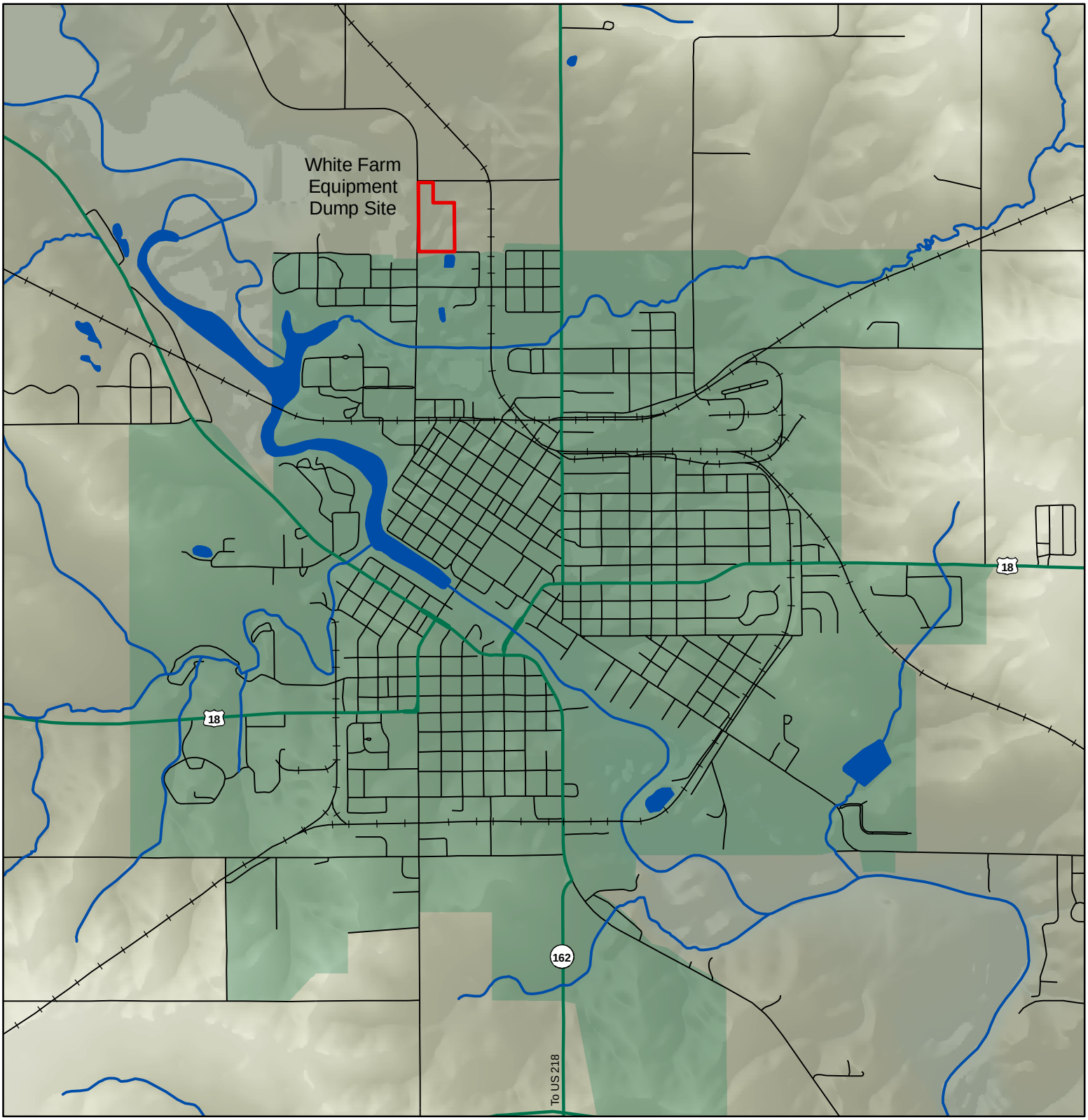
The remedy at the White Farm Equipment site is protective of human health and the environment. All threats at the site have been addressed through capping of contaminated soils and wastes on site, long-term groundwater monitoring, and an environmental covenant which imposes activity and use limitations at the site in order to maintain the protectiveness of the remedy. Recent changes to the land use have not introduced any threat to the protectiveness of the remedy.

11.0 Next Review

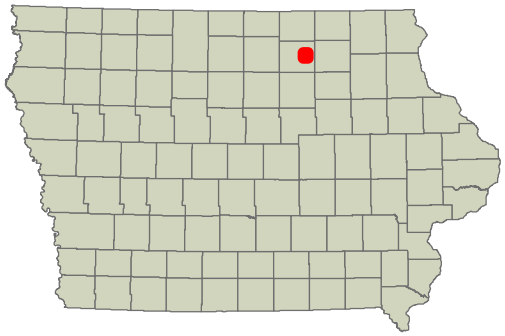
The next five-year review for the White Farm Equipment Site is required by June 22, 2019, five years from the date of this review.

Attachment A

Figures



Area of Interest



N

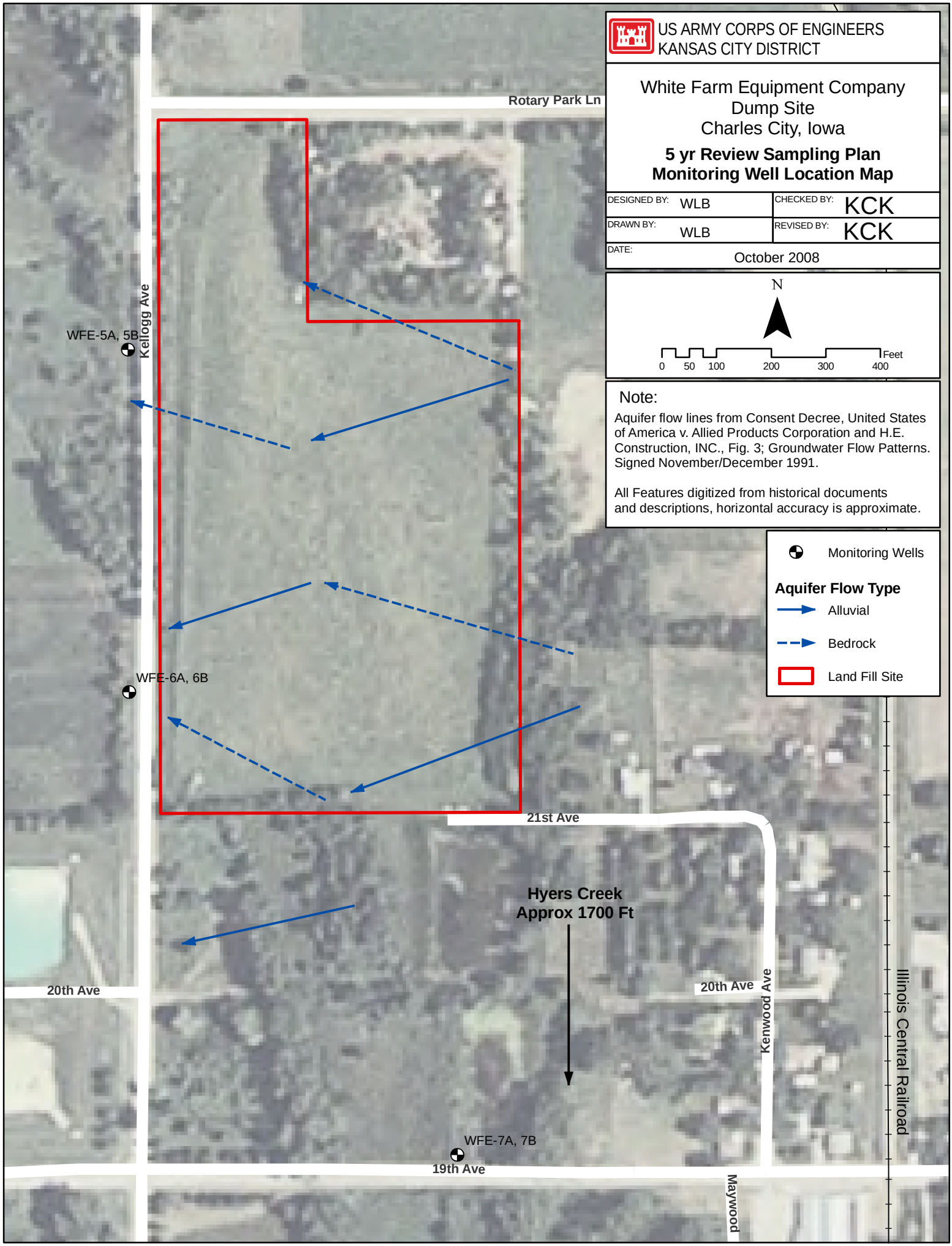
0 455 910 1,820 2,730 3,640 Feet

US ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

White Farm Equipment Company
Dump Site
Charles City, Iowa

5 yr Review Sampling Plan
Location Map

DESIGNED BY: WLB	CHECKED BY: KCK
DRAWN BY: WLB	REVISED BY: KCK
DATE: October 2008	


US ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT
White Farm Equipment Company
Dump Site
Charles City, Iowa
5 yr Review Sampling Plan
Monitoring Well Location Map
DESIGNED BY: WLB
CHECKED BY: KCK
DRAWN BY: WLB
REVISED BY: KCK
DATE: October 2008
N
0 50 100 200 300 400 Feet
Note:
Aquifer flow lines from Consent Decree, United States of America v. Allied Products Corporation and H.E. Construction, INC., Fig. 3; Groundwater Flow Patterns. Signed November/December 1991.
All Features digitized from historical documents and descriptions, horizontal accuracy is approximate.
Monitoring Wells
Aquifer Flow Type
Alluvial
Bedrock
Land Fill Site
Rotary Park Ln
Kellogg Ave
WFE-5A, 5B
WFE-6A, 6B
21st Ave
Hyers Creek
Approx 1700 Ft
20th Ave
20th Ave
Kenwood Ave
Illinois Central Railroad
WFE-7A, 7B
19th Ave
Maywood

Attachment B

ARARs

Chemical-Specific ARARs		
Regulation	Requirement Synopsis	Comments
567 IAC §133.2 (455B, 455E)	Establishes hierarchy to be used to establish cleanup levels for groundwater.	Groundwater performance standards were set based on the hierarchy presented in the regulation. Groundwater was required to meet the performance standards at the point of compliance which was set at the limits of the landfill. Compliance with groundwater performance standards is measured through monitoring conducted during the five-year reviews.
Action-Specific ARARs		
567 IAC §103.2(13)	Provides closure requirements for solid waste landfills.	A cap was installed over the landfill materials that met the requirements of the regulation.
Location-Specific ARARs		
40 CFR Part 6, Appendix A	Describes EPA policy on implementing Executive Order 11990 for Wetlands Protection.	A cap was installed over the landfill materials to minimize surface water runoff to the adjacent wetlands.

Attachment C

Environmental Covenant

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into by and between H.E. Construction, Inc. ("H.E. Construction"), an Iowa Corporation, as both "Grantor" and "Holder" pursuant to the Iowa Uniform Environmental Covenants Act codified at Chapter 455I of the Iowa Code.

RECITALS

WHEREAS, H.E. Construction, whose mailing address is 3011 190th Street, Charles City, IA 50616, is the owner in fee simple of that real property legally described on Attachment 1 hereto, the "Property;"

WHEREAS, the White Farm Equipment Dump Superfund Site ("Site") is located on the Property, which the EPA, pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, placed on the National Priorities List ("NPL"), set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on August 30, 1990;

WHEREAS, on November 13, 1989, the Site was listed on the State of Iowa's Registry of Confirmed Hazardous Waste or Hazardous Substance Disposal Sites ("Iowa Registry") pursuant to Iowa Code § 455B.426 *et al*, which provides in pertinent part:

> a. A person shall not substantially change the manner in which a hazardous waste or hazardous substance disposal site on the registry...is used without the written approval of the director.
>
> b. A person shall not sell, convey, or transfer title to a hazardous waste or hazardous substance disposal site which is on the registry...without the written approval of the director. Iowa Code § 455B.430

A statement that the Site was listed on the Iowa Registry was filed in book 44, at page 390, in the Office of the Recorder of Deeds of Floyd County, Iowa;

WHEREAS, in a Record of Decision dated September 28, 1990, the EPA Region VII Regional Administrator selected a "remedial action" for the Site that consisted of installing a soil cover on landfill materials, fencing the perimeter of the site to restrict access to landfill materials, installation of a groundwater treatment system, and deed restrictions to limit future property use and well installation.

WHEREAS, Allied Products Corporation, H.E. Construction and the United States entered into a Consent Decree ("Consent Decree") pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.* In this Consent Decree, Allied Products Corporation agreed to conduct the "remedial action" selected in the ROD, in order to respond to the release or threat of release of hazardous substances into the environment on the Property. The remedial action is an "environmental response project," as defined in Iowa Code § 455I.2(5). This Consent Decree was styled "United States of America v. Allied Products Corporation and H.E. Construction, Inc." and was entered under Civil Action No. C92-2043, in the United States District Court for the

Northern District of Iowa, on July 14, 1992.

WHEREAS, a copy of the Administrative Record for the remedial action, including the Consent Decree, Record of Decision, Explanation of Significant Differences, and Five-Year Reviews, is located at the Charles City Public Library, 106 Milwaukee Mall, Charles City, Iowa 50616.

WHEREAS, pursuant to the Consent Decree, H.E. Construction agreed to, among other things, provide access to the Property to the United States Environmental Protection Agency ("EPA") for the purposes of implementing, facilitating, and monitoring the environmental response project required to be performed under the Consent Decree, and file a Restrictive Covenant that imposes activity and use limitations on the Property that would run with the Property and bind subsequent owners;

WHEREAS, on October 5, 1992, H.E. Construction filed a Restrictive Covenant in book 50, at page 453 and 454, in the Office of the Recorder of Deeds of Floyd County, Iowa;

WHEREAS, H.E. Construction and EPA agree that it is appropriate at this time to revoke, rescind, and terminate the Restrictive Covenant and supersede the Restrictive Covenant with this Environmental Covenant.

WHEREAS, H.E. Construction desires to grant to itself as Holder, as that term is defined in Iowa Code § 455I.2(7), this Environmental Covenant for the purpose of subjecting the Property to certain activity and use limitations as provided in the Iowa Uniform Environmental Covenants Act;

WHEREAS, as hazardous substances remain at the Property at levels which do not allow for unlimited use of, and unrestricted exposure at, the Property, H.E. Construction is subjecting the Property to the activity and use limitations contained herein;

NOW THEREFORE, H.E. Construction hereby states and declares as follows:

1. Parties: In addition to H.E. Construction, who is the owner of the Property and Holder hereunder, the EPA and the Iowa Department of Natural Resources ("IDNR") and any successor agency, is a party to this Environmental Covenant. EPA and IDNR are each an "Agency" hereunder as defined in Iowa Code § 455I.2(2), and may enforce this Environmental Covenant as provided in Iowa Code § 455I.11 and paragraph 4 below.

2. Activity and Use Limitations: The following activity and use limitations are hereby imposed on the Property:

a. The construction, installation, maintenance or use of any wells on the Property for the purpose of extracting water for human drinking purposes or for the irrigation of food or feed crops shall be prohibited;

b. The soil cap located on the Property shall be maintained in good repair in order to prevent direct contact with the landfill materials, reduce infiltration and leaching of contaminants and minimize run-off transport of contaminants;

c. The soil cap located on the Property shall not be excavated or disturbed except for minor excavations necessary to install, maintain, or repair fences unless approved in advance in writing by the EPA or its assigns;

c. The Property may not be used for any residential, commercial, recreational or agricultural purposes unless approved in advance in writing by the EPA or its assigns; and

e. The fence located on the Property shall be maintained in good condition and repair. The hazardous chemical warning signs shall continuously be displayed in a conspicuous place on said fence, and such signs shall be maintained in legible condition.

3. Running with the Land: This Environmental Covenant shall be binding upon H.E. Construction and its successors, assigns, and Transferees in interest, and shall run with the land, as provided in Iowa Code § 455I.5(1), subject to amendment or termination as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

4. Enforcement: Compliance with this Environmental Covenant may be enforced as provided in Iowa Code § 455I.11. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict any person from exercising any authority under any other applicable law.

5. Notice of Non-Compliance: Grantor and any subsequent Transferee of the Property shall notify EPA as soon as possible of any conditions that would constitute a breach of the activity and use limitations specified above in Paragraph 2.

6. Rights of Access: Grantor grants to the Holder and to EPA and IDNR's agents, contractors, and employees, an irrevocable, permanent and continuing right of access at all reasonable times to the Property for implementation, monitoring or enforcement of this Environmental Covenant and the aforementioned Consent Decree. Nothing herein shall be deemed to limit or otherwise affect EPA's right of access and entry under federal law.

7. Notice of Proposed Conveyance: Grantor or its Transferee shall, at least 30 days prior to the conveyance of any interest in the Property or any portion thereof, give written notice to EPA of the proposed conveyance, including the name and address of the proposed Transferee, and the date on which the notice of the Consent Decree and this Environmental Covenant was given to the proposed Transferee, and that all of the provisions of the Consent Decree continue in full force and effect, notwithstanding any such transfer.

8. Groundwater Hazard Statement: Iowa Code § 558.69 requires submission of a groundwater hazard statement and notice if "hazardous waste," as defined in Iowa Code §§ 455B.411(3), 455B.412(2) or section 455B.464, is present on real property. If hazardous waste is present, the groundwater hazard statement must state that the condition is being managed in accordance with IDNR rules. Grantor and all subsequent Transferees required to submit a groundwater hazard statement under Iowa Code § 558.69 for the Property shall make reference to this Environmental Covenant in any instrument conveying an interest in the Property. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED _____, 2009, RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF FLOYD COUNTY, IOWA, ON _____, 2009, AS DOCUMENT ____, BOOK ____, PAGE ____.

THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS:

A. THE CONSTRUCTION, INSTALLATION, MAINTENANCE OR USE OF ANY WELLS ON THE PROPERTY FOR THE PURPOSE OF EXTRACTING WATER FOR HUMAN DRINKING PURPOSES OR FOR THE IRRIGATION OF FOOD OR FEED CROPS SHALL BE PROHIBITED;

B. THE SOIL CAP LOCATED ON THE PROPERTY SHALL BE MAINTAINED IN GOOD REPAIR IN ORDER TO PREVENT DIRECT CONTACT WITH THE LANDFILL MATERIALS, REDUCE INFILTRATION AND LEACHING OF CONTAMINANTS AND MINIMIZE RUN-OFF TRANSPORT OF CONTAMINANTS;

C. THE SOIL CAP LOCATED ON THE PROPERTY SHALL NOT BE EXCAVATED OR DISTURBED EXCEPT FOR MINOR EXCAVATIONS NECESSARY TO INSTALL, MAINTAIN, OR REPAIR FENCES UNLESS APPROVED IN ADVANCE IN WRITING BY THE EPA OR ITS ASSIGNS;

D. THE PROPERTY MAY NOT BE USED FOR ANY RESIDENTIAL OR AGRICULTURAL PURPOSES UNLESS APPROVED IN ADVANCE IN WRITING BY THE EPA OR ITS ASSIGNS; AND

E. THE FENCE LOCATED ON THE PROPERTY SHALL BE MAINTAINED IN GOOD CONDITION AND REPAIR. THE HAZARDOUS CHEMICAL WARNING SIGNS SHALL CONTINUOUSLY BE DISPLAYED IN A CONSPICUOUS PLACE ON SAID FENCE, AND SUCH SIGNS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

9. Notice upon Conveyance: Grantor and any subsequent Transferee shall notify EPA within ten (10) days following each conveyance of an interest in the Property, or any portion thereof. The notice shall include the name, address, and telephone number of the Transferee, and a copy of the deed or other documentation evidencing the conveyance.

10. Representations and Warranties: Grantor hereby represents and warrants to EPA that Grantor has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all of Grantor's obligations hereunder, and that Grantor is the sole owner of the Property and holds fee simple title which is free, clear, and unencumbered.

11. Amendment or Termination: This Environmental Covenant may be amended or terminated by consent signed by EPA, IDNR and Grantor or its Transferee. Within thirty (30) days of signature by all requisite parties on any amendment or termination of this Environmental Covenant, Grantor or its Transferee shall file such instrument for recording with the Office of the Recorder of Deeds of Floyd County, Iowa, and shall provide a file- and date-stamped copy of the recorded instrument to EPA.

12. Severability: If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

13. Governing Law: This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Iowa.

14. Recordation: Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Grantor shall record this Environmental Covenant with the Office of the Recorder of Deeds of Floyd County, Iowa.

15. Effective Date: The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the Office of the Recorder of Deeds of Floyd County, Iowa.

16. Distribution of Environmental Covenant: Within thirty (30) days following the reecording of this Environmental Covenant, Grantor shall, in accordance with Iowa Code § 455I.7, distribute a file- and date-stamped copy of the recorded Environmental Covenant to: (a) each signatory hereto; (b) each person holding a recorded interest in the Property; (c) each person in possession of the Property; (d) each municipality or other unit of local government in which the Property is located; and (e) any other person designated by EPA.

17. Notice to EPA: Any document, notice, or other item required by this Environmental Covenant to be given to EPA shall be sent to:

Superfund Division Director
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

EPA may change the recipient title and address from time to time and will provide written notice to Holder or its Transferee of any such changes.

18. Termination of Declaration: It is the intention of the parties for this Environmental Covenant to supersede and take the place of the Restrictive Covenant referred to above. Accordingly, that Restrictive Covenant is hereby revoked, rescinded, and terminated.

The undersigned represents and certifies that he/she is authorized to execute this Environmental Covenant on behalf of Holder, EPA and IDNR.

IT IS SO AGREED:

GRANTOR:

FOR H.E. CONSTRUCTION, INC.,

By: _____ Date: 10/2/2009

Name (print): Homer L. Blickenderfer

Title: President

STATE OF Iowa)

COUNTY OF Floyd)

On this 2nd day of October, 2009 before me a Notary Public in and for said state, personally appeared Homer L. Blickenderfer [NAME], President [TITLE], of H.E. Construction, Inc., known to me to be the person who executed the within Environmental Covenant in behalf of said corporation and acknowledged to me that he/she executed the same for the purposes therein stated.

NOTARIAL SEAL IOWA
LARRY R. STEWART
Commission No.: 107620
My Commission Expires
9/20/2011

_____
Notary Public
LARRY R. Stewart

HOLDER:

FOR H.E. CONSTRUCTION, INC.,

By: Homer L Blickenderfer Date: 10/2/2009

Name (print): Homer L. Blickenderfer

Title: President

STATE OF Iowa)

COUNTY OF Floyd)

On this 2nd day of October, 2009, before me a Notary Public in and for said state, personally appeared Homer L. Blickenderfer [NAME], President [TITLE], of H.E. Construction, Inc., known to me to be the person who executed the within Environmental Covenant in behalf of said corporation and acknowledged to me that he/she executed the same for the purposes therein stated.

NOTARIAL SEAL IOWA

LARRY R. STEWART
Commission No.: 107620
My Commission Expires
9/20/2011

Larry R Stewart
Notary Public
Larry R. Stewart

AGENCY:

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY

By: Cecilia Tapia Date: 10/6/09

Name (print): CECILIA TAPIA

Title: DIRECTOR, SUPERFUND DIVISION

STATE OF Kansas)

COUNTY OF Wyandotte)

On this 6th day of October, 2009, before me a Notary Public in and for said state, personally appeared Cecilia Tapia (or her designee), the Director of EPA Region VII's Superfund Division, known to me to be the person who executed the within Environmental Covenant in behalf of EPA and acknowledged to me that she executed the same for the purposes therein stated.

Notary Public

KENT JOHNSON
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. 7/23/11

AGENCY:

FOR THE IOWA DEPARTMENT OF NATURAL RESOURCES

By: _____ Date: 10-8-09

Name (print): Richard Leopold

Title: Director

STATE OF Iowa)

COUNTY OF Polk)

On this 8th day of October, 2009, before me a Notary Public in and for said state, personally appeared the Director of the Iowa Department of Natural Resources or the lawful designee of the Director who executed the foregoing instrument, and acknowledge that this person executed the same for the purposes therein stated.

_____
Notary Public

NOTARIAL SEAL IOWA

LISA NISSEN
COMMISSION NO. 721371
MY COMMISSION EXPIRES
3-17-12

Attachment D

Public Notice

U.S. Environmental Protection Agency (EPA) Region 7 Starts the Fourth Five-Year Review for the White Farm Equipment Company Dump Superfund Site, Charles City, Floyd County, Iowa

EPA has started the fourth Five-Year Review at the White Farm Equipment Company Dump Superfund site. The review is required by the Superfund law to make sure completed cleanups continue to protect human health and the environment.

The contaminants of concern at the site include heavy metals such as arsenic, chromium, and lead, among others, and volatile organic compounds (VOCs) from former waste disposal practices on site.

The third Five-Year Review found that the site remedy remains protective. The final report of the fourth Five-Year Review will be available on the EPA Region 7 website at: http://www.epa.gov/region7/cleanup/index.htm

EPA encourages community members to ask questions and report any concerns about the site. A paper copy of the Five Year Review report and detailed information about the site is available at the following locations:

Charles City Public Library
106 Milwaukee Mall
Charles City, Iowa

EPA Records Center
11201 Renner Boulevard
Lenexa, Kan.

Questions or requests for site information and/or the five-year review process can be submitted to:

Ben Washburn
U.S. Environmental Protection Agency
Community Involvement Coordinator
11201 Renner Boulevard, Lenexa KS, 66219
Toll free: 800-223-0425
Email: washburn.ben@epa.gov

Attachment E

Inspection Checklist

Site Inspection Checklist

I. SITE INFORMATION	
Site name: White Farm Equipment Company Site	**Date of inspection:** 27 August 2013
Location and Region: Charles City, Floyd County, Iowa	**EPA ID:** IAD065210734
Agency, office, or company leading the five-year review: U.S. EPA Region 7	**Weather/temperature:** Sunny, mid-80's

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☐ Other:
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☒ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager**

Name Title Date

Interviewed ☐ at site ☐ at office ☐ by phone Phone no. _____

Problems, suggestions; ☐ Report attached _____

_____

2. **O&M staff**

Name Title Date

Interviewed ☐ at site ☐ at office ☐ by phone Phone no. _____

Problems, suggestions; ☐ Report attached _____

_____

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency IDNR
Contact Bob Drustrup — Project Manager — 515-281-8900
Name — Title — Date — Phone no.
Problems; suggestions; ☐ Report attached No significant concerns with the site.

Agency _____
Contact _____ _____ _____ _____
Name — Title — Date — Phone no.
Problems; suggestions; ☐ Report attached _____

Agency _____
Contact _____ _____ _____ _____
Name — Title — Date — Phone no.
Problems; suggestions; ☐ Report attached _____

Agency _____
Contact _____ _____ _____ _____
Name — Title — Date — Phone no.
Problems; suggestions; ☐ Report attached _____

4. **Other interviews** (optional) ☒ Matthew Ross, land user. No significant concerns with the site.

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**
   - ☐ O&M manual — ☐ Readily available — ☐ Up to date — ☐ N/A
   - ☐ As-built drawings — ☐ Readily available — ☐ Up to date — ☐ N/A
   - ☐ Maintenance logs — ☐ Readily available — ☐ Up to date — ☐ N/A

   Remarks There are no facilities at the site so no O&M documents are available at the site.

2. **Site-Specific Health and Safety Plan** — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Contingency plan/emergency response plan — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks_____

3. **O&M and OSHA Training Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks_____

4. **Permits and Service Agreements**
   - ☐ Air discharge permit — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Effluent discharge — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Waste disposal, POTW — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Other permits_____ — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks_____

5. **Gas Generation Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks_____

6. **Settlement Monument Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks_____

7. **Groundwater Monitoring Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks Groundwater sampling has not been performed since the previous inspections, no records were available for review.

8. **Leachate Extraction Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks_____

9. **Discharge Compliance Records**
   - ☐ Air — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Water (effluent) — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks_____

10. **Daily Access/Security Logs** — ☐ Readily available — ☐ Up to date — ☒ N/A

    Remarks_____

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for State
☐ PRP in-house ☐ Contractor for PRP
☐ Federal Facility in-house ☐ Contractor for Federal Facility
☒ Other PRP is bankrupt so IDNR is responsible for O&M

2. **O&M Cost Records**

☐ Readily available ☐ Up to date
☐ Funding mechanism/agreement in place
Original O&M cost estimate_____ ☐ Breakdown attached

Total annual cost by year for review period if available

From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost

3. **Unanticipated or Unusually High O&M Costs During Review Period**

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☐ Gates secured ☐ N/A

Remarks Fencing was in good condition, vegetation which had begun to grow along the fencing has been cleared by the site user.

B. Other Access Restrictions

1. **Signs and other security measures** ☐ Location shown on site map ☐ N/A

Remarks Four signs were identified along the fenceline during the inspection, all signs were in good condition and legible.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) Inspection of capped areas and access controls

Frequency Annual inspection by State of Iowa

Responsible party/agency EPA and IDNR

Contact _____ _____ _____

Name Title Date Phone no.

Reporting is up-to-date ☐ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☐ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☐ N/A

Violations have been reported ☐ Yes ☐ No ☒ N/A

Other problems or suggestions: ☐ Report attached

2. **Adequacy** ☐ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks_____

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident

Remarks Damage has occurred to Monitoring Well WFE-6A, however it is not believed to have been intentional

2. **Land use changes on site** ☐ N/A

Remarks The new land user has grazed sheep on the site and also intends to plant and harvest hay.

3. **Land use changes off site** ☒ N/A

Remarks_____

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks_____

B. Other Site Conditions

Remarks _____

_____

_____

_____

_____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ Settlement not evident
Areal extent_____ Depth_____
Remarks_____
_____

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident
Lengths_____ Widths_____ Depths_____
Remarks_____
_____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
Areal extent_____ Depth_____
Remarks_____
_____

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
Areal extent_____ Depth_____
Remarks_____
_____

5. **Vegetative Cover** ☒ Grass ☒ Cover properly established ☒ No signs of stress
■ Trees/Shrubs (indicate size and locations on a diagram)
Remarks__Small volunteer trees were identified, but the land user is in the process of having them removed as part of haying the site._____

6. **Alternative Cover (armored rock, concrete, etc.)** ☒ N/A
Remarks_____
_____

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident
Areal extent_____ Height_____
Remarks_____
_____

8. **Wet Areas/Water Damage** ☒ Wet areas/water damage not evident
☐ Wet areas ☐ Location shown on site map Areal extent_____
☐ Ponding ☐ Location shown on site map Areal extent_____
☐ Seeps ☐ Location shown on site map Areal extent_____
☐ Soft subgrade ☐ Location shown on site map Areal extent_____
Remarks_____
_____

9. **Slope Instability** ☐ Slides ☐ Location shown on site map ☒ No evidence of slope instability
Areal extent_____
Remarks_____
_____

B. Benches ☐ Applicable ☒ N/A
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** ☐ Location shown on site map ☐ N/A or okay
Remarks_____
_____

2. **Bench Breached** ☐ Location shown on site map ☐ N/A or okay
Remarks_____
_____

3. **Bench Overtopped** ☐ Location shown on site map ☐ N/A or okay
Remarks_____
_____

C. Letdown Channels ☐ Applicable ☒ N/A
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** ☐ Location shown on site map ☐ No evidence of settlement
Areal extent_____ Depth_____
Remarks_____
_____

2. **Material Degradation** ☐ Location shown on site map ☐ No evidence of degradation
Material type_____ Areal extent_____
Remarks_____
_____

3. **Erosion** ☐ Location shown on site map ☐ No evidence of erosion
Areal extent_____ Depth_____
Remarks_____
_____

4. **Undercutting** ☐ Location shown on site map ☒ No evidence of undercutting
Areal extent_____ Depth_____
Remarks_____
_____

5. **Obstructions** Type_____ ☒ No obstructions
☐ Location shown on site map Areal extent_____
Size_____
Remarks_____
_____

6. **Excessive Vegetative Growth** Type_____
☐ No evidence of excessive growth
☐ Vegetation in channels does not obstruct flow
☐ Location shown on site map Areal extent_____
Remarks_____
_____

D. Cover Penetrations ☐ Applicable ☒ N/A

1. **Gas Vents** ☐ Active ☐ Passive
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance
☐ N/A
Remarks_____
_____

2. **Gas Monitoring Probes**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks_____
_____

3. **Monitoring Wells** (within surface area of landfill)
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks_____
_____

4. **Leachate Extraction Wells**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks_____
_____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☐ N/A
Remarks_____
_____

E. Gas Collection and Treatment ☐ Applicable ☒ N/A

1. **Gas Treatment Facilities**
   ☐ Flaring ☐ Thermal destruction ☐ Collection for reuse
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____
   _____

2. **Gas Collection Wells, Manifolds and Piping**
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____
   _____

3. **Gas Monitoring Facilities** (*e.g.*, gas monitoring of adjacent homes or buildings)
   ☐ Good condition ☐ Needs Maintenance ☐ N/A
   Remarks_____
   _____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

1. **Outlet Pipes Inspected** ☐ Functioning ☐ N/A
   Remarks_____
   _____

2. **Outlet Rock Inspected** ☐ Functioning ☐ N/A
   Remarks_____
   _____

G. Detention/Sedimentation Ponds ☒ Applicable ☐ N/A

1. **Siltation** Areal extent_____ Depth_____ ☐ N/A
   ☒ Siltation not evident
   Remarks_____ _____
   _____

2. **Erosion** Areal extent_____ Depth_____
   ☒ Erosion not evident
   Remarks_____ _____
   _____

3. **Outlet Works** ☒ Functioning ☐ N/A
   Remarks_____
   _____

4. **Dam** ☐ Functioning ☒ N/A
   Remarks_____
   _____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident
   Horizontal displacement_____ Vertical displacement_____
   Rotational displacement_____
   Remarks_____
   _____

2. **Degradation** ☐ Location shown on site map ☒ Degradation not evident
   Remarks_____
   _____

I. Perimeter Ditches/Off-Site Discharge ☐ Applicable ☐ N/A

1. **Siltation** ☐ Location shown on site map ☒ Siltation not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A
   ☒ Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks_____
   _____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

4. **Discharge Structure** ☒ Functioning ☐ N/A
   Remarks_____
   _____

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

1. **Settlement** ☐ Location shown on site map ☐ Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

2. **Performance Monitoring** Type of monitoring_____
   ☐ Performance not monitored
   Frequency_____ ☐ Evidence of breaching
   Head differential_____
   Remarks_____
   _____

IX. GROUNDWATER/SURFACE WATER REMEDIES ☐ Applicable ☐ N/A

A. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☒ N/A

1. **Pumps, Wellhead Plumbing, and Electrical**
   ☐ Good condition ☐ All required wells properly operating ☐ Needs Maintenance ☐ N/A
   Remarks_____
   _____
   _____

2. **Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances**
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____
   _____

3. **Spare Parts and Equipment**
   ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided
   Remarks_____
   _____

B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A

1. **Collection Structures, Pumps, and Electrical**
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____
   _____

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances**
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____
   _____

3. **Spare Parts and Equipment**
   ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided
   Remarks_____
   _____

C. Treatment System ☐ Applicable ☒ N/A

1. **Treatment Train** (Check components that apply)
   ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation
   ☐ Air stripping ☐ Carbon adsorbers
   ☐ Filters_____
   ☐ Additive (*e.g.*, chelation agent, flocculent)_____
   ☐ Others_____
   ☐ Good condition ☐ Needs Maintenance
   ☐ Sampling ports properly marked and functional
   ☐ Sampling/maintenance log displayed and up to date
   ☐ Equipment properly identified
   ☐ Quantity of groundwater treated annually_____
   ☐ Quantity of surface water treated annually_____
   Remarks_____
   _____

2. **Electrical Enclosures and Panels** (properly rated and functional)
☐ N/A ☐ Good condition ☐ Needs Maintenance
Remarks_____
_____

3. **Tanks, Vaults, Storage Vessels**
☐ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs Maintenance
Remarks_____
_____

4. **Discharge Structure and Appurtenances**
☐ N/A ☐ Good condition ☐ Needs Maintenance
Remarks_____
_____

5. **Treatment Building(s)**
☐ N/A ☐ Good condition (esp. roof and doorways) ☐ Needs repair
☐ Chemicals and equipment properly stored
Remarks_____
_____

6. **Monitoring Wells** (pump and treatment remedy)
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ All required wells located ☐ Needs Maintenance ☐ N/A
Remarks_____
_____

D. Monitoring Data

1. Monitoring Data
☐ Is routinely submitted on time ☐ Is of acceptable quality

2. Monitoring data suggests:
☐ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

E. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ All required wells located ☒ Needs Maintenance ☐ N/A
Remarks Wells WFE 7A and 7B could not be located due to overgrowth and standing water. Well WFE 6A was found detached, the below grade portion of the well could not be identified. Well WFE 5A was found to have a missing well casing cap, as well as a missing well cap._____
_____

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

See report text.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

See report text.

C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future. See report text.
D.	**Opportunities for Optimization**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. See report text.

Site Inspection Team Roster		
Personnel	**Representing**	**Phone Number**
Kenneth Kamp	U.S. Army Corps of Engineers	816-389-3642
Paul Speckin	U.S. Army Corps of Engineers	816-389-3592