FINAL Preliminary Assessment Report Army Aviation Support Facility, Waterloo, Iowa

Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) Impacted Sites ARNG Installations, Nationwide

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Acronyms and Abbreviations

°F	degrees Fahrenheit
AASF	Army Aviation Support Facility
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
AOI	Area of Interest
ARNG	Army National Guard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	conceptual site model
FTA	fire training area
IAARNG	Iowa Army National Guard
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
SI	Site Inspection
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VSI	visual site inspection

Executive Summary

The United States Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG)-Installations & Environment Division, Cleanup Branch contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections (SIs) for* Perfluorooctanesulfonic *acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide*. The ARNG is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS), primarily in the form of aqueous film forming foam released as part of firefighting activities, although other PFAS sources are possible.

AECOM completed a PA for PFAS at the Army Aviation Support Facility (AASF) in Waterloo, lowa, to assess potential PFAS release areas and exposure pathways to receptors. The Waterloo AASF is constructed on a parcel of land owned by the State of Iowa. The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS releases
- Conducted a site visit on 22 August 2018
- Interviewed current and retired Iowa ARNG (IAARNG) AASF personnel during the site visit
- Completed visual site inspections at known or suspected PFAS release locations and documented with photographs
- Developed a conceptual site model (CSM) to outline the potential release and pathway of PFAS for the area(s) of interest (AOIs) and the facility (**Figure ES-1**)

Two AOIs related to potential PFAS releases were identified at the Waterloo AASF during the PA. The AOIs are shown on **Figure ES-1** and described below:

Area of Interest	Name	Used by	Potential Release Date
AOI 1	Middle Ramp Fire Extinguisher Training	IAARNG	2001-2003
AOI 2	West Ramp Fire Extinguisher Training	IAARNG	2011-2013

Based on potential PFAS releases at these AOIs, there is potential for exposure to PFAS contamination in surface soil, surface water, and sediment for site workers, onsite construction workers, and trespassers; and subsurface soil for onsite construction workers. In addition, off-facility residents using groundwater for drinking water surrounding the facility may potentially be exposed to migrating PFAS contamination via nearby groundwater pathways. At this time the completeness of the groundwater pathway has not been verified. Potential off-facility PFAS release areas exist adjacent to the Waterloo AASF. Because the adjacent sources are downgradient of the Waterloo AASF, potential PFAS releases at these areas are not suspected to impact the Waterloo AASF. The CSM for the Waterloo AASF is shown on **Figure ES-2**.







1. Introduction

1.1 Authority and Purpose

The United States Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG)-Installations & Environment Division, Cleanup Branch contracted AECOM Technical Services, Inc. to perform *Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide* under Contract Number W912DR-12-D-0014, Task Order W912DR17F0192, issued 11 August 2017. The ARNG is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS), primarily in the form of aqueous film forming foam (AFFF) released as part of firefighting activities, although other PFAS sources are possible. In addition, the ARNG is assessing businesses or operations adjacent to the ARNG facility (not under the control of ARNG) that could potentially be responsible for a PFAS release.

PFAS are classified as emerging environmental contaminants that are garnering increasing regulatory interest due to their potential risks to human health and the environment. PFAS formulations contain highly diverse mixtures of compounds. Thus, the fate of PFAS compounds in the environment varies. The regulatory framework at both federal and state levels continues to evolve. The US Environmental Protection Agency (USEPA) issued Drinking Water Health Advisories for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water. In the absence of federal maximum contaminant levels, some states have adopted their own drinking water standards for PFAS. The State of Iowa standards for PFOS and PFOA are 0.00007 milligrams per liter (mg/L) for a protected groundwater source, and 0.0010 mg/L for a non-protected groundwater source (PFOS only, no standard for PFOA). PFOS and PFOA soil standards are 1.8 milligrams per kilogram (mg/kg) and 1.2 mg/kg, respectively (Iowa Department of Natural Resources, 2012).

This report presents the findings of a PA for PFAS at the Army Aviation Support Facility (AASF) in Waterloo, Iowa, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations Part 300), and USACE requirements and guidance.

This PA documents the known fire training areas (FTAs) as well as other locations where PFAS may have been released into the environment at the Waterloo AASF. The term PFAS will be used throughout this report to encompass all PFAS chemicals being evaluated, including PFOS and PFOA, which are key components of AFFF.

1.2 Preliminary Assessment Methods

The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS releases
- Conducted a site visit on 22 August 2018
- Interviewed current and retired Iowa ARNG (IAARNG) AASF personnel during the site visit
- Completed visual site inspections (VSIs) at known or suspected PFAS release locations and documented with photographs
- Developed a conceptual site model (CSM) to outline the potential release and pathway of PFAS for the area(s) of interest (AOIs) and the facility

1.3 Report Organization

This report has been prepared in accordance with the USEPA *Guidance for Performing Preliminary Assessments under CERCLA* (USEPA, 1991). The report sections and descriptions of each are:

- Section 1 Introduction: identifies the project purpose and authority and describes the facility location, environmental setting, and methods used to complete the PA
- Section 2 Fire Training Areas: describes the FTAs at the facility identified during the site visit
- Section 3 Non-Fire Training Areas: describes other locations of potential PFAS releases at the facility identified during the site visit
- Section 4 Emergency Response Areas: describes areas of potential PFAS release at the facility, specifically in response to emergency situations
- Section 5 Adjacent Sources: describes sources of potential PFAS release adjacent to the facility that are not under the control of ARNG
- Section 6 Conceptual Site Model: describes the pathways of PFAS transport and receptors for the AOIs and the facility
- Section 7 –Conclusions: summarizes the data findings and presents the conclusions of the PA
- Section 8 References: provides the references used to develop this document
- Appendix A Data Resources
- **Appendix B** Preliminary Assessment Documentation
- **Appendix C** Photographic Log

1.4 Facility Location and Description

The Waterloo AASF in Black Hawk County in Waterloo, IA, adjacent to the Waterloo Regional Airport (**Figure 1-1**). The Waterloo AASF is north of West Airline Highway, east of the Waterloo Regional Airport, south of West Big Rock Road, and east of Wagner Road. The communities of Waverly and Cedar Falls lie within 15 miles of the Waterloo AASF.

The Waterloo AASF was constructed circa 1974 on a 26-acre parcel of land. An additional 6-acre parcel located on the east boundary was acquired in 2002. Both are owned by the State of lowa.

1.5 Facility Environmental Setting

Waterloo AASF lies in the Iowan Surface region, a region characterized by glacial erratics, thin, discontinuous loess deposits, and northwest to southeast trending eolian features. The terrain of the area has been subjected to repeated periods of Quaternary-age glaciations and erosion, creating gently rolling hills with long slopes and low relief that slope toward nearby drainage features and wetlands (lowa Geological Survey [IGS], 2017c) The elevation of the facility is approximately 875 feet above mean sea level. The elevation in the area decreases to the southwest toward the Cedar River.

1.5.1 Geology

The Waterloo AASF is situated on Quaternary-age sand and gravel of the Noah Creek Formation which was deposited during the Wisconsin Glaciation. The Noah Creek Formation ranges from 10 feet to 66 feet thick and is characterized as yellowish brown to gray, poorly to well-sorted, massive to well stratified, coarse to fine feldspathic quartz sand and gravel (Iowa Geological and Water Survey, 2013). The Quaternary-age deposits are underlain by approximately 185 feet of the dolomitic and argillaceous limestones of the Devonian aged Cedar Valley Group (Iowa Geological and Water Survey, 2010; Witzke, B.J and Bunker, B.J., 2017).

1.5.2 Hydrogeology

The Waterloo AASF is in the Northeast Iowa Groundwater Province within the boundaries of the Cambrian-Ordovician and the Silurian-Devonian bedrock aquifers. The Silurian-Devonian Aquifer serves rural, public, and industrials uses in eastern and northern Iowa (IGS, 2017a). Wells tapping the Silurian-Devonian Aquifer are typically 100 to 700 feet deep. The Cambrian-Ordovician Aquifer is a widespread source of water for high capacity wells, extensively used by municipalities and industries in eastern Iowa. Wells tapping the Cambrian-Ordovician Aquifer are typically 300 to 2,000 feet deep (IGS, 2017b). Alluvial aquifers are generally not used as production wells in the Northeast Iowa Groundwater Province as the bedrock aquifers are more productive and reliable, although alluvial aquifer utilization does occur along the larger rivers such as the Iowa, Cedar, and Wapsipinicon (Iowa Geological and Water Survey, 2013). Groundwater flow is inferred to be generally to the southwest toward the Cedar River (**Figure 1-2**).

No potable water wells are located within the Waterloo AASF; however, domestic and municipal/public water supply wells exist within one mile of the facility (**Figure 1-2**). Drinking water for the Waterloo AASF is supplied by the City of Waterloo. Drinking water for the City of Waterloo is predominantly sourced from the limestone bedrock Cedar Valley Aquifer, although some of Waterloo's water supply is obtained from an alluvial aquifer along the Cedar River. Drinking water wells in and around the City of Waterloo range in depth from 76 feet to 225 feet (Waterloo Water Works, 2018).

1.5.3 Hydrology

The Waterloo AASF is in the East Lake Watershed, and tributaries leading to the Cedar River are located less than 0.5 mile east of the Waterloo AASF (**Figure 1-3**). The Waterloo AASF is currently connected to the City of Waterloo sanitary sewer system; however, prior to 1994, the AASF was served by a septic system. Regional surface water features include the Cedar River, approximately 2 miles southwest of the Waterloo AASF, which empties to the Mississippi River, Fisher Lake, and George Wyth Lake.

1.5.4 Climate

The climate at the Waterloo AASF is humid continental with warm summers, cold winters, and wet springs. The average temperature is 48 degrees Fahrenheit (°F). Seasonally, temperatures vary from summer highs of 84 °F to winter lows of 10 °F (World Climate, 2018). Average precipitation is 35 inches. The prevailing wind is southerly, averaging 10 miles per hour, with gust speeds of 60 miles per hour (National Weather Service Forecast Office, 2018).

1.5.5 Current and Future Land Use

The Waterloo AASF is a controlled access facility and is adjacent to the Waterloo Regional Airport. The Waterloo Regional Airport is owned and operated by the City of Waterloo and

provides commercial and general air service to the Waterloo and Cedar Falls area. Future land use is not anticipated to change.





Q: Projects/ENV/GEARS/GEO/ARNG PFASI900-CAD-GIS/920-GIS or Graphics/MXD/IA/Waterloo_AASF_Figures/Waterloo_PA_Figures/Fig_1-2_Waterloo_Groundwater.mxd



2. Fire Training Areas

Two FTAs were identified within the Waterloo AASF facility during the PA. A description of each FTA is presented below, and the FTAs are shown on **Figure 2-1**. Interview records appear in **Appendix B**. Photographs appear in **Appendix C**.

2.1 Waterloo AASF Middle Ramp

One potential PFAS release event occurred between 2001 and 2003 during fire extinguisher training. During this potential release event, all Tri-Max fire extinguishers were emptied near the middle of the ramp, south of the Waterloo AASF hangar building (**Figure 2-1**). The geographic coordinates are 42°33'15.9"N and 92°23'05.0"W. No information was available regarding the type or amount of AFFF potentially released.

At the time of the potential release, the ramp consisted of concrete pads surrounded by cracked asphalt. PFAS from the potential release likely infiltrated the surface soil under the cracked asphalt, and surface drainage from the potential release area likely flowed to the surface soil south of the middle ramp area. In 2007 or 2008 the ramp was expanded and the cracked asphalt was replaced by concrete. No information was available regarding the final disposition of the cracked asphalt.

2.2 Waterloo AASF West Ramp

A second potential PFAS release event occurred between 2011 and 2013 during fire extinguisher training. During this potential release event, all Tri-Max fire extinguishers were emptied on the west end of the ramp, created during the expansion in 2007 or 2008 (**Figure 2-1**). The geographic coordinates are 42°33'18.1"N and 92°23'09.2"W. During the 2007 or 2008 ramp expansion, detention ponds to the west, south, and southwest of the ramp were also created. Fire extinguishers emptied to concrete on the west end of the ramp between 2011 and 2013 would have most likely been washed off the ramp into the detention pond located southwest of the ramp. No information was available regarding the type or amount of AFFF potentially released.

The Waterloo AASF facility currently houses Tri-Max and Halotron fire extinguishers. Halotron fire extinguishers, which do not contain PFAS, are intended to replace the Tri-Max extinguishers. A facility-provided safety data sheet for the Halotron is located in **Appendix A**. Currently, two Tri-Max 30 fire extinguishers are stored on the ramp immediately outside the hangar, one Tri-Max 60 fire extinguisher is located in the building east of the hangar, and five Halotron fire extinguishers are stored on the ramp. Bulk AFFF is stored at the facility and used to refill the Tri-Max fire extinguishers after off-facility hydrostatic testing has been completed. Four five-gallon containers of 6 percent AFFF were observed at the Waterloo AASF during the VSI.



3. Non-Fire Training Areas

No non-FTAs where AFFF was stored and/or potentially released were identified during the PA through interviews or document review.

4. Emergency Response Areas

No emergency response areas were identified within the Waterloo AASF facility during the PA through interviews or document review. All emergency services for the Waterloo AASF are provided by the Waterloo Regional Airport and the City of Waterloo.

5. Adjacent Sources

Two potential off-facility sources of PFAS adjacent to the Waterloo AASF, not under the control of the IAARNG, were identified during the PA. A description of each adjacent source is presented below, and the adjacent sources are shown on **Figure 5-1**.

5.1 Off-Facility Fire Training Area

A fire truck was present at the facility prior to 1999 until the mid-2000s. The fire truck was used in annual off-facility training exercises by the IAARNG at the southwest quadrant of Streeter and Dunkerton Road on Waterloo Regional Airport property. According to interviewees, the fire truck was not used from 1999 until the mid-2000s when it was removed from the Waterloo AASF due to maintenance issues. No information was available regarding the type or amount of AFFF used during training, nozzle testing, where fire truck washing activities occurred, or the fire truck maintenance issues.

Prior to 1999, the Waterloo AASF fire truck was used in annual training exercises at the southwest quadrant of Streeter and Dunkerton Road on Waterloo Regional Airport property (**Figure 5-1**). The geographic coordinates are 42°34'07.11"N and 92°23'50.85"W. No information was available with regard to the type or amount of AFFF used during training or where fire truck washing activities occurred. A freshwater emergent wetland is currently located in the same location as the off-facility FTA.

5.2 Waterloo Regional Airport

The Waterloo Regional Airport is located approximately 3/4 mile west of the Waterloo AASF (**Figure 5-1**). The geographic coordinates are 42°32'59.40"N and 92°23'51.25"W. The runways for the Waterloo Regional Airport are located within 700 feet west of the Waterloo AASF ramp. The Waterloo Regional Airport is owned and operated by the City of Waterloo. No information was available on the use of AFFF by the Waterloo Regional Airport; however, the Waterloo Regional Airport (along with the City of Waterloo) provides fire fighting services for the Waterloo AASF. Therefore, the potential for PFAS use by the Waterloo Regional Airport exists.



6. Conceptual Site Model

Based on the PA findings, two AOIs were identified at the Waterloo AASF: AOI 1 Middle Ramp Fire Extinguisher Training Area and AOI 2 West Ramp Fire Extinguisher Training Area. The AOI locations are shown on **Figure 6-1**. The following sections describe the CSM components and the specific CSM developed for AOI 1 and AOI 2. The CSM identifies the three components necessary for a potentially complete exposure pathway: (1) source, (2) pathway, (3) receptor. If any of these elements are missing, the pathway is considered incomplete.

In general, the potential PFAS exposure pathways are ingestion and inhalation. Dermal contact is not considered to be a potential exposure pathway as studies have shown very limited absorption of PFAS through the skin (National Ground Water Association [NGWA], 2018). Receptors at the Waterloo AASF include site workers, construction workers, trespassers, and off-facility residents. The CSM for the Waterloo AASF indicates which specific receptors could potentially be exposed to PFAS.

6.1 AOI 1 Middle Ramp Fire Extinguisher Training Area

AOI 1 is on the middle of the ramp, south of the Waterloo AASF hangar. PFAS was released to concrete pads surrounded by cracked asphalt at AOI 1 during fire extinguisher training by the IAARNG. The potential release occurred between 2001 and 2003. PFAS may have been released directly to surface soil through cracks in the asphalt on the ramp. The potential PFAS released also may also have migrated via overland flow to the surface soil south of the middle ramp area. A ramp expansion in 2007 or 2008 replaced cracked asphalt on the ramp and created detention ponds to the west, southwest, and south of the ramp. An unknown amount of soil surrounding the ramp was disturbed and removed during the ramp expansion. PFAS may potentially remain in the surface soil south of the middle ramp fire extinguisher training area. PFAS are water soluble and can migrate readily from soil to groundwater via leaching. As such, PFAS may have migrated to subsurface soil and groundwater.

Ground-disturbing activities to surface soil and intermittent surface water and sediment at AOI 1 could result in site worker, construction worker, and trespasser exposure to potential PFAS contamination. Ground-disturbing activities to subsurface soil could result in site and construction worker exposure via inhalation of soil particles and ingestion of subsurface soil. Therefore, the inhalation and ingestion pathways for these receptors are considered potentially complete.

The Waterloo AASF drinking water is supplied by the City of Waterloo; however, domestic and municipal/commercial wells are present to the southwest of Waterloo AASF. Groundwater flow at the Waterloo AASF is inferred to be to the southwest; therefore, there are wells downgradient of AOI 1. Therefore, the ingestion exposure pathway for groundwater is potentially complete for off-facility residents. The CSM for the Waterloo AASF is shown on **Figure 6-2**.

6.2 AOI 2 West Ramp Fire Extinguisher Training Area

AOI 2 is on the ramp west of the hangar of the Waterloo AASF. PFAS was released to concrete at AOI 2 during fire extinguisher training by the IAARNG between 2011 and 2013. Prior to the potential release, a ramp expansion in 2007 or 2008 replaced cracked asphalt on the ramp with concrete. During the ramp expansion, detention ponds to the west, southwest, and south of the ramp were created. The potential PFAS release to concrete at AOI 2 may have been washed into the detention ponds on the west and southwest of the ramp, potentially releasing PFAS to intermittent surface water and sediment and surface soil. PFAS are water soluble and can migrate readily from soil to groundwater via leaching. As such, PFAS may have migrated to subsurface soil and groundwater.

Ground-disturbing activities to surface soil and intermittent surface water and sediment at AOI 2 could result in site worker, construction worker, and trespasser exposure to potential PFAS contamination. Ground-disturbing activities to subsurface soil could result in site and construction worker exposure via inhalation of soil particles and ingestion of subsurface soil. Therefore, the inhalation and ingestion pathways for these receptors are considered potentially complete.

Domestic and municipal/commercial wells are present to the southwest of Waterloo AASF. Groundwater flow at the Waterloo AASF is inferred to be to the southwest; therefore, there are wells downgradient of AOI 2. Therefore, the ingestion exposure pathway for groundwater is potentially complete for off-facility residents.

In addition, because potential PFAS contamination may have migrated from the soil to intermittent surface water in the western and southwestern detention ponds, the surface water and sediment exposure pathways via ingestion for site workers, construction workers, and trespassers are potentially complete. The CSM for the Waterloo AASF is shown on **Figure 6-2**.



Figure 6-2 Conceptual Ste Model AOI 1 Middle Ramp Fire Extinguisher Training Area and AOI 2 West Ramp Fire Extinguisher Training Area





7. Conclusions

This report presents a summary of available information gathered during the PA with respect to the use and storage of AFFF and other PFAS-related activities at the Waterloo AASF. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

Two AOIs related to potential PFAS releases were identified at the Waterloo AASF during the PA (**Figure 7-1**):

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Middle Ramp Fire Extinguisher Training	IAARNG	2001-2003
AOI 2	West Ramp Fire Extinguisher Training	IAARNG	2011-2013

Based on potential PFAS releases at these AOIs, there is potential for exposure to PFAS contamination in surface soil, surface water, and sediment for site workers, onsite construction workers, and trespassers; and subsurface soil for onsite construction workers. In addition, off-facility residents using groundwater for drinking water surrounding the facility may potentially be exposed to migrating PFAS contamination if the nearby groundwater pathway is determined to be complete.

7.2 Uncertainties

A number of information sources were investigated during this PA to determine the potential for PFAS-containing materials to have been present, used, or released at the facility. Historically, documentation of PFAS use was not required because PFAS were considered benign. Therefore, records were not typically kept by the facility or available during the PA with respect to the use of PFAS in training, firefighting, other non-traditional activities, or its disposition.

The conclusions of this PA are predominantly based on the information provided during interviews with personnel who had direct knowledge of PFAS use at the facility. Sometimes the provided information was vague or conflicted with other sources. Gathered information has a degree of uncertainty due to the absence of written documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS was first used (1969 to present), and a reliance on personal recollection. Inaccuracies may arise in potential PFAS release locations, dates of release, volume of releases, and the concentration of AFFF used. There is also a possibility the PA has missed a source of PFAS, as the science of how PFAS may enter the environment continually evolves.

In order to minimize the level of uncertainty, readily available data regarding the use and storage of PFAS were reviewed, retired and current personnel were interviewed, multiple persons were interviewed for the same potential source area, and potential source areas were visually inspected.

Area of Interest	Source of Uncertainty
All AOIs	No or limited information was available on the type, amount, or concentration of AFFF used at each AOI.
All AOIs	No or limited information about PFAS use prior to 1999.
All AOIs	No information was available regarding the location of fire truck washing activities.
AOI 1	No information was available regarding the final disposition of the cracked asphalt that was replaced with concrete in 2007 or 2008.

The following table summarizes the uncertainties associated with the PA:

Potential off-facility PFAS release areas exist adjacent to the Waterloo AASF. Because the adjacent sources are downgradient of the Waterloo AASF, potential PFAS releases at these areas are not suspected to impact the Waterloo AASF.

7.3 Potential Future Actions

Interviews and records (covering 1999 to present) indicate that ARNG activities may have resulted in potential PFAS releases at the two AOIs identified during the PA. Based on the CSM developed for the AOIs, there is potential for receptors to be exposed to PFAS contamination in soil, groundwater, surface water, and sediment at these AOIs. The following table summarizes the rationale used to determine if the AOIs should be considered for further investigation under the CERCLA process and undergo a Site Inspection (SI).

ARNG evaluates the need for an SI at the Waterloo AASF based on the presence of a PFAS release, potential receptors, and the migration potential of PFAS contamination to receptors.

Area of Interest	AOI Location	Rationale	Potential Future Action
AOI 1 Middle Ramp Fire Extinguisher Training	42°33'15.9"N and 92°23'05.0"W	Tri-Max fire extinguishers emptied between 2001 and 2003.	Proceed to an SI, focus on soil, groundwater, surface water, sediment
AOI 2 West Ramp Fire Extinguisher Training	42°33'18.1"N and 92°23'09.2"W	Tri-Max fire extinguishers emptied between 2011 and 2013.	Proceed to an SI, focus on soil, groundwater, surface water, sediment



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Appendix A Data Resources Data Resources will be provided separately on CD. Data Resources for the Waterloo Army Aviation Support Facility include:

Waterloo AASF PFAS Release Information

- 2016 Halotron I Safety Data Sheet
- 2018 Waterloo AASF Map
- 2018 Waterloo AASF Surrounding Sources Map

Waterloo AASF Facility Maps

- 2018 Waterloo AASF Well Map
- 1972 Waterloo AASF Grading and Surfacing Plan

Waterloo AASF EDR Report

• 2018 Waterloo AASF Environmental Data Resource Report

1 IDENTIFICATION

SAFETY DATA SHEET

I. IDENTIFICATION			
Product Identifier:	HALOTRON [®] I		
Synonyms:	HCFC Blend B, Halotron [®] I Pre-Sat Base		
Product Code:	Reach Registration - N/A		
SDS compliant with regulations:	(EC) No 1907/2006 (REACH), (EC) No 1272/2008 (CLP)		
Manufacturer/Supplier:	American Pacific, Halotron		
Address:	10622 West 6400 North, Cedar City, UT 84721		
Telephone:	+1 (435) 865-5000	Fax: +1 (435) 865-5005	
Emergency Contact:	CHEMTREC		
	Customer Number: CCN721187		
	US Tel: 1 (800) 424-9300		
	Int'l Tel: +1 (703) 741-5970		

Use of substance/preparation: Halotron[®] I is a clean fire-extinguishing agent for streaming and local applications. NFPA 2001, "Standard on Clean Agent Fire Extinguishing Systems" defines a "Clean Agent" to be "electrically non-conducting, volatile, or gaseous fire extinguishant that does not leave a residue upon evaporation." Halotron[®] I is a safe, effective, environmentally acceptable clean agent. It is discharged as a liquid, which rapidly evaporates (i.e. it is volatile). It is a proprietary three component chemical blend based on HCFC-123 that has been found acceptable by the U.S. EPA under its Significant New Alternatives Policy (SNAP) program (referred to as "HCFC Blend B") for all non-residential use (including commercial/industrial, military, and maritime use) in streaming applications as a substitute for halon 1211 (bromochlorodifluoromethane or "BCF").

2. HAZARDS IDENTIFICATION

Hazard Classification:

Specific target organ toxicity, single exposure – Category 3 Gases under pressure – Dissolved gas

Pictogram





Signal word:

Warning

Preparation classification:

Physical Hazard: H280:	Contains gas under pressure; may explode if heated
Health Hazard: H336:	May cause drowsiness and dizziness
Precautionary Statements: P261: P271: P304+P340: P 312 P403+P233: P405: P501:	Avoid breathing vapors/spray Use only outdoors or in a well-ventilated area IF INHALED: Remove person to fresh air and keep comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell Store in a well-ventilated place. Keep container tightly closed. Store locked up Dispose of contents/container to an approved waste disposal plant

Information pertaining to particular dangers for man and environment: Inhalation of high concentrations of vapour may cause central nervous system effects such as dizziness, drowsiness, anesthesia, or unconsciousness. When used on a fire, hazardous decomposition products are formed, but typically are within safe emergency exposure limits. Misuse or intentional inhalation abuse may lead to death without warning.

3. COMPOSITION/INFORMATION OR INGREDIENTS

Ingredient N	ame Chemical Makeup	CAS#	EC#	%
HCFC-123	2, 2-Dichloro-1, 1, 1-trifluoroethane	306-83-2	206-190-3	Greater than 93%
Gas Mixture	Proprietary			Less than 7%

4. FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a physician

Routes of exposure	Signs and symptoms of exposure:	Emergency and first aid procedures:
Skin:	Evaporative cooling can result in chilling sensations or frostbite effects. Short exposures, such as when filling equipment or in other situations, should not have a lasting effect.	Wash exposed area with water. If irritation develops and persists, call a physician.
Inhalation:	Significant exposure may cause central nervous system effects such as dizziness, drowsiness, anesthesia, or unconsciousness. High concentrations of 20,000 ppm (v/v) or higher, may cause cardiac arrhythmia.	Remove to fresh air. Oxygen or artificial respiration if necessary Call a physician if breathing difficulties occur.
Ingestion:	Not likely to occur in industrial use. Highly volatile liquid.	Clean mouth with water and drink plenty of water. Do not induce vomiting. If vomiting occurs, lean person forward to reduce risk of aspiration. Call a physician.
Eyes:	Irritation and tearing may result. Mild to moderate reversible eye effects.	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

Description of the most important symptoms or effects:

Halotron[®] I is a colorless volatile, pressurized liquid with a slight ether-like odor. As with any chemical, dose and exposure are critically important variables to understand any potential treatment. Short-term exposure to high concentrations may result in central nervous system and cardiac effects. Long-term exposure to concentrations above those time-weighted averages recommended herein may result in liver effects.

Note to Physician:

This material may make the heart more susceptible to arrhythmias. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

5. FIRE FIGHTING MEASURES

Flammable properties:

Flash Point: not flammable. Flash point method: not applicable. Auto-ignition temperature: not determined. Upper flammability limit (volume % in air): not applicable. Lower flammability limit (volume % in air): not applicable.

Extinguishing media: The properties of this chemical make it an ideal extinguishing media itself.

Special firefighting precautions/instructions: Ensure that the area where the fire occurred is well ventilated before re-entering. Wear protective clothing. Use water spray or fog to cool storage containers to help prevent an uncontrolled pressure release. Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Unsuitable extinguishing media: None.

Unusual fire and explosion hazards: The concentrated agent when applied to fire can produce toxic by-products specifically hydrogen halides, which can cause damage. Avoid inhalation of these materials by evacuating and ventilating the area.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Other Release: Prevent further leakage or spillage if safe to do so. Keep away from Incompatible products. In the event of a large spill, allow for adequate ventilation, and do not re-enter an area without a self-contained breathing apparatus (SCBA) until adequate ventilation is accomplished. For spills that might result in overexposure, evacuate the area and use protective gear and SCBA's. Avoid leakage into waterways. The vapours are heavier than air; therefore use caution when large volume releases occur in low-lying areas where concentrated vapors may accumulate.

Recommended 1 Hr. Emergency Exposure Limit: 1000 ppm (v/v) on the same basis as above Recommended 1 Min. Emergency Exposure Limit: 2500 ppm (v/v) on the same basis as above

Advice for emergency responders (large spills): Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear SCBA and protective suit. The product evaporates readily. Ventilate the area.

Environmental precautions: Prevent material from entering into waterways, soil or drains.

Methods and materials for containment and cleaning up: Dam up. Soak up with inert absorbent material. Prevent product from entering drains. Keep in properly labelled containers. Keep in suitable, closed containers for disposal. Refer to other sections and to protective measures listed in Section 8.

Any food items that were directly sprayed by the liquid should be thrown away, and all surfaces that are used for food service should be washed (as normal) before re-use.

Waste Disposal: Observe all federal, state, and local regulations for products of this type when accomplishing disposal

Supplier Notification: (SECTION 313) This product contains more than 93% by weight 2,2-dichloro-1,1,1-trifluoroethane (CAS #306-83-2) which is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR372).

7. HANDLING AND STORAGE

Normal Handling: Precautions for safe handling - transfer material in a closed system. Handle only in wellventilated areas. Use only equipment and materials which are compatible with the product.

Conditions for storage, including incompatibilities: Keep container closed

Specific use(s): For further information, please contact: Supplier

Additional Note: Approved DOT shipping containers are a normal safe method of storage. Containers should be maintained in good condition. Do not allow material to remain in deteriorating containers. Because this product can volatilize, special care should be taken for over pressurization hazards if the containers are overheated or near a radiant heat source.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Ventilate as necessary to minimize exposure levels. Inspect and clean ventilation systems regularly. Prolonged use should occur only in areas with adequate ventilation. Keep storage containers tightly closed. Vapors are heavier than air posing a potential hazard if large volumes are trapped in enclosed or low places.

Personal Protective Equipment: Protective shoes, such as steel toed shoes, should be worn in addition to the other specified personal protective equipment (PPE) when handling bulk containers. If handling bulk material or transferring the material from fire protection equipment, wear safety glasses with side shields. This statement is not intended to apply to use of a fire extinguisher where the nozzle arrangement is intended to direct the discharge away from the user of the extinguisher. Wear protective clothing when handling a leak in a storage container (does not apply to fire protection equipment servicing, other than safety goggles and gloves if large volumes can be exposed to skin). Short exposures to skin are not likely to pose a hazard. Respiratory protection is not normally needed, however, if handled in enclosed spaces where applicable exposure limits might be exceeded, a SCBA should be used. When performing filling or servicing operations, PERFORM THESE ACTIVITIES IN A WELL-VENTILATED AREA

Time Weighted Exposure Limits: (For persons regularly exposed to material)

Workplace Environmental Exposure Level, WEEL (AIHA) (8 hrs.): 50 ppm (v/v), based on the primary component (HCFC-123)

Rev: 18

9. PHYSICAL AND CHEMICAL PROPERTI	

Appearance: Pressurized, colorless,	Physical state: Liquid	Molecular weight: Approx. 150.7	Chemical formula: CF ₃ CHCl ₂ plus Proprietary Gas Mixture	Odor: Slight ether-like odor
Specific gravity (water = 1.0): 1.47 at 25° C (77° F)	Solubility in Water: 0.39% wt. @ 25° C (77° F), 1 atm	pH: Not applicable	Boiling point: 27°C (80.6°F)	Melting point: Not applicable
Relative density, Air = 1: 5.1	Partition coefficient, n- octanol/water, Log P _{ow} : 2.0 - 2.8	Auto-ignition temperature: Not determined	Upper flammability or explosive limits: Not applicable	Lower flammability or explosive limits: Not applicable
Vapor pressure at: 655 kPa (95 psig) at 20° C (70° F)	Vapor density: approx. 6.08 kg/m ³ (0.387 lb./ft ³) at 25° C (77° F)	Evaporation rate: Faster than water, slower than ether	Flash point: None	Liquid density: 1.48 kg/l (92.3 lb./ft3) at 25° C (77° F)

10. STABILITY AND REACTIVITY

Reactivity: Decomposes on heating.

Chemical Stability: Normally stable (will decompose if exposed to a high radiant heat source, such as fire). The material is intended for use as a fire extinguishant.

Incompatibilities: Incompatible with alkali or alkaline earth metals, and powdered metals Al, Zn, Be, etc.

Hazardous Decomposition Products: Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, and possibly carbonyl halide.

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Acute toxicity is low.

For 2,2-dichloro-1,1,1-trifluoroethane (CAS # 306-83-2): LC50 (4 hr.): 3.2% (32,000 ppm), (Inhalation) Oral Approximate Lethal Dose (ALD): 9 g/kg (body weight) Cardiotoxic LOAEL (Lowest Observed Adverse Effect Level): 2%vol. Cardiotoxic NOAEL (No Observed Adverse Effect Level): 1%vol.

Toxicological testing was performed on HCFC-123 by the Program for Alternative Fluorocarbon Testing (PAFT). Data from acute toxicity studies in this program demonstrated that HCFC-123 has very low toxicity by skin application or inhalation.

For the proprietary gas mixture: The toxic effects of the proprietary gas mixture in the absence of extreme temperature are primarily its ability to function as a simple asphyxiant (i.e. displace oxygen).

Other Toxicity Information:

Animal Studies: For 2,2-dichloro-1,1,1-trifluoroethane (CAS #306-83-2): Long-term exposure in a two year study (6 hours/day, 5 days/week) at concentrations of 300, 1000 and 5000 ppm decreased body weight, serum cholesterol, triglycerides and glucose, and increased urinary fluoride concentrations in rats. However, survival was significantly improved in all exposed groups compared to control animals. Inhalation of 300, 1000 and 5000 ppm caused an increase in benign tumors of the liver, pancreas, and testis. Tumors occurred late in life and none were assessed to be life threatening. Tumor formation is thought to occur through non-genotoxic mechanisms associated with a peroxisome proliferating potential or with hormonal disturbances in older rats.

Exposure to dogs, guinea pigs or monkeys at 1000 ppm or greater for 6 hours per day,7 days per week, for a total of 3 weeks, induced slight or mild liver damage with altered enzyme levels.

Halotron I Safety Data Sheet

Rodent studies indicate HCFC-123 is easily absorbed via inhalation. It distributes in all organs, more so in the liver. About 90% of inhaled HCFC-123 is eliminated via the lungs unchanged. The remaining amount is metabolized to trifluoroacetic acid and excreted in the urine. Small amounts of trifluoroacetylated proteins were detected in rats in laboratory studies.

HCFC-123 did not affect reproductive performance in rats or harm the unborn animals in rats or rabbits at 5000 and 10,000 ppm.

HCFC-123 was inactive in several test-tube genetic damage studies except the human lymphocyte chromosome aberration assay. HCFC-123 is also inactive in live animal genetic damage studies. Therefore, it is not considered genotoxic.

Carcinogen: IARC: no NTP: no OSHA: no

12. ECOLOGICAL INFORMATION

Aquatic toxicity: 2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123) 96 h LC50: Oncorhynchus mykiss (rainbow trout) 55.5 mg/l 96 h ErC50: Pseudokirchneriella subcapitata (green algae) 96.6 mg/l 96 h EbC50: Pseudokirchneriella subcapitata (green algae) 67.8 mg/l 48 h EC50: Daphnia magna (Water flea) 17.3 mg/l Environmental Fate:

2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123) Biodegradability: 24%, not readily biodegradable Bioaccumulation: Bio-concentration factor (BCF): 33, Bioaccumulation is unlikely

The material is a mixture of volatile organic compounds (although exempted from reporting as a VOC under U.S. regulation 40 CFR Part 51.100(s)) and should not be permitted to be mixed with ground or drinking water and should be handled, used, and disposed responsibly in accordance with regulations in the Country, Province, State, County, and locality where it is used.

13. DISPOSAL CONSIDERATIONS

Observe all federal, state, and local regulations for products of this type when accomplishing disposal.

The manufacturer assumes no liability for the use of this product in a manner that causes environmental or other harm.

14. TRANSPORT INFORMATION

UN	Proper Shipping Name:	US DOT	Pack
Number:	UN1956, Compressed Gas,	Hazard Class:	Group:
UN1956	N.O.S., 2.2 (Contains Argon,	2.2,	N/A
	Tetrafluoromethane)	Nonflammable	
		Gas	

15. REGULATORY INFORMATION

Listed in the Toxic Substances Control Act (TSCA) Inventory: Yes, all components are on the TSCA inventory, listed on EPA SARA (313) Hazard Class, and is subject to reporting requirements of EPCRA Section 313

HCFC-123 is listed under EINECS EC Number 206-190-3 for Intermediate Use Only.

All components of the proprietary gas mixture are listed in EINECS based on ESIS lookup for the European Union. This chemical substance is not classified in the Annex I of Directive 67/548/EEC. It is listed as a LPV for Canada, All components listed in Canadian DSL

Information about limitation of use: This blend is intended solely for use as a fire extinguishing agent and should not be used for other purposes without contact and technical discussion with the manufacturer.

This preparation was classified in compliance with the following directives and regulations:

Rev: 18

(EC) No 1907/2006 (REACH) (EC) No 1272/2008 (CLP) (EC) No 453/2010

16. OTHER INFORMATION

The user is responsible to evaluate the safety and environmental consequences of any intended uses. The manufacturer assumes no liability for any usages that result in adverse consequences.

Health Hazard	
Fire Hazard	0
Reactivity	1
PPE	X

Hazardous Materials Identification System (HMIS) ratings (scale 0 - 4)

X - Consult your supervisor or S.O.P. for SPECIAL handling directions

National Fire Protection Association (NFPA) ratings (scale 0 - 4)



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Fax To: AECOM Contact: Brittany Kirchmann Fax : 000-000-0000 Date: 10/16/2018

EDR PUR-IQ[®] Report

"the intelligent way to conduct historical research"

for Waterloo Big Rock AASF 2245 West Big Rock Road Waterloo, IA 50703 Lat./Long. 42.554788 / 92.383858 EDR Inquiry # 5454370.2s

The EDR PUR-IQ report facilitates historical research planning required to complete the Phase I ESA process. The report identifies the *likelihood* of prior use coverage by searching proprietary EDR-Prior Use Reports[®] comprising nationwide information on: city directories, fire insurance maps, aerial photographs, historical topographic maps, flood maps and National Wetland Inventory maps.

Potential for EDR Historical (Prior Use) Coverage - Coverage in the following historical information sources may be used as a guide to develop your historical research strategy:

1. Building Permits:	Building Permits are ava	ilable for 'WATERLOO', IA (1990 - 2017).
2. City Directory:	Coverage exists for portions of WATERLOO, IA for 1957-2002	
3. Fire Insurance Map:	When you order online any EDR Package or the EDR Radius Map with EDR Sanborn Map Search/Print, you receive site specific Sanborn Map coverage information at no charge.	
4. Aerial Photograph:	Aerial photography coverage may exist for portions of Black Hawk County. Please contact your EDR Account Executive for information about USGS photos available through EDR.	
5. Topographic Map:	The USGS 7.5 min. quad topo sheet(s) associated with this site:	
Historical: Coverage exists for BLACK HAWK County		
Current: Targe	et Property:	TP I 2013 I 5944548 Cedar Falls, IA
Additional required for 1 Mile radius:		E I 2013 I 5944028 Waterloo North, IA

EDR's network of professional researchers, located throughout the United States, accesses the most extensive national collections of city directory, fire insurance maps, aerial photographs and historical topographic map resources available for Waterloo, IA. These collections may be located in multiple libraries throughout the country. To ensure maximum coverage, EDR will often assign researchers at these multiple locations on your behalf. Please call or fax your EDR representative to authorize a search.



EDR - HISTORICAL SOURCE(S) ORDER FORM

AECOM **Brittany Kirchmann** Account # 1861179

Waterloo Big Rock AASF 2245 West Big Rock Road Waterloo, IA 50703 BLACK HAWK County Lat./Long. 42.554788 / 92.383858 EDR Inquiry # 5454370.2s

Should you wish to change or add to your order, fax this form to your EDR account executive:

Sean McLaughlin Ph: 1-800-352-0050 Fax: 1-800-231-6802

Reports

- ____ EDR Sanborn Map[®] Search/Print
- EDR Fire Insurance Map Abstract
- ____ EDR Multi-Tenant Retail Facility[®] Report
- ____ EDR City Directory Abstract
- EDR Aerial Photo Decade Package
- USGS Aerial 5 Package
- ____ USGS Aerial 3 Package
- ____ EDR Historical Topographic Maps
- ____ Paper Current USGS Topo (7.5 min.)
- __ Environmental Lien Search
- Chain of Title Search
- _ NJ MacRaes Industrial Directory Report
- ____ EDR Telephone Interview

Shipping:

- Email
- _ Express, Next Day Delivery
- Express, Second Day Delivery Express, Next day Delivery Express, Second Day Delivery U.S. Mail

Customer Account Customer Account

RUSH SERVICE IS AVAILABLE

Acct #	
Acct #	

Thank you

Waterloo Big Rock AASF 2245 West Big Rock Road Waterloo, IA 50703

Inquiry Number: 5454370.3 October 15, 2018

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

10/15/18 Certified Sanborn® Map Report Site Name: Client Name: Waterloo Big Rock AASF AECOM 12120 Shamrock Plaza 2245 West Big Rock Road Waterloo, IA 50703 Omaha. NE 68154 EDR Inquiry # 5454370.3 Contact: Brittany Kirchmann

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by AECOM were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results: Certification # AC67-4728-93B6 PO# NA Waterloo Project

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Certification #: AC67-4728-93B6

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

[Library of Congress	
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University Publications of America

EDR Private Collection

The Sanborn Library LLC Since 1866™

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Waterloo Big Rock AASF

2245 West Big Rock Road Waterloo, IA 50703

Inquiry Number: 5454370.5 October 18, 2018

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

EDR Aerial Photo Decade Package

Site Name:

Client Name:

10/18/18

Waterloo Big Rock AASF 2245 West Big Rock Road Waterloo, IA 50703 EDR Inquiry # 5454370.5 AECOM 12120 Shamrock Plaza Omaha, NE 68154 Contact: Brittany Kirchmann



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:				
<u>Year</u>	Scale	Details	Source	
2017	1"=500'	Flight Year: 2017	USDA/NAIP	
2014	1"=500'	Flight Year: 2014	USDA/NAIP	
2011	1"=500'	Flight Year: 2011	USDA/NAIP	
2008	1"=500'	Flight Year: 2008	USDA/NAIP	
2005	1"=500'	Flight Year: 2005	USDA/NAIP	
1994	1"=500'	Acquisition Date: March 31, 1994	USGS/DOQQ	
1983	1"=500'	Flight Date: January 01, 1983	USGS	
1970	1"=500'	Flight Date: January 01, 1970	ASCS	
1964	1"=500'	Flight Date: August 10, 1964	USDA	
1958	1"=500'	Flight Date: April 19, 1958	USGS	
1952	1"=500'	Flight Date: July 03, 1952	USDA	
1937	1"=500'	Flight Date: August 04, 1937	USDA	

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Waterloo Big Rock AASF

2245 West Big Rock Road Waterloo, IA 50703

Inquiry Number: 5454370.2s October 16, 2018

The EDR Radius Map[™] Report with GeoCheck[®]



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FORM-LBD-SPM

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Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2245 WEST BIG ROCK ROAD WATERLOO, IA 50703

COORDINATES

Latitude (North):	42.5547880 - 42° 33' 17.23"
Longitude (West):	92.3838580 - 92° 23' 1.88"
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	550583.2
UTM Y (Meters):	4711346.5
Elevation:	876 ft. above sea level

2013

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	
Version Date:	

2013 5944028 WATERLOO NORTH, IA

5944548 CEDAR FALLS, IA

AERIAL PHOTOGRAPHY IN THIS REPORT

East Map: Version Date:

Portions of Photo from:	20150913
Source:	USDA

Target Property Address: 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	ALLSITES, AIRS		TP
A2	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	AST		ТР
A3	ARMY AVIATION SUPPOR	2245 W. BIG ROCK RD.	NPDES		ТР
A4	IA ARNG WATERLOO AVI	2245 WEST BIG ROCK R	TIER 2		ТР
A5	BECKER CHAPMAN POST	2245 W BIG ROCK RD	FINDS		ТР
A6	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	US AIRS		ТР
A7	IOWA ARMY NATIONAL G	2245 WEST BIG ROCK R	NPDES		ТР
A 8	AASF #2	AASF #2 2245 W BIG R	FINDS		ТР
A9	IOWA ARMY NATIONAL G	2245 WEST BIG ROCK R	FINDS, ECHO		ТР
A10	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	CORRACTS, RCRA-TSDF, RCRA-SQG, RAATS		ТР
A11	AASF #2	AASF #2 2245 W BIG R	UST		ТР
A12	IOWA ARMY NATIONAL G	2245 W. BIG ROCK RD.	NPDES		ТР
A13	IA ARNG WATERLOO AVI	2245 WEST BIG ROCK R	FINDS		ТР

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD WATERLOO, IA 50703	ALLSITES Status: Closed Site Id Number: 1175 AIRS Status: MINOR EI Facility Id: 07-01-115	N/A
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD WATERLOO, IA	AST Registration Number: 18822 Registration Number: 18823 Registration Number: 18824 Registration Number: 18825	N/A
ARMY AVIATION SUPPOR 2245 W. BIG ROCK RD. WATERLOO, IA 50703	NPDES	N/A
IA ARNG WATERLOO AVI 2245 WEST BIG ROCK R WATERLOO, IA 50703	TIER 2 Facility Id: 864 Facility Id: FAIDSIT2A00000864 State Id: IA	N/A
BECKER CHAPMAN POST 2245 W BIG ROCK RD WATERLOO, IA 50703	FINDS Registry ID:: 110070130403	N/A
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD WATERLOO, IA 50703	US AIRS Database: US AIRS MINOR, Date of Government Version: 1	N/A 10/12/2016
IOWA ARMY NATIONAL G 2245 WEST BIG ROCK R WATERLOO, IA 50703	NPDES	N/A
AASF #2 AASF #2 2245 W BIG R WATERLOO, IA 50703	FINDS Registry ID:: 110036255405	N/A
IOWA ARMY NATIONAL G 2245 WEST BIG ROCK R WATERLOO, IA 50703	FINDS	N/A

	Registry ID:: 110005756379 ECHO Registry ID: 110005756379	
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD	CORRACTS EPA ID:: IAD981504269	IAD981504269
WATERLOO, IA 50703	RCRA-TSDF EPA ID:: IAD981504269	
	RCRA-SQG EPA ID:: IAD981504269	
	RAATS Status: 01 Facility ID: IAD981504269	
AASF #2 AASF #2 2245 W BIG R WATERLOO, IA 50703	UST Facility Id: 6228 Registration: 198605894	N/A
IOWA ARMY NATIONAL G 2245 W. BIG ROCK RD. WATERLOO, IA 50703	NPDES	N/A
IA ARNG WATERLOO AVI 2245 WEST BIG ROCK R WATERLOO, IA 50703	FINDS Registry ID:: 110043626234	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
NPL LIENS	Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE_____ Superfund Enterprise Management System Archive

Federal RCRA generators list

RCRA-LQG	RCRA - Large Quant	tity Generators	
RCRA-CESQG	RCRA - Conditionally	y Exempt Small Quantity General	tor

Federal institutional controls / engineering controls registries

LUCIS	Land Use Control Information System
	. Engineering Controls Sites List
	Sites with Institutional Controls

Federal ERNS list

ERNS_____ Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS______ Registry of Hazardous Waste or Hazardous Substance Disposal Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF_____ Permitted Solid Waste Management Facilities

State and tribal leaking storage tank lists

LUST	Leaking Underground Storage Tank Data
LAST	Leaking Aboveground Storage Tank Sites
	Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST...... Underground Storage Tank Listing INDIAN UST...... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL..... Sites with Institutional Controls

State and tribal voluntary cleanup sites

VCP.....Land Recycling Program Sites INDIAN VCP.....Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Brownfields Site Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	•
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
DEL SHWS	Delisted Contaminated Sites Listing
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS	Liens Filed Listing
LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Spills Database
	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	. State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
	. Section 7 Tracking Systems
ROD	
RMP	Risk Management Plans
	Potentially Responsible Parties
	PCB Activity Database System
	Integrated Compliance Information System
FTTS	. FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide
	Act)/TSCA (Toxic Substances Control Act)
	Material Licensing Tracking System
	. Steam-Electric Plant Operation Data
	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	. PCB Transformer Registration Database

HIST FTTS DOT OPS CONSENT INDIAN RESERV FUSRAP UMTRA LEAD SMELTERS US MINES ABANDONED MINES UXO DOCKET HWC FUELS PROGRAM COAL ASH	Superfund (CERCLA) Consent Decrees Indian Reservations Formerly Utilized Sites Remedial Action Program Uranium Mill Tailings Sites Lead Smelter Sites Mines Master Index File Abandoned Mines Unexploded Ordnance Sites Hazardous Waste Compliance Docket Listing EPA Fuels Program Registered Listing Coal Ash Disposal Site Listing
DRYCLEANERS	

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	. EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS______ Recovered Government Archive State Hazardous Waste Facilities List RGA LUST______ Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

There were no unmapped sites in this report.

OVERVIEW MAP - 5454370.2S



SITE NAME: Waterloo Big Rock AASF	CLIENT: AECOM
ADDRESS: 2245 West Big Rock Road	CONTACT: Brittany Kirchmann
Waterloo IA 50703	INQUIRY #: 5454370.2s
LAT/LONG: 42.554788 / 92.383858	DATE: October 16, 2018 9:00 am
	Copyright @ 2018 EDB Inc @ 2015 TomTom Rel 2015

DETAIL MAP - 5454370.2S



- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

Indian Reservations BIA 100-year flood zone 500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

樹

SITE NAME:	Waterloo Big Rock AASF
ADDRESS:	2245 West Big Rock Road
	Waterloo IA 50703
LAT/LONG:	42.554788 / 92.383858

CLIENT: AECOM CONTACT: Brittany Kirchmann INQUIRY #: 5454370.2s DATE: October 16, 2018 9:02 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	<u>< 1/8</u>	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted	
STANDARD ENVIRONMENTAL RECORDS									
Federal NPL site list									
NPL Proposed NPL NPL LIENS	1.000 1.000 TP		0 0 NR	0 0 NR	0 0 NR	0 0 NR	NR NR NR	0 0 0	
Federal Delisted NPL site list									
Delisted NPL	1.000		0	0	0	0	NR	0	
Federal CERCLIS list									
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0	
Federal CERCLIS NFRA	P site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0	
Federal RCRA CORRAC	TS facilities l	ist							
CORRACTS	1.000	1	0	0	0	0	NR	1	
Federal RCRA non-COR		acilities list							
RCRA-TSDF	0.500	1	0	0	0	NR	NR	1	
Federal RCRA generato	rs list								
RCRA-LQG RCRA-SQG RCRA-CESQG	0.250 0.250 0.250	1	0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 1 0	
Federal institutional controls / engineering controls registries									
LUCIS US ENG CONTROLS US INST CONTROL	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0	
Federal ERNS list									
ERNS	TP		NR	NR	NR	NR	NR	0	
State- and tribal - equiva	alent CERCLIS	S							
SHWS	1.000		0	0	0	0	NR	0	
State and tribal landfill a solid waste disposal sit									
SWF/LF	0.500		0	0	0	NR	NR	0	
State and tribal leaking storage tank lists									
LUST LAST INDIAN LUST	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0	
State and tribal registered storage tank lists									
FEMA UST	0.250		0	0	NR	NR	NR	0	

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted	
UST AST INDIAN UST	0.250 0.250 0.250	1 1	0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	1 1 0	
State and tribal institution control / engineering co									
INST CONTROL	0.500		0	0	0	NR	NR	0	
State and tribal voluntary cleanup sites									
VCP INDIAN VCP	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0	
State and tribal Brownfields sites									
BROWNFIELDS	0.500		0	0	0	NR	NR	0	
ADDITIONAL ENVIRONMEN	ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists									
US BROWNFIELDS	0.500		0	0	0	NR	NR	0	
Local Lists of Landfill / S Waste Disposal Sites	Solid								
INDIAN ODI DEBRIS REGION 9 ODI IHS OPEN DUMPS	0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0	0 0 0 0	NR NR NR NR	NR NR NR NR	0 0 0 0	
Local Lists of Hazardou Contaminated Sites	s waste /								
US HIST CDL ALLSITES DEL SHWS US CDL	TP 0.500 1.000 TP	1	NR 0 0 NR	NR 0 0 NR	NR 0 0 NR	NR NR 0 NR	NR NR NR NR	0 1 0 0	
Local Land Records									
LIENS LIENS 2	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0	
Records of Emergency	Release Repo	orts							
HMIRS SPILLS SPILLS 90	TP TP TP		NR NR NR	NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0	
Other Ascertainable Rec	cords								
RCRA NonGen / NLR FUDS DOD SCRD DRYCLEANERS US FIN ASSUR EPA WATCH LIST	0.250 1.000 1.000 0.500 TP TP		0 0 0 NR NR	0 0 0 NR NR	NR 0 0 NR NR	NR 0 NR NR NR	NR NR NR NR NR	0 0 0 0 0	
MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION TSCA TRIS SSTS ROD RMP RAATS PRP PADS ICIS FTTS MLTS COAL ASH DOE COAL ASH DOE COAL ASH DOE COAL ASH EPA PCB TRANSFORMER RADINFO HIST FTTS DOT OPS CONSENT INDIAN RESERV FUSRAP UMTRA LEAD SMELTERS US AIRS US MINES ABANDONED MINES FINDS ECHO UXO DOCKET HWC	0.250 TP TP TP 1.000 TP TP TP TP TP TP TP TP 0.500 TP TP TP 1.000 1.000 0.500 TP TP 0.250 0.250 TP TP 1.000 TP TP	Property 1 1 4 1	0 R R R O R R R R R R R R R R R R R R R	0 NR NR NR NR NR NR NR NR NR NR NR NR NR	NR NR O R NR N	NR NR O NR NR N	NR R R R R R R R R R R R R R R R R R R	$\begin{array}{c} 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ $
FUELS PROGRAM AIRS COAL ASH DRYCLEANERS Financial Assurance NPDES TIER 2	0.250 TP 0.500 0.250 TP TP TP	1 3 1	0 NR 0 NR NR NR	0 NR 0 NR NR NR	NR NR NR NR NR NR	NR NR NR NR NR NR	NR NR NR NR NR NR	0 1 0 0 3 1
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP EDR Hist Auto EDR Hist Cleaner	1.000 0.125 0.125		0 0 0	0 NR NR	0 NR NR	0 NR NR	NR NR NR	0 0 0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Go								
RGA HWS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals		18	0	0	0	0	0	18

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Database(s)

EDR ID Number EPA ID Number

A1 Target Property	IOWA ARMY NATIONAL GU 2245 W BIG ROCK RD WATERLOO, IA 50703	JARD - WATERLO	00	ALLSITES AIRS	S107669067 N/A
	Site 1 of 13 in cluster A				
Actual: 876 ft.	ALLSITES: Site Id Number: Project Manager: Ownership Type: Status: Program: Site Type: Brownfield Eligible: Registry: Institutional Control: Priority: Latitude: Longitude: XCoord: YCoord:	1175 Dan Cook State Closed Chapter 133 Federal False False False 0 42.554658 -92.380764 550836.76 4711548.21			
	AIRS: Facility Number: Status: Closed?: Region: Site ID: Contact Phone: Facility Contact Phone: Facility Contact Phone: Mailing Address 2: SIC Primary: NAICS Primary: AIRS: Facility ID: NAICS Code: Year: PM25: PM10: SO2: NOX: VOC: CO: Lead: Ozone: Ammonia: HAP: Antimony: Arsenic: Beryllium: Cadmium: Chromium: Cobalt: Cokeoven:		07-01-115 MINOR EI Not reported EAST 100000012808 515-252-4396 Not reported NGIA-DIM_E, BLDG 3535, CAMP DODGE Not reported Not reported Not reported 2015 Not reported Not rep		
	Cyanide: Finemat: Glycol:		Not reported Not reported Not reported		

Out of Service Date:

Amount Received:

Not reported

20.00

MAP FINDINGS

EDR ID Number Database(s)

EPA ID Number

	IOWA ARMY NATIONAL GUARD - WATERLOO (Continued)			
	IOWA ARMY NATIONAL GUARD	- WATERLOO (Continued)		S107669067
	H2SO4:	Not reported		
	Manganese:	Not reported		
	Mercury:	Not reported		
	Nickel:	Not reported		
	Pom:	Not reported		
	Radionclide:	Not reported		
	Selenium:	Not reported		
A2	IOWA ARMY NATIONAL GUARD		AST	A100408818
Target	2245 W BIG ROCK RD			N/A
Property	WATERLOO, IA			
	Site 2 of 13 in cluster A			
Actual:	AST:			
876 ft.	Key:	Not reported		
	Owners Name:	HOWARD R CLEGG -ENV PROTECTION SPECIALIST		
	Owners Address:	7105 NW 70TH AVE BLDG 3535		
	Owners City,St,Zip:	Johnston, IA 50131		
	Tank Key Num:	Not reported		
	Registration Number:	18824		
	Year Of Manufacture (age):	Not reported		
	Size:	10000		
	Type:	Not reported		
	Contents:	jet fuel		
	Plan Date:	Not reported		
	Registration Date:	Not reported		
	Plan Number:	Not reported		
	Out of Service Date:	Not reported		
	Amount Received:	20.00		
	Date Received:	12/24/2014		
	Tank Key Num:	Not reported		
	Registration Number:	18823		
	Year Of Manufacture (age):	Not reported		
	Size:	10000		
	Type:	Not reported		
	Contents:	jet fuel		
	Plan Date:	Not reported		
	Registration Date:	Not reported		
	Plan Number:	Not reported		
	Out of Service Date:	Not reported		
	Amount Received:	20.00		
	Date Received:	12/24/2014		
	Tank Key Num:	Not reported		
	Registration Number:	18822		
	Year Of Manufacture (age):	Not reported		
	Size:	10000		
	Type:	Not reported		
	Contents:	jet fuel		
	Plan Date:	Not reported		
	Registration Date:	Not reported		
	Plan Number:	Not reported		
	Out of Service Date:	Not reported		

Database(s)

EDR ID Number EPA ID Number

IOWA ARMY NATIONAL GUARD (Continued)

Date Received:	12/24/2014
Tank Key Num: Registration Number: Year Of Manufacture (age): Size: Type: Contents: Plan Date: Registration Date: Plan Number: Out of Service Date: Amount Received: Date Received:	Not reported 18825 Not reported 10000 Not reported jet fuel Not reported Not reported Not reported Not reported 20.00 12/24/2014

A3 ARMY AVIATION SUPPORT FACILITY #2 Target 2245 W. BIG ROCK RD. Property WATERLOO, IA 50703

Site 3 of 13 in cluster A

Actual: 876 ft. NPDES: Permit Number: Not reported Epa Npdes Id Number: Not reported Permit Expiration Date: 09/30/2018 Facility Name: **ARMY AVIATION SUPPORT FACILITY #2** Facility Address1: 2245 W. BIG ROCK RD. Facility City: WATERLOO Facility Phone Number: Not reported Facility Type: Not reported Facility Class: Not reported Standard Industrial Classification Code: Not reported Owner Name: IOWA ARMY NATIONAL GUARD Owner Add1: Not reported Owner Add2: Not reported Owner City: Not reported Owner State: Not reported Not reported Owner Zip: Not reported Owner Phone: Indr Regional/Field Office Number: Not reported Section: Not reported Township: Not reported Range: Not reported Latitude Degree: Not reported Longitude Degree: Not reported River Basin: Not reported Type Of Treatment: Not reported Not reported Design Number: **Design Population Equivalent:** Not reported Design Biochemical Oxygen Demand: Not reported Design Avg Dry Weather Flow (Mll Glns Per Dy): Not reported Design Avg Wet Weather Flow (MII GIns Per Dy): Not reported Operator Certification Facility Type: Not reported File No: 576 Authorization No: 422 10/01/1992 Authorization Date: Permit Status: Current Permit Type: GP #1 - Industrial Activity

A100408818

NPDES S122561870 N/A

Map ID Direction		MAP FINDINGS		
Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	ARMY AVIATION SUPPORT FAC	CILITY #2 (Continued) Federal		S122561870
A4 Target Property	IA ARNG WATERLOO AVIATIOI 2245 WEST BIG ROCK ROAD R WATERLOO, IA 50703		TIER 2	S109946710 N/A
	Site 4 of 13 in cluster A			
Actual: 876 ft.	TIER 2: Report Year: Facility Id: Id: Description: Last Modified:	2017 864 9711 NATIONAL SECURITY SIC Not reported		
	ld: Description: Last Modified:	928110 National Security NAICS Not reported		
	State Id: Fire District: Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail State: Mail Zip: Latitude: Longitude: Notes:	Not reported Waterloo Fire Department Not reported 01/14/2008 01/02/2018 Not reported Not reported Not reported IA Not reported 42.55598 -92.37820 Not reported		
	Notes: Contact: Report Year: Contact Id: Date Modified: First Name: Last Name: Title: Email: Address: City: Country: State: Zip Code: Type1: Last Modified: Telephone: Telephone Type: Chemical: Report Year: Chem Inv Record Id: CICAS: EHS Chemical: Chemical Name: Acute:	Not reported 2017 199181 Not reported Harlan Ratcliff Not reported harlan.r.ratcliff.nfg@mail.mil 7105 NW 70th Avenue Johnston US IA 50131 Owner / Operator Not reported 515-252-4396 Work 2017 5032 8008-20-6 Not reported Jet Fuel Kerosene (F24) Not reported		

Database(s)

EDR ID Number EPA ID Number

IA ARNG WATERLOO AVIATION (Continued)

Ave Amount: 200000 Ave Amount Code: 10 370000 Max Amount: Max Amount Code: 10 Chronic: Not reported Not reported Last Modified: Days On Site: 365 Fire: Not reported Gas: Not reported Liquid: True Mixture: True Pressure: Not reported Pure: Not reported Reactive: Not reported Not reported Solid: Trade Secret: Not reported Report Year: 2016 Facility Id: 864 State Id: Not reported Fire District: Waterloo Fire Department Site Map: Not reported Site Coord Abbreviation: Not reported Date Signed: 01/14/2008 Date Modified: 01/06/2017 Dike Or Other Safeguard: Not reported Mailing Address: Not reported Mail City: Not reported Mail State: IA Mail Zip: Not reported Latitude: 42.55598 Longitude: -92.37820 Notes: Not reported Report Year: 2015 Facility Id: 864 State Id: Not reported Fire District: Waterloo Fire Department Site Map: Not reported Site Coord Abbreviation: Not reported Date Signed: 01/14/2008 Date Modified: 01/14/2016 Dike Or Other Safeguard: Not reported Mailing Address: Not reported Mail City: Not reported Mail State: IA Mail Zip: Not reported Latitude: 42.55598 -92.37820 Longitude: Notes: Not reported 2014 Report Year: Facility Id: 864 State Id: Not reported Fire District: Waterloo Fire Department Site Map: Not reported

S109946710

Database(s)

EDR ID Number EPA ID Number

IA ARNG WATERLOO AVIATION (Continued)

	(
Site Coord Abbreviation:	Not reported
Date Signed:	01/14/2008
Date Modified:	02/06/2015
Dike Or Other Safeguard:	Not reported
Mailing Address:	Not reported
Mail City:	Not reported
Mail State:	IA
Mail Zip:	Not reported
Latitude:	42.55598
Longitude:	-92.37820
Notes:	Not reported
Report Year:	2013
Facility Id:	864
State Id:	Not reported
Fire District:	Waterloo Fire Department
Site Map:	Not reported
Site Coord Abbreviation:	Not reported
Date Signed:	01/14/2008
Date Modified:	02/26/2014
Dike Or Other Safeguard:	Not reported
Mailing Address:	Not reported
Mail City:	Not reported
Mail State:	IA
Mail Zip:	Not reported
Latitude:	42.55598
Longitude:	-92.37820
Notes:	Not reported
Report Year:	2012
Facility Id:	FAIDSIT2A00000864
State Id:	Not reported
Fire District:	Waterloo Fire Department
Site Map:	False
Site Map: Site Coord Abbreviation:	False False
Site Map: Site Coord Abbreviation: Date Signed:	False False 02/12/2007
Site Map: Site Coord Abbreviation: Date Signed: Date Modified:	False False 02/12/2007 02/23/2012
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard:	False False 02/12/2007 02/23/2012 False
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address:	False False 02/12/2007 02/23/2012 False Not reported
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City:	False False 02/12/2007 02/23/2012 False Not reported Not reported
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City:	False False 02/12/2007 02/23/2012 False Not reported Not reported
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported Not reported
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported 42.55598 -92.37820
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported 42.55598 -92.37820
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through work then home phones first. The cell phone should be used if neither person can be contacted.
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through work then home phones first. The cell phone should be used if neither
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes: Report Year:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported Palse Palse Out reported Not reported Palse Not reported Palse Palse Palse Palse Not reported Palse Palse Palse Palse Palse Not reported Palse Palse
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes: Report Year: Facility Id:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported Palse Palse 02/23/2012 False Not reported Not reported Palse Polse Palse Palse Not reported Palse
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes: Report Year: Facility Id: State Id:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through work then home phones first. The cell phone should be used if neither person can be contacted. 2012 FAIDSIT2A00000864 Not reported
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes: Report Year: Facility Id: State Id: Fire District:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through work then home phones first. The cell phone should be used if neither person can be contacted. 2012 FAIDSIT2A00000864 Not reported Waterloo Fire Department
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes: Report Year: Facility Id: State Id: Fire District: Site Map: Site Coord Abbreviation:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through work then home phones first. The cell phone should be used if neither person can be contacted. 2012 FAIDSIT2A00000864 Not reported Waterloo Fire Department False
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes: Report Year: Facility Id: State Id: Fire District: Site Map:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through work then home phones first. The cell phone should be used if neither person can be contacted. 2012 FAIDSIT2A00000864 Not reported Waterloo Fire Department False False
Site Map: Site Coord Abbreviation: Date Signed: Date Modified: Dike Or Other Safeguard: Mailing Address: Mail City: Mail State: Mail Zip: Latitude: Longitude: Notes: Report Year: Facility Id: State Id: Fire District: Site Map: Site Coord Abbreviation: Date Signed:	False False 02/12/2007 02/23/2012 False Not reported Not reported Not reported 42.55598 -92.37820 FROM 2006 DATA: Please attempt to contact emergency contacts through work then home phones first. The cell phone should be used if neither person can be contacted. 2012 FAIDSIT2A00000864 Not reported Waterloo Fire Department False False 02/14/2013

IA ARNG WATERLOO AVIATION (Continued)

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S109946710

Mailing Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Latitude:	42.55598
Longitude:	-92.37820
Notes:	Not reported
NOLES.	Not reported
Report Year:	2010
Facility Id:	FAIDSIT2A00000864
State Id:	Not reported
Fire District:	Waterloo Fire Department
Site Map:	False
Site Coord Abbreviation:	False
Date Signed:	2011-01-20T16:13:56
Date Modified:	3/30/2011
Dike Or Other Safeguard:	False
Mailing Address:	Not reported
Mail City:	Not reported
Mail State:	Not reported
Mail Zip:	Not reported
Latitude:	42.555985999999997
Longitude:	-92.378204999999994
Notes:	FROM 2006 DATA: Please attempt to contact emergency contacts throug
	work then home phones first. The cell phone should be used if neither
	person can be contacted.
Report Year:	2009
Facility Id:	FAIDSIT2A00000864
State Id:	IA
Fire District:	Waterloo Fire Department
Site Map:	False
Site Coord Abbreviation:	False
Date Signed:	2010-02-18T16:24:13
Date Modified:	2010-02-18T16:23:24
Dike Or Other Safeguard:	False
Mailing Address:	Not reported
Mail City:	Not reported
•	•
Mail State:	Not reported
Mail Zip:	Not reported
Latitude:	42.555985999999997
Longitude:	-92.378204999999994
Notes:	FROM 2006 DATA: Please attempt to contact emergency contacts throug
	work then home phones first. The cell phone should be used if neither
	person can be contacted.

A5 BECKER CHAPMAN POST RIFLE RANGE Target 2245 W BIG ROCK RD Property WATERLOO, IA 50703

Site 5 of 13 in cluster A

Registry ID:

Actual: FINDS: 876 ft.

110070130403

Environmental Interest/Information System IDNR-EFD (Iowa Department Of Natural Resources - Emission Factor FINDS 1024047188 N/A

TC5454370.2s Page 14

Direction Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	BECKER CHAPMAN POST RIFLE RA	ANGE (Continued) a) provides information about existing emission factors		1024047188
	Click this hype additional FINE			
A6 Target Property	IOWA ARMY NATIONAL GUARD - W 2245 W BIG ROCK RD WATERLOO, IA 50703	ATERLOO	US AIRS	1016935615 N/A
	Site 6 of 13 in cluster A			
Actual: 876 ft.	US AIRS MINOR: Envid: Region Code: Programmatic ID: Facility Registry ID: D and B Number: Primary SIC Code: NAICS Code: Default Air Classification Code: Facility Type of Ownership Code: Air CMS Category Code: HPV Status:	Not reported		
		Not reported		
	US AIRS MINOR: Region Code: Programmatic ID: Facility Registry ID: Air Operating Status Code: Default Air Classification Code: Air Program: Activity Date: Activity Status Date: Activity Group: Activity Type: Activity Status:	07 AIR IA0000001901300247 110005756379 OPR MIN State Implementation Plan for National Primary and Se 1998-05-20 00:00 Not reported Compliance Monitoring Inspection/Evaluation Not reported	econdary Ambie	nt Air Quality Standards
	Region Code: Programmatic ID: Facility Registry ID: Air Operating Status Code: Default Air Classification Code: Air Program: Activity Date: Activity Status Date: Activity Group: Activity Type: Activity Status:	07 AIR IA0000001901300247 110005756379 OPR MIN State Implementation Plan for National Primary and Se 2000-02-04 00:00:00 Not reported Compliance Monitoring Inspection/Evaluation Not reported	econdary Ambier	nt Air Quality Standards
	US AIRS MINOR: Envid: Region Code: Programmatic ID: Facility Registry ID: D and B Number: Primary SIC Code:	1016935615 07 AIR IA0000001901300247 110005756379 Not reported 9711		

Database(s)

EDR ID Number EPA ID Number

VA ARMY NATIONAL GUARD - W	ATERLOO (Continued)	1016935615
NAICS Code:	928110	
Default Air Classification Code:	MIN	
Facility Type of Ownership Code	STF	
Air CMS Category Code:	Not reported	
HPV Status:	Not reported	
JS AIRS MINOR:		
Region Code:	07	
Programmatic ID:	AIR IA0000001901300247	
Facility Registry ID:	110005756379	
Air Operating Status Code:	OPR	
Default Air Classification Code:	MIN	
Air Program:	State Implementation Plan for National Primary and Second	ndary Ambient Air Quality Stand
Activity Date:	1998-05-20 00:00:00	
Activity Status Date:	Not reported	
Activity Group:	Compliance Monitoring	
Activity Type:	Inspection/Evaluation	
Activity Status:	Not reported	
Region Code:	07	
Programmatic ID:	AIR IA000001901300247	
Facility Registry ID:	110005756379	
Air Operating Status Code:	OPR	
Default Air Classification Code:	MIN	
Air Program:	State Implementation Plan for National Primary and Second	ndary Ambient Air Quality Stand
Activity Date:	2000-02-04 00:00:00	
Activity Status Date:	Not reported	
Activity Group:	Compliance Monitoring	
Activity Type:	Inspection/Evaluation	
Activity Status:	Not reported	

A7IOWA ARMY NATIONAL GUARD AASF 2Target2245 WEST BIG ROCK RD.PropertyWATERLOO, IA 50703

Site 7 of 13 in cluster A

Actual: 876 ft.

al:	NPDES:	
	Permit Number:	Not reported
	Epa Npdes Id Number:	Not reported
	Permit Expiration Date:	07/02/2010
	Facility Name:	IOWA ARMY NATIONAL GUARD AASF 2
	Facility Address1:	2245 WEST BIG ROCK RD.
	Facility City:	WATERLOO
	Facility Phone Number:	Not reported
	Facility Type:	Not reported
	Facility Class:	Not reported
	Standard Industrial Classification Code:	Not reported
	Owner Name:	IOWA ARMY NATIONAL GUARD
	Owner Add1:	Not reported
	Owner Add2:	Not reported
	Owner City:	Not reported
	Owner State:	Not reported
	Owner Zip:	Not reported
	Owner Phone:	Not reported
	Indr Regional/Field Office Number:	Not reported
	Section:	Not reported

NPDES S122537119 N/A

Database(s)

EDR ID Number EPA ID Number

S122537119

IOWA ARMY NATIONAL GUARD AASF 2 (Continued)

Township:	Not reported
Range:	Not reported
Latitude Degree:	Not reported
Longitude Degree:	Not reported
River Basin:	Not reported
Type Of Treatment:	Not reported
Design Number:	Not reported
Design Population Equivalent:	Not reported
Design Biochemical Oxygen Demand:	Not reported
Design Avg Dry Weather Flow (Mll Glns Per Dy):	Not reported
Design Avg Wet Weather Flow (Mll Glns Per Dy):	Not reported
Operator Certification Facility Type:	Not reported
File No:	13802
Authorization No:	13591
Authorization Date:	07/02/2007
Permit Status:	Discontinued
Permit Type:	GP #2 - Construction Activity
Legal Status:	Federal

A8 AASF #2 Target AASF #2 2245 W BIG ROCK RD Property WATERLOO, IA 50703

Site 8 of 13 in cluster A

Actual: FINDS: 876 ft.

Registry ID:

110036255405

Environmental Interest/Information System

IDNR-EFD (Iowa Department Of Natural Resources - Emission Factor Documentation) provides information about existing emission factors

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A9 IOWA ARMY NATIONAL GUARD - WATERLOO Target 2245 WEST BIG ROCK ROAD

Property WATERLOO, IA 50703

Site 9 of 13 in cluster A

Actual: FINDS: 876 ft.

Registry ID:

110005756379

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the FINDS 1011288083 N/A

FINDS 1016085222 ECHO N/A

TC5454370.2s Page 17

Map ID	
Direction	
Distance	
Elevation	Site

Database(s) EP/

EDR ID Number EPA ID Number

1016085222

IOWA ARMY NATIONAL GUARD - WATERLOO (Continued)

estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

AIR MINOR

IDNR-EFD (Iowa Department Of Natural Resources - Emission Factor Documentation) provides information about existing emission factors

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO: Envid: Registry ID: DFR URL:

1016085222 110005756379 http://echo.epa.gov/detailed-facility-report?fid=110005756379

A10 Target Property	IOWA ARMY NATIONAL GU 2245 W BIG ROCK RD WATERLOO, IA 50703	JARD - AASF 2	CORRACTS RCRA-TSDF RCRA-SQG RAATS	1000439559 IAD981504269
	Site 10 of 13 in cluster A			
Actual: 876 ft.	CORRACTS: EPA ID: EPA Region: Area Name: Actual Date: Action: NAICS Code(s): Original schedule date: Schedule end date: EPA ID: EPA Region: Area Name: Actual Date: Action: NAICS Code(s): Original schedule date: Schedule end date: EPA ID: EPA Region: Area Name: Actual Date: Actual Date: Actual Date: Actual Date: Action:	Not reported IAD981504269 7 ENTIRE FACILITY 20091211 CA999NF - Corrective Action Process Terminated, No Further 92811 National Security	Action	

IOWA ARMY NATIONAL GUARD - AASF 2 (Continued)

Database(s)

EDR ID Number EPA ID Number

NAICS Code(s):	92811 National Security
Original schedule date: Schedule end date:	
EPA ID:	IAD981504269
EPA Region: Area Name:	7 ENTIRE FACILITY
Actual Date:	19960905
Action:	CA225NR - Stabilization Measures Evaluation, This facility is, not amenable to stabilization activity at the, present time for reasons
	other than (1) it appears to be technically, infeasible or
	inappropriate (NF) or (2) there is a lack of technical, information
	(IN). Reasons for this conclusion may be the status of, closure at the facility, the degree of risk, timing considerations, the status of
	corrective action work at the facility, or other, administrative
NAICS Code(s):	considerations 92811
NAIGO 0000(3).	National Security
Original schedule date: Schedule end date:	19960930 Not reported
Schedule end date.	Notreported
EPA ID: EPA Region:	IAD981504269 7
Area Name:	, ENTIRE FACILITY
Actual Date:	19950321
Action:	CA225IN - Stabilization Measures Evaluation, This facility is not, amenable to stabilization activity because of, a lack of technical
	data. An evaluation has been completed, but further data is necessary
	to determine stabilization measures, feasibility or appropriateness.
NAICS Code(s):	This status should be changed when data becomes available 92811
	National Security
Original schedule date: Schedule end date:	19950930 Not reported
EPA ID: EPA Region:	IAD981504269 7
Area Name:	ENTIRE FACILITY
Actual Date:	19940801
Action:	CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s):	92811
Original schedule date:	National Security Not reported
Schedule end date:	Not reported
EPA ID:	IAD981504269
EPA Region:	
Area Name: Actual Date:	ENTIRE FACILITY 19930818
Action:	CA075LO - CA Prioritization, Facility or area was assigned a low
NAICS Code(s):	corrective action priority 92811
	National Security
Original schedule date: Schedule end date:	Not reported Not reported
Concluie end dale.	Notroponeu

Database(s)

EDR ID Number EPA ID Number

IOWA ARMY NATIONAL GUARD - AASF 2 (Continued)

RCRA-TSDF:	
Date form received by agency	/:09/11/2014
Facility name:	IOWA ARMY NATIONAL GUARD - AASF 2
Facility address:	2245 W BIG ROCK RD
·	WATERLOO, IA 50703-9643
EPA ID:	IAD981504269
Mailing address:	NW 70TH AVE, ENV OFFICE
Maning address.	BLDG B61 (3535) CAMP DODGE
Contract	JOHNSTON, IA 50131-1824
Contact:	
Contact address:	NW 70TH AVE, ENV OFFICE BLDG B61 (3535) CAMP DODGE
O and a standard and a standard	JOHNSTON, IA 50131-1824
Contact country:	US
Contact telephone:	515-252-4557
Contact email:	CURTIS.L.MADSEN.NFG@MAIL.MIL
EPA Region:	07
Land type:	State
Classification:	TSDF
Description:	Handler is engaged in the treatment, storage or disposal of hazardous
	waste
Owner/Operator Summary:	
Owner/operator name:	IOWA ARMY NATIONAL GUARD
Owner/operator address:	NW 70TH AVE, ENV OFFICE BLDG B61 (3535) CAMP DODGE
	JOHNSTON, IA 50131
Owner/operator country:	US
Owner/operator telephone:	515-252-4557
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	State
Owner/Operator Type:	Operator
Owner/Op start date:	12/31/1992
Owner/Op end date:	Not reported
Owner/operator name:	IOWA ARMY NATIONAL GUARD
Owner/operator address:	NW 70TH AVE, ENV OFFICE BLDG B61 (3535) CAMP DODGE
	JOHNSTON, IA 50131
Owner/operator country:	US
Owner/operator telephone:	515-252-4557
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	State
Owner/Operator Type:	Owner
Owner/Op start date:	12/31/1992
Owner/Op end date:	Not reported
Owner/Op end date.	Not reported
Handlor Activition Summony	
Handler Activities Summary:	asto: No
U.S. importer of hazardous wa	
Mixed waste (haz. and radioa	
Recycler of hazardous waste:	
Transporter of hazardous was	
Treater, storer or disposer of	
Underground injection activity	
On-site burner exemption:	No

Map ID		MAP FINDINGS			
Direction Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number	
	IOWA ARMY NATIONAL GUARI	D - AASF 2 (Continued)		1000439559	
	Furnace exemption: Used oil fuel burner: Used oil processor: User oil refiner: Used oil fuel marketer to bur Used oil Specification marke Used oil transfer facility: Used oil transporter:				
	. Waste code: . Waste name:	D001 IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.			
	. Waste code: . Waste name:	D006 CADMIUM			
	. Waste code: . Waste name:	D007 CHROMIUM			
	. Waste code: . Waste name:	D008 LEAD			
	. Waste code: . Waste name:	F003 THE FOLLOWING SPENT NON-HALOGENATED SOLV ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL MIXTURES/BLENDS CONTAINING, BEFORE USE, ON NON-HALOGENATED SOLVENTS; AND ALL SPENT S CONTAINING, BEFORE USE, ONE OR MORE OF THE SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MC MORE OF THOSE SOLVENTS LISTED IN F001, F002, BOTTOMS FROM THE RECOVERY OF THESE SPENT MIXTURES.	L ISOBUTYL KE SPENT SOLVE LY THE ABOVE OLVENT MIXTU ABOVE NON-H, DRE (BY VOLUM F004, AND F005	TONE, N-BUTYL NT SPENT RES/BLENDS ALOGENATED IE) OF ONE OR 5, AND STILL	
	. Waste code: . Waste name:	F005 THE FOLLOWING SPENT NON-HALOGENATED SOLV KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRID 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SI CONTAINING, BEFORE USE, A TOTAL OF TEN PERC ONE OR MORE OF THE ABOVE NON-HALOGENATED LISTED IN F001, F002, OR F004; AND STILL BOTTOM THESE SPENT SOLVENTS AND SPENT SOLVENT MI	INE, BENZENE, PENT SOLVENT ENT OR MORE) SOLVENTS OF S FROM THE RE	MIXTURES/BLENDS (BY VOLUME) OF THOSE SOLVENTS	
	. Waste code: . Waste name:	UOIL UOIL			
	Historical Generators: Date form received by agen Site name: Classification:	cy:07/06/2010 IOWA ARMY NATIONAL GUARD - AASF 2 Conditionally Exempt Small Quantity Generator			
	. Waste code:	D001			

Map ID		MAP FINDINGS		
Direction Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	IOWA ARMY NATIONAL GUARD	- AASF 2 (Continued)		1000439559
	. Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE LESS THAN 140 DEGREES FAHRENHEIT AS DE CLOSED CUP FLASH POINT TESTER. ANOTHE FLASH POINT OF A WASTE IS TO REVIEW THE WHICH CAN BE OBTAINED FROM THE MANUF/ MATERIAL. LACQUER THINNER IS AN EXAMPL WHICH WOULD BE CONSIDERED AS IGNITABL	ETERMINED BY A PEN ER METHOD OF DETE MATERIAL SAFETY I ACTURER OR DISTRII LE OF A COMMONLY	ISKY-MARTENS RMINING THE DATA SHEET, BUTOR OF THE USED SOLVENT
	. Waste code: . Waste name:	D009 MERCURY		
	. Waste code: . Waste name:	UOIL UOIL		
	Date form received by agency Site name: Classification:	r:01/08/2010 IOWA ARMY NATIONAL GUARD - AASF 2 Conditionally Exempt Small Quantity Generator		
	Date form received by agency Site name: Classification:	r:06/30/2008 IOWA ARMY NATIONAL GUARD-AASF 2 Large Quantity Generator		
	. Waste code: . Waste name:	D002 A WASTE WHICH HAS A PH OF LESS THAN 2 C CONSIDERED TO BE A CORROSIVE HAZARDO CAUSTIC SOLUTION WITH A HIGH PH, IS OFTE OR DEGREASE PARTS. HYDROCHLORIC ACID USED BY MANY INDUSTRIES TO CLEAN META THESE CAUSTIC OR ACID SOLUTIONS BECOM DISPOSED, THE WASTE WOULD BE A CORROS	US WASTE. SODIUM EN USED BY INDUSTR , A SOLUTION WITH A L PARTS PRIOR TO P IE CONTAMINATED A	HYDROXIDE, A HES TO CLEAN LOW PH, IS AINTING. WHEN ND MUST BE
	. Waste code: . Waste name:	D006 CADMIUM		
	. Waste code: . Waste name:	D007 CHROMIUM		
	. Waste code: . Waste name:	D008 LEAD		
	. Waste code: . Waste name:	D009 MERCURY		
	. Waste code: . Waste name:	D018 BENZENE		
	. Waste code: . Waste name:	D039 TETRACHLOROETHYLENE		
	. Waste code: . Waste name:	F001 THE FOLLOWING SPENT HALOGENATED SOLV TETRACHLOROETHYLENE, TRICHLOROETHYL 1,1,1-TRICHLOROETHANE, CARBON TETRACH FLUOROCARBONS; ALL SPENT SOLVENT MIXT CONTAINING, BEFORE USE, A TOTAL OF TEN ONE OR MORE OF THE ABOVE HALOGENATED IN F002, F004, AND F005, AND STILL BOTTOMS	LENE, METHYLENE CI ILORIDE, AND CHLOR TURES/BLENDS USEL PERCENT OR MORE O SOLVENTS OR THO	HLORIDE, INATED) IN DEGREASING (BY VOLUME) OF SE SOLVENTS LISTED

Map ID		MAP FINDINGS		
Direction Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	IOWA ARMY NATIONAL GUARI	D - AASF 2 (Continued)		1000439559
		SPENT SOLVENTS AND SPENT SOLVENT MIXT	URES.	
	. Waste code: . Waste name:	F002 THE FOLLOWING SPENT HALOGENATED SOLV METHYLENE CHLORIDE, TRICHLOROETHYLEN CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRI ORTHO-DICHLOROBENZENE, TRICHLOROFLUG 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVEN BEFORE USE, A TOTAL OF TEN PERCENT OR N OF THE ABOVE HALOGENATED SOLVENTS OR F005, AND STILL BOTTOMS FROM THE RECOV SPENT SOLVENT MIXTURES.	IE, 1,1,1-TRICHLORO FLUOROETHANE, OROMETHANE, AND IT MIXTURES/BLEND MORE (BY VOLUME) THOSE LISTED IN F	ETHANE, OS CONTAINING, OF ONE OR MORE 001, F004, OR
	. Waste code: . Waste name:	F003 THE FOLLOWING SPENT NON-HALOGENATED ACETATE, ETHYL BENZENE, ETHYL ETHER, ME ALCOHOL, CYCLOHEXANONE, AND METHANOI MIXTURES/BLENDS CONTAINING, BEFORE USI NON-HALOGENATED SOLVENTS; AND ALL SPE CONTAINING, BEFORE USE, ONE OR MORE OF SOLVENTS, AND, A TOTAL OF TEN PERCENT OF MORE OF THOSE SOLVENTS LISTED IN F001, F BOTTOMS FROM THE RECOVERY OF THESE S MIXTURES.	ETHYL ISOBUTYL KE L; ALL SPENT SOLVE E, ONLY THE ABOVE ENT SOLVENT MIXTU F THE ABOVE NON-H. DR MORE (BY VOLUM F002, F004, AND F005	TONE, N-BUTYL NT SPENT RES/BLENDS ALOGENATED IE) OF ONE OR 5, AND STILL
	. Waste code: . Waste name:	F004 THE FOLLOWING SPENT NON-HALOGENATED ACID, AND NITROBENZENE; ALL SPENT SOLVE BEFORE USE, A TOTAL OF TEN PERCENT OR M OF THE ABOVE NON-HALOGENATED SOLVENT F001, F002, AND F005; AND STILL BOTTOMS FF SPENT SOLVENTS AND SPENT SOLVENT MIXT	ENT MIXTURES/BLEN MORE (BY VOLUME) I'S OR THOSE SOLVE ROM THE RECOVERY	DS CONTAINING, OF ONE OR MORE ENTS LISTED IN
	. Waste code: . Waste name:	F005 THE FOLLOWING SPENT NON-HALOGENATED KETONE, CARBON DISULFIDE, ISOBUTANOL, F 2-ETHOXYETHANOL, AND 2-NITROPROPANE; A CONTAINING, BEFORE USE, A TOTAL OF TEN F ONE OR MORE OF THE ABOVE NON-HALOGEN LISTED IN F001, F002, OR F004; AND STILL BOT THESE SPENT SOLVENTS AND SPENT SOLVEN	PYRIDINE, BENZENE, ALL SPENT SOLVENT PERCENT OR MORE IATED SOLVENTS OF TOMS FROM THE RI	MIXTURES/BLENDS (BY VOLUME) OF THOSE SOLVENTS
	Date form received by agen	5		
	Site name: Classification:	IOWA ARMY NATIONAL GUARD-AASF 2 Conditionally Exempt Small Quantity Generator		
	. Waste code: . Waste name:	D002 A WASTE WHICH HAS A PH OF LESS THAN 2 O CONSIDERED TO BE A CORROSIVE HAZARDO CAUSTIC SOLUTION WITH A HIGH PH, IS OFTE OR DEGREASE PARTS. HYDROCHLORIC ACID, USED BY MANY INDUSTRIES TO CLEAN METAL THESE CAUSTIC OR ACID SOLUTIONS BECOM DISPOSED, THE WASTE WOULD BE A CORROS	US WASTE. SODIUM N USED BY INDUSTF A SOLUTION WITH A PARTS PRIOR TO P E CONTAMINATED A	HYDROXIDE, A RIES TO CLEAN A LOW PH, IS PAINTING. WHEN ND MUST BE
	. Waste code: . Waste name:	D006 CADMIUM		

Database(s)

EDR ID Number EPA ID Number

IOWA ARMY NATIONAL GUARD	- AASF 2 (Continued)	1000439559
. Waste code: . Waste name:	D007 CHROMIUM	
. Waste code: . Waste name:	D008 LEAD	
. Waste code: . Waste name:	D009 MERCURY	
. Waste code: . Waste name:	D018 BENZENE	
. Waste code: . Waste name:	D039 TETRACHLOROETHYLENE	
. Waste code: . Waste name:	F001 THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGATE TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CI 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLOR FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THO IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.	HLORIDE, INATED DIN DEGREASING (BY VOLUME) OF ISE SOLVENTS LISTED
. Waste code: . Waste name:	F002 THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOF METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLORO CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLEND BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN FI F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPEN SPENT SOLVENT MIXTURES.	ETHANE, S CONTAINING, OF ONE OR MORE 001, F004, OR
. Waste code: . Waste name:	F003 THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KE ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVE MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTU CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-H. SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUM MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005 BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AN MIXTURES.	TONE, N-BUTYL NT SPENT RES/BLENDS ALOGENATED IE) OF ONE OR 5, AND STILL
. Waste code: . Waste name:	F004 THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOL ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLEN BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVE F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.	DS CONTAINING, OF ONE OR MORE INTS LISTED IN
. Waste code:	F005	

Map ID		MAP FINDINGS	
Direction Distance Elevation	۲ Site	Database(s)	EDR ID Number EPA ID Number
	IOWA ARMY NATIONAL GUAR		1000439559
	. Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUE KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVEN CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORI ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS O LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE I THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.	E, IT MIXTURES/BLENDS E (BY VOLUME) OF DR THOSE SOLVENTS
	Date form received by agen Site name: Classification:	cy:03/06/2000 IOWA ARMY NATIONAL GUARD-AASF 2 Small Quantity Generator	
	. Waste code:	D000	
	. Waste name:	Not Defined	
	. Waste code: . Waste name:	D001 IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH H. LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PE CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DET FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WA	ENSKY-MARTENS ERMINING THE 7 DATA SHEET, RIBUTOR OF THE 7 USED SOLVENT
	. Waste code: . Waste name:	D002 A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIU CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUST OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS V	M HYDROXIDE, A 'RIES TO CLEAN A LOW PH, IS PAINTING. WHEN AND MUST BE
	. Waste code: . Waste name:	D006 CADMIUM	
	. Waste code: . Waste name:	D007 CHROMIUM	
	. Waste code: . Waste name:	D008 LEAD	
	. Waste code: . Waste name:	D009 MERCURY	
	. Waste code: . Waste name:	D018 BENZENE	
	. Waste code: . Waste name:	D039 TETRACHLOROETHYLENE	
	. Waste code: . Waste name:	F001 THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEC TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLO FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USI CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORI	CHLORIDE, RINATED ED IN DEGREASING

Map ID		MAP FINDINGS
Direction Distance Elevation	Site	EDR ID Number Database(s) EPA ID Number
	IOWA ARMY NATIONAL GU	ARD - AASF 2 (Continued) 1000439559
		ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
	. Waste code: . Waste name:	F002 THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
	. Waste code: . Waste name:	F003 THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
	. Waste code: . Waste name:	F004 THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
	. Waste code: . Waste name:	F005 THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
	Date form received by a Site name: Classification:	ency:08/02/1994 IOWA ARMY NATIONAL GUARD-AASF 2 Small Quantity Generator
	. Waste code: . Waste name:	D000 Not Defined
	. Waste code: . Waste name:	D001 IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE

Map ID		MAP FINDINGS
Direction Distance Elevation	Site	EDR ID Number Database(s) EPA ID Number
	IOWA ARMY NATIONAL G	UARD - AASF 2 (Continued) 1000439559
		MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
	. Waste code: . Waste name:	D002 A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
	. Waste code:	
	. Waste name:	CADMIUM
	. Waste code: . Waste name:	D007 CHROMIUM
	. Waste code:	D008
	. Waste name:	LEAD
	. Waste code:	D018
	. Waste name:	BENZENE
	. Waste code: . Waste name:	D039 TETRACHLOROETHYLENE
	. Waste code: . Waste name:	F001 THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
	. Waste code: . Waste name:	F002 THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, AND 0RTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
	. Waste code: . Waste name:	F003 THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL

Mar ID				
Map ID Direction	μ	MAP FINDINGS		
Distance Elevation	Site		Database(s)	EDR ID Number EPA ID Number
	IOWA ARMY NATIONAL GUARD	- AASF 2 (Continued)		1000439559
		BOTTOMS FROM THE RECOVERY OF THESE S MIXTURES.	PENT SOLVENTS AN	D SPENT SOLVENT
	. Waste code: . Waste name:	F004 THE FOLLOWING SPENT NON-HALOGENATED ACID, AND NITROBENZENE; ALL SPENT SOLVE BEFORE USE, A TOTAL OF TEN PERCENT OR I OF THE ABOVE NON-HALOGENATED SOLVENT F001, F002, AND F005; AND STILL BOTTOMS FF SPENT SOLVENTS AND SPENT SOLVENT MIXT	ENT MIXTURES/BLEN MORE (BY VOLUME) (IS OR THOSE SOLVE ROM THE RECOVERY	DS CONTAINING, OF ONE OR MORE INTS LISTED IN
	. Waste code: . Waste name:			
	Date form received by agency Site name:	y:07/13/1993 IOWA ARMY NATIONAL GUARD-AASF 2		
	Classification:	Not a generator, verified		
	Corrective Action Summary: Event date: Event:	08/18/1993 CA PRIORITIZATION-LOW CA PRIORITY		
	Event date: Event:	08/01/1994 CA PRIORITIZATION-MEDIUM CA PRIORITY		
	Event date: Event:	03/21/1995 STABILIZATION MEASURES EVALUATION-FUR	THER INVESTIGATIO	N NECESSARY
	Event date: Event:	09/05/1996 STABILIZATION MEASURES EVALUATION-FAC STABILIZATION	ILITY NOT AMENABLE	ΈΤΟ
	Event date: Event:	12/11/2009 REMEDY DECISION		
	Event date: Event:	12/11/2009 REMEDY CONSTRUCTION-NO REMEDY CONST	TRUCTED	
	Event date: Event:	12/11/2009 CA PROCESS IS TERMINATED-NO FURTHER A	CTION	
	Facility Has Received Notices of Regulation violated: Area of violation: Date violation determined: Date achieved compliance: Violation lead agency: Enforcement action: Enforcement action date: Enf. disposition status:	f Violations: FR - CFR 262.34(a)(2) Generators - Pre-transport 02/22/1995 03/31/1995 EPA WRITTEN INFORMAL 02/22/1995 Not reported		

Database(s)

EDR ID Number EPA ID Number

IOWA ARMY NATIONAL GUARD - AASF 2 (Continued)

Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated: Area of violation: Date violation determined: Date achieved compliance: Violation lead agency: Enforcement action: Enforcement action date: Enf. disposition status: Enf. disp. status date: Enforcement lead agency: Proposed penalty amount: Final penalty amount: Paid penalty amount:	FR - CFR 268.7(a)(7) LDR - General 02/22/1995 03/03/1995 EPA WRITTEN INFORMAL 02/22/1995 Not reported Not reported EPA Not reported Not reported Not reported Not reported Not reported
Regulation violated: Area of violation: Date violation determined: Date achieved compliance: Violation lead agency: Enforcement action: Enforcement action date: Enf. disposition status: Enf. disp. status date: Enforcement lead agency: Proposed penalty amount: Final penalty amount: Paid penalty amount:	Not reported TSD - Closure/Post-Closure 04/27/1993 09/27/1995 EPA INITIAL 3008(A) COMPLIANCE 06/30/1993 Not reported Not reported EPA 263450 Not reported Not reported Not reported Not reported
Regulation violated:	Not reported
Area of violation:	TSD - Closure/Post-Closure
Date violation determined:	04/27/1993
Date achieved compliance:	09/27/1995
Violation lead agency:	EPA
Enforcement action:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date:	10/17/1994
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	35000
Paid penalty amount:	35000
Regulation violated:	FR - Disposed of Lead Waste
Area of violation:	Generators - General
Date violation determined:	09/15/1992
Date achieved compliance:	09/27/1995
Violation lead agency:	EPA
Enforcement action:	INITIAL 3008(A) COMPLIANCE
Enforcement action date:	06/30/1993
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported

Database(s)

EDR ID Number EPA ID Number

IOWA ARMY NATIONAL GUARD - AASF 2 (Continued) Enforcement lead agency: EPA Proposed penalty amount: 263450 Not reported Final penalty amount: Paid penalty amount: Not reported Regulation violated: FR - Disposed of Lead Waste Generators - General Area of violation: Date violation determined: 09/15/1992 09/27/1995 Date achieved compliance: Violation lead agency: EPA FINAL 3008(A) COMPLIANCE ORDER Enforcement action: Enforcement action date: 10/17/1994 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: EPA Proposed penalty amount: Not reported Final penalty amount: 35000 35000 Paid penalty amount: **Evaluation Action Summary:** Evaluation date: 05/25/2010 Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE Area of violation: Not reported Date achieved compliance: Not reported EPA Contractor/Grantee Evaluation lead agency: 09/27/1995 Evaluation date: Evaluation: NOT A SIGNIFICANT NON-COMPLIER Area of violation: Not reported Date achieved compliance: Not reported Evaluation lead agency: EPA Evaluation date: 06/15/1995 COMPLIANCE EVALUATION INSPECTION ON-SITE Evaluation: Area of violation: Not reported Date achieved compliance: Not reported Evaluation lead agency: EPA Contractor/Grantee Evaluation date: 02/22/1995 COMPLIANCE EVALUATION INSPECTION ON-SITE Evaluation: Area of violation: Generators - Pre-transport Date achieved compliance: 03/31/1995 Evaluation lead agency: EPA Evaluation date: 02/22/1995 FOCUSED COMPLIANCE INSPECTION Evaluation: Area of violation: LDR - General Date achieved compliance: 03/03/1995 Evaluation lead agency: EPA Evaluation date: 02/22/1995 Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE Area of violation: LDR - General 03/03/1995 Date achieved compliance: Evaluation lead agency: EPA Evaluation date: 08/02/1994

Database(s)

EDR ID Number EPA ID Number

Evaluation:	FOCUSED COMPLIANCE INS
Area of violation:	Not reported

1000439559

Evaluation:	FOCUSED COMPLIANCE INSPECTION
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	EPA Contractor/Grantee
Evaluation date:	04/27/1993
Evaluation:	SIGNIFICANT NON-COMPLIER
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	EPA
Evaluation date:	04/27/1993
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	TSD - Closure/Post-Closure
Date achieved compliance:	09/27/1995
Evaluation lead agency:	EPA
Evaluation date:	09/15/1992
Evaluation:	SIGNIFICANT NON-COMPLIER
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	EPA
Evaluation date:	09/15/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	09/27/1995
Evaluation lead agency:	EPA

A11 AASF #2

AASF #2 2245 W BIG ROCK RD Target Property WATERLOO, IA 50703

Site 11 of 13 in cluster A

Actual: 876 ft.

UST:	
Facility Id:	6228
Loc Id:	6228
Registration:	198605894
Owner Type:	State
Financial Code:	Not reported
Insurer's Name:	Not reported
Policy Number:	Not reported
Policy Start Date:	Not reported
Policy End Date:	Not reported
Registration Sign Date:	03/10/1986
Created By:	migration
Created Date:	01/08/2007
Changed By:	migration
Last Changed:	01/08/2007
Latitude:	42.56091
Longitude:	-92.39604
Otype ID Decode:	State
Tank Info:	
Tank Num:	17188
In Use:	False
Tank Type:	4
Tank Brand Id:	Not reported
	·

UST U003634984 N/A

Map ID	
Direction	
Distance	
Elevation	Site

Database(s)

EDR ID Number EPA ID Number

	AASF #2 (Continued)				U003634984
	Inert Material Id: Filled In Place: Material Construction: Emergency Power Gen:	Not reported Not reported Double Wall Steel Not reported			
	Tank Num: In Use: Tank Type: Tank Brand Id: Inert Material Id: Filled In Place:	17189 False 4 Not reported Not reported Not reported			
	Material Construction: Emergency Power Gen:	Double Wall Steel Not reported			
A12 Target Property	IOWA ARMY NATIONAL GUARI 2245 W. BIG ROCK RD. WATERLOO, IA 50703) AASF2 - TRUCK L	OADING RAM	NPDES	S122545207 N/A
	Site 12 of 13 in cluster A				
Actual: 876 ft.	NPDES: Permit Number: Epa Npdes Id Number: Permit Expiration Date: Facility Name: Facility Address1:		Not reported Not reported 12/16/2012 IOWA ARMY NATIONAL GUARD AASF2 2245 W. BIG ROCK RD.	- TRUCK LC	DADING RAMP CONSTRUCTION
	Facility City: Facility Phone Number: Facility Type: Facility Class:		WATERLOO Not reported Not reported Not reported		
	Standard Industrial Classific Owner Name: Owner Add1: Owner Add2:		Not reported IOWA ARMY NATIONAL GUARD NGIA-D Not reported Not reported	IM-E	
	Owner City: Owner State: Owner Zip: Owner Phone:		Not reported Not reported Not reported Not reported		
	Indr Regional/Field Office N Section: Township: Range: Latitude Degree:		Not reported Not reported Not reported Not reported Not reported		
	Longitude Degree: River Basin: Type Of Treatment: Design Number:		Not reported Not reported Not reported Not reported		
	Design Population Equivaler Design Biochemical Oxygen Design Avg Dry Weather Flo Design Avg Wet Weather Flo	nt: I Demand: ow (MII GIns Per Dy): ow (MII GIns Per Dy):	Not reported Not reported Not reported Not reported		
	Operator Certification Facilit File No: Authorization No: Authorization Date: Parmit Status:		Not reported 21097 20865 12/16/2011		
	Permit Status: Permit Type:		Discontinued GP #2 - Construction Activity		

Site	MAP	' FINDINGS	Dat	abase(s)	EDR ID Number EPA ID Number
IOWA ARMY NATIONAL (Legal Status:	GUARD AASF2 - TRUCK L	OADING RAMP CONSTRUC (Continued)		S122545207
				FINDS	1014699342 N/A
Site 13 of 13 in cluster A					
FINDS:					
Registry ID:	110043626234				
IDI	NR-EFD (Iowa Department (
	IOWA ARMY NATIONAL O Legal Status: IA ARNG WATERLOO AV 2245 WEST BIG ROCK RO WATERLOO, IA 50703 Site 13 of 13 in cluster A FINDS: Registry ID: Environmental Interes	Site IOWA ARMY NATIONAL GUARD AASF2 - TRUCK L Legal Status: IA ARNG WATERLOO AVIATION 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703 Site 13 of 13 in cluster A FINDS: Registry ID: 110043626234 Environmental Interest/Information System IDNR-EFD (lowa Department of the second s	IOWA ARMY NATIONAL GUARD AASF2 - TRUCK LOADING RAMP CONSTRUC (Legal Status: State IA ARNG WATERLOO AVIATION 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703 Site 13 of 13 in cluster A FINDS: Registry ID: 110043626234 Environmental Interest/Information System IDNR-EFD (Iowa Department Of Natural Resources - Emission	Site Date IOWA ARMY NATIONAL GUARD AASF2 - TRUCK LOADING RAMP CONSTRUC (Continued) Legal Status: State IA ARNG WATERLOO AVIATION 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703 Site 13 of 13 in cluster A FINDS: 110043626234	Site Database(s) IOWA ARMY NATIONAL GUARD AASF2 - TRUCK LOADING RAMP CONSTRUC (Continued) Legal Status: State MA ARNG WATERLOO AVIATION State IA ARNG WATERLOO AVIATION FINDS Site 13 of 13 in cluster A FINDS: Registry ID: 110043626234 Environmental Interest/Information System IDNR-EFD (lowa Department Of Natural Resources - Emission Factor)

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

	Database(s)					
	Zip Da	1				
	Site Address					
۲۶						
ORPHAN SUMMARY						
ORPH						
	lame	NO SITES FOUND				
	Site Name					
	EDR ID					
cords.						
Count: 0 records.	City					

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 09/07/2018 Number of Days to Update: 29 Source: EPA Telephone: N/A Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 01/14/2019 Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC) Telephone: 202-564-7333

EPA Region 1 Telephone 617-918-1143

EPA Region 3 Telephone 215-814-5418

EPA Region 4 Telephone 404-562-8033

EPA Region 5 Telephone 312-886-6686

EPA Region 10 Telephone 206-553-8665 EPA Region 6 Telephone: 214-655-6659

EPA Region 7 Telephone: 913-551-7247

EPA Region 8 Telephone: 303-312-6774

EPA Region 9 Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 09/07/2018 Number of Days to Update: 29 Source: EPA Telephone: N/A Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 01/14/2019 Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994 Number of Days to Update: 56 Source: EPA Telephone: 202-564-4267 Last EDR Contact: 08/15/2011 Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 09/07/2018 Number of Days to Update: 29 Source: EPA Telephone: N/A Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 01/14/2019 Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016 Date Data Arrived at EDR: 01/05/2017 Date Made Active in Reports: 04/07/2017 Number of Days to Update: 92 Source: Environmental Protection Agency Telephone: 703-603-8704 Last EDR Contact: 07/06/2018 Next Scheduled EDR Contact: 10/15/2018 Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 09/07/2018 Number of Days to Update: 29 Source: EPA Telephone: 800-424-9346 Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 10/29/2018 Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 09/07/2018 Number of Days to Update: 29 Source: EPA Telephone: 800-424-9346 Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 01/14/2019 Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018	Source: EPA
Date Data Arrived at EDR: 03/28/2018	Telephone: 800-424-9346
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 09/19/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018 Date Data Arrived at EDR: 03/28/2018 Date Made Active in Reports: 06/22/2018 Number of Days to Update: 86 Source: Environmental Protection Agency Telephone: 913-551-7003 Last EDR Contact: 09/19/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018 Date Data Arrived at EDR: 03/28/2018 Date Made Active in Reports: 06/22/2018 Number of Days to Update: 86 Source: Environmental Protection Agency Telephone: 913-551-7003 Last EDR Contact: 09/19/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018 Date Data Arrived at EDR: 03/28/2018 Date Made Active in Reports: 06/22/2018 Number of Days to Update: 86 Source: Environmental Protection Agency Telephone: 913-551-7003 Last EDR Contact: 09/19/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018Source: Environmental Protection AgencyDate Data Arrived at EDR: 03/28/2018Telephone: 913-551-7003Date Made Active in Reports: 06/22/2018Last EDR Contact: 09/19/2018Number of Days to Update: 86Next Scheduled EDR Contact: 01/07/2019Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/14/2018	Source: Department of the Navy
Date Data Arrived at EDR: 05/18/2018	Telephone: 843-820-7326
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 07/16/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 11/26/2018
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/28/2018	Telephone: 703-603-0695
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 08/28/2018
Number of Days to Update: 17	Next Scheduled EDR Contact: 12/10/2018
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/31/2018 Date Data Arrived at EDR: 08/28/2018 Date Made Active in Reports: 09/14/2018 Number of Days to Update: 17 Source: Environmental Protection Agency Telephone: 703-603-0695 Last EDR Contact: 08/28/2018 Next Scheduled EDR Contact: 12/10/2018 Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/18/2018 Date Data Arrived at EDR: 06/27/2018 Date Made Active in Reports: 09/14/2018 Number of Days to Update: 79 Source: National Response Center, United States Coast Guard Telephone: 202-267-2180 Last EDR Contact: 09/25/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: Registry of Hazardous Waste or Hazardous Substance Disposal Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 12/31/2017	Source: Department of Natural Resources
Date Data Arrived at EDR: 01/24/2018	Telephone: 515-281-8801
Date Made Active in Reports: 02/23/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Solid Waste Management Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/04/2018 Date Data Arrived at EDR: 09/05/2018 Date Made Active in Reports: 10/02/2018 Number of Days to Update: 27 Source: Department of Natural Resources Telephone: 515-281-8801 Last EDR Contact: 09/05/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LAST: Leaking Aboveground Storage Tank Sites A listing of leaking aboveground storage tank sites.

Date of Government Version: 07/16/2018	Source: Department of Natural Resources
Date Data Arrived at EDR: 07/18/2018	Telephone: 515-281-6001
Date Made Active in Reports: 08/24/2018	Last EDR Contact: 07/18/2018
Number of Days to Update: 37	Next Scheduled EDR Contact: 10/29/2018
	Data Release Frequency: Quarterly

LUST: Leaking Underground Storage Tank Data

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/30/2018 Date Data Arrived at EDR: 09/07/2018 Date Made Active in Reports: 10/02/2018 Number of Days to Update: 25 Source: Department of Natural Resources Telephone: 515-281-6001 Last EDR Contact: 08/29/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.		
Date of Government Version: 04/12/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63	Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies	
INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.		
Date of Government Version: 04/12/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63	Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies	
INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada		
Date of Government Version: 04/10/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63	Source: Environmental Protection Agency Telephone: 415-972-3372 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies	
INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.		
Date of Government Version: 04/25/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63	Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies	
INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Iowa, Kansas, and Nebraska		
Date of Government Version: 04/24/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63	Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies	
INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in New Mexico and Oklahoma.		
Date of Government Version: 04/01/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63	Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies	
INDIAN LUST R4: Leaking Underground Storage Ta LUSTs on Indian land in Florida, Mississippi ar		
Date of Government Version: 05/08/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63	Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies	

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018		
Date Data Arrived at EDR: 05/18/2018		
Date Made Active in Reports: 07/20/2018		
Number of Days to Update: 63		

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017	Source: F
Date Data Arrived at EDR: 05/30/2017	Telephone
Date Made Active in Reports: 10/13/2017	Last EDR
Number of Days to Update: 136	Next Sche

Source: FEMA Telephone: 202-646-5797 Last EDR Contact: 10/10/2018 Next Scheduled EDR Contact: 01/21/2019 Data Release Frequency: Varies

UST: Underground Storage Tank Data

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/30/2018 Date Data Arrived at EDR: 09/07/2018 Date Made Active in Reports: 10/02/2018 Number of Days to Update: 25 Source: Department of Natural Resources Telephone: 515-281-6001 Last EDR Contact: 08/29/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Sites

Bulk fuel facilities, commercial fuel operations, private farm sites, and any other storage facility that meets the Department of Public Safety?s registration criteria. They register any class I, II or III petroleum product (gas, diesel and oil) above 1,100 gallons.

Date of Government Version: 07/31/2018 Date Data Arrived at EDR: 08/02/2018 Date Made Active in Reports: 08/24/2018 Number of Days to Update: 22 Source: Department of Public Safety Telephone: 515-281-5821 Last EDR Contact: 09/28/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/12/2018	Source: EPA Region 10
Date Data Arrived at EDR: 05/18/2018	Telephone: 206-553-2857
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 07/27/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 11/05/2018
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/10/2018	Source: EPA Region 9
Date Data Arrived at EDR: 05/18/2018	Telephone: 415-972-3368
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 07/27/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 11/05/2018
	Data Release Frequency: Varies
INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/24/2018	Source: EPA Region 7
Date Data Arrived at EDR: 05/18/2018	Telephone: 913-551-7003
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 07/27/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 11/05/2018
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/01/2018	Source: EPA Region 6
Date Data Arrived at EDR: 05/18/2018	Telephone: 214-665-7591
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 07/27/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 11/05/2018
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/12/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/08/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/25/2018 Date Data Arrived at EDR: 05/18/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 63

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/13/2018	Source: EPA, Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 07/27/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 11/05/2018
	Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites with Institutional Controls Sites currently enrolled in the Land Recycling F	Program that have Institutional Controls.	
Date of Government Version: 07/16/2018 Date Data Arrived at EDR: 07/18/2018 Date Made Active in Reports: 08/24/2018 Number of Days to Update: 37	Source: Department of Natural Resources Telephone: 515-242-5818 Last EDR Contact: 07/18/2018 Next Scheduled EDR Contact: 10/29/2018 Data Release Frequency: Varies	
State and tribal voluntary cleanup sites		
INDIAN VCP R7: Voluntary Cleanup Priority Lisitng A listing of voluntary cleanup priority sites locat	ted on Indian Land located in Region 7.	
Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008 Number of Days to Update: 27	Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009 Next Scheduled EDR Contact: 07/20/2009 Data Release Frequency: Varies	
INDIAN VCP R1: Voluntary Cleanup Priority Listing A listing of voluntary cleanup priority sites locat	ted on Indian Land located in Region 1.	
Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 09/29/2015 Date Made Active in Reports: 02/18/2016 Number of Days to Update: 142	Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 09/24/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Varies	
VCP: Land Recycling Program Sites		

Sites currently enrolled in the Land Recycling Program.

Date of Government Version: 07/16/2018	Source: Department of Natural Resources
Date Data Arrived at EDR: 07/18/2018	Telephone: 515-242-5818
Date Made Active in Reports: 08/23/2018	Last EDR Contact: 07/18/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 10/29/2018
	Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Site Listing

Brownfields are abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

Date of Government Version: 07/16/2018 Date Data Arrived at EDR: 07/18/2018 Date Made Active in Reports: 08/23/2018 Number of Days to Update: 36

Source: Department of Natural Resources Telephone: 515-281-8489 Last EDR Contact: 07/18/2018 Next Scheduled EDR Contact: 10/29/2018 Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/18/2018 Date Data Arrived at EDR: 06/20/2018 Date Made Active in Reports: 09/14/2018 Number of Days to Update: 86 Source: Environmental Protection Agency Telephone: 202-566-2777 Last EDR Contact: 09/18/2018 Next Scheduled EDR Contact: 12/31/2018 Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands Location of open dumps on Indian land. Date of Government Version: 12/31/1998 Source: Environmental Protection Agency Date Data Arrived at EDR: 12/03/2007 Telephone: 703-308-8245 Date Made Active in Reports: 01/24/2008 Last EDR Contact: 07/30/2018 Number of Days to Update: 52 Next Scheduled EDR Contact: 11/12/2018 Data Release Frequency: Varies **ODI:** Open Dump Inventory An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria. Date of Government Version: 06/30/1985 Source: Environmental Protection Agency Date Data Arrived at EDR: 08/09/2004 Telephone: 800-424-9346 Date Made Active in Reports: 09/17/2004 Last EDR Contact: 06/09/2004 Number of Days to Update: 39 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California. Source: EPA, Region 9 Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Telephone: 415-947-4219 Date Made Active in Reports: 09/21/2009 Last EDR Contact: 07/17/2018 Number of Days to Update: 137 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: No Update Planned IHS OPEN DUMPS: Open Dumps on Indian Land A listing of all open dumps located on Indian Land in the United States. Date of Government Version: 04/01/2014 Source: Department of Health & Human Serivces, Indian Health Service Date Data Arrived at EDR: 08/06/2014 Telephone: 301-443-1452 Date Made Active in Reports: 01/29/2015 Last EDR Contact: 08/03/2018

Local Lists of Hazardous waste / Contaminated Sites

Number of Days to Update: 176

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 05/18/2018 Date Data Arrived at EDR: 06/20/2018 Date Made Active in Reports: 09/14/2018 Number of Days to Update: 86 Source: Drug Enforcement Administration Telephone: 202-307-1000 Last EDR Contact: 08/28/2018 Next Scheduled EDR Contact: 12/10/2018 Data Release Frequency: No Update Planned

Next Scheduled EDR Contact: 11/12/2018

Data Release Frequency: Varies

ALLSITES: Contaminated Sites Tracking Database

All the sites included in the Contaminated Sites Tracking Database. The database includes several regulatory complinace programs and actions.

Date of Government Version: 07/16/2018 Date Data Arrived at EDR: 07/18/2018 Date Made Active in Reports: 08/23/2018 Number of Days to Update: 36

Source: Department of Natural Resources Telephone: 515-281-4171 Last EDR Contact: 07/18/2018 Next Scheduled EDR Contact: 10/29/2018 Data Release Frequency: Quarterly

DEL SHWS: Delisted Contaminated Sites Listing A listing of sites delisted from the Contaminated Sites Listing.

Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 01/24/2018	Source: Department of Natural Resources Telephone: 515-281-8801
Date Made Active in Reports: 02/23/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Annually

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/18/2018 Date Data Arrived at EDR: 06/20/2018 Date Made Active in Reports: 09/14/2018 Number of Days to Update: 86

Source: Drug Enforcement Administration Telephone: 202-307-1000 Last EDR Contact: 08/28/2018 Next Scheduled EDR Contact: 12/10/2018 Data Release Frequency: Quarterly

Local Land Records

LIENS: Liens Filed Listing

A listing of liens filed with the Iowa Comprehensive Petroleum Underground Storage Tank Fund.

Date of Government Version: 07/05/2018	Source: Department of Natural Resources
Date Data Arrived at EDR: 07/24/2018	Telephone: 515-281-5523
Date Made Active in Reports: 08/24/2018	Last EDR Contact: 07/17/2018
Number of Days to Update: 31	Next Scheduled EDR Contact: 11/05/2018
	Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 57

Source: Environmental Protection Agency Telephone: 202-564-6023 Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 01/14/2019 Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018 Date Data Arrived at EDR: 03/27/2018 Telephone: 202-366-4555 Last EDR Contact: 09/25/2018 Date Made Active in Reports: 06/08/2018 Number of Days to Update: 73

Source: U.S. Department of Transportation Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Quarterly

SPILLS: Spills Database

Spill reporting data that is collected during the initial report of an incident.

Date of Government Version: 09/04/2018 Date Data Arrived at EDR: 09/06/2018 Date Made Active in Reports: 10/02/2018 Number of Days to Update: 26 Source: Department of Natural Resources Telephone: 515-281-4367 Last EDR Contact: 09/06/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Annually

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 10/17/2012 Date Data Arrived at EDR: 01/03/2013 Date Made Active in Reports: 03/05/2013 Number of Days to Update: 61 Source: FirstSearch Telephone: N/A Last EDR Contact: 01/03/2013 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018 Date Data Arrived at EDR: 03/28/2018 Date Made Active in Reports: 06/22/2018 Number of Days to Update: 86 Source: Environmental Protection Agency Telephone: 913-551-7003 Last EDR Contact: 09/19/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 10/13/2015 Number of Days to Update: 97 Source: U.S. Army Corps of Engineers Telephone: 202-528-4285 Last EDR Contact: 08/24/2018 Next Scheduled EDR Contact: 12/03/2018 Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/10/2006 Date Made Active in Reports: 01/11/2007 Number of Days to Update: 62 Source: USGS Telephone: 888-275-8747 Last EDR Contact: 10/12/2018 Next Scheduled EDR Contact: 01/21/2019 Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 02/06/2006 Date Made Active in Reports: 01/11/2007 Number of Days to Update: 339 Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 10/12/2018 Next Scheduled EDR Contact: 01/21/2019 Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 04/07/2017 Number of Days to Update: 63 Source: Environmental Protection Agency Telephone: 615-532-8599 Last EDR Contact: 08/17/2018 Next Scheduled EDR Contact: 11/26/2018 Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/27/2018	Telephone: 202-566-1917
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 09/25/2018
Number of Days to Update: 100	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Date Data Arrived at EDR: 03/21/2014 Date Made Active in Reports: 06/17/2014 Number of Days to Update: 88 Source: Environmental Protection Agency Telephone: 617-520-3000 Last EDR Contact: 08/03/2018 Next Scheduled EDR Contact: 11/19/2018 Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017 Date Data Arrived at EDR: 05/08/2018 Date Made Active in Reports: 07/20/2018 Number of Days to Update: 73 Source: Environmental Protection Agency Telephone: 703-308-4044 Last EDR Contact: 08/10/2018 Next Scheduled EDR Contact: 11/19/2018 Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 06/21/2017 Date Made Active in Reports: 01/05/2018 Number of Days to Update: 198	Source: EPA Telephone: 202-260-5521 Last EDR Contact: 09/21/2018 Next Scheduled EDR Contact: 12/31/2018 Data Release Frequency: Every 4 Years	
TRIS: Toxic Chemical Release Inventory System Toxic Release Inventory System. TRIS identifie land in reportable quantities under SARA Title	es facilities which release toxic chemicals to the air, water and III Section 313.	
Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 01/10/2018 Date Made Active in Reports: 01/12/2018 Number of Days to Update: 2	Source: EPA Telephone: 202-566-0250 Last EDR Contact: 08/24/2018 Next Scheduled EDR Contact: 12/03/2018 Data Release Frequency: Annually	
SSTS: Section 7 Tracking Systems Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.		
Date of Government Version: 12/31/2009 Date Data Arrived at EDR: 12/10/2010 Date Made Active in Reports: 02/25/2011 Number of Days to Update: 77	Source: EPA Telephone: 202-564-4203 Last EDR Contact: 07/27/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Annually	
ROD: Records Of Decision Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.		
Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 57	Source: EPA Telephone: 703-416-0223 Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Annually	
RMP: Risk Management Plans When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely bazardous substances. The Risk Management Program		

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2018 Date Data Arrived at EDR: 08/22/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 44 Source: Environmental Protection Agency Telephone: 202-564-8600 Last EDR Contact: 07/20/2018 Next Scheduled EDR Contact: 11/05/2018 Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

	Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995 Number of Days to Update: 35	Source: EPA Telephone: 202-564-4104 Last EDR Contact: 06/02/2008 Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned
PRF	2: Potentially Responsible Parties A listing of verified Potentially Responsible Pa	rties
	Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 10/17/2014 Date Made Active in Reports: 10/20/2014 Number of Days to Update: 3	Source: EPA Telephone: 202-564-6023 Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 11/19/2018 Data Release Frequency: Quarterly
PAD	DS: PCB Activity Database System PCB Activity Database. PADS Identifies gener of PCB's who are required to notify the EPA of	ators, transporters, commercial storers and/or brokers and disposers f such activities.
	Date of Government Version: 06/01/2017 Date Data Arrived at EDR: 06/09/2017 Date Made Active in Reports: 10/13/2017 Number of Days to Update: 126	Source: EPA Telephone: 202-566-0500 Last EDR Contact: 10/11/2018 Next Scheduled EDR Contact: 01/21/2019 Data Release Frequency: Annually
ICIS	5 1 ,	n (ICIS) supports the information needs of the national enforcement e needs of the National Pollutant Discharge Elimination System (NPDES)
	Date of Government Version: 11/18/2016 Date Data Arrived at EDR: 11/23/2016 Date Made Active in Reports: 02/10/2017 Number of Days to Update: 79	Source: Environmental Protection Agency Telephone: 202-564-2501 Last EDR Contact: 10/09/2018 Next Scheduled EDR Contact: 01/21/2019 Data Release Frequency: Quarterly
FTT	FTTS tracks administrative cases and pesticid	deral Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) e enforcement actions and compliance activities related to FIFRA, Community Right-to-Know Act). To maintain currency, EDR contacts the
	Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009 Number of Days to Update: 25	Source: EPA/Office of Prevention, Pesticides and Toxic Substances Telephone: 202-566-1667 Last EDR Contact: 08/18/2017 Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: Quarterly
FTT	S INSP: FIFRA/ TSCA Tracking System - FIFR A listing of FIFRA/TSCA Tracking System (FT	A (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) TS) inspections and enforcements.
	Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009 Number of Days to Update: 25	Source: EPA Telephone: 202-566-1667 Last EDR Contact: 08/18/2017 Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: Quarterly
MLT	S: Material Licensing Tracking System	

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30 Date Data Arrived at EDR: 09/08/20 Date Made Active in Reports: 10/21 Number of Days to Update: 43	Telephone: 301-415-7169	
COAL ASH DOE: Steam-Electric Plant C A listing of power plants that store a		
Date of Government Version: 12/31. Date Data Arrived at EDR: 08/07/20 Date Made Active in Reports: 10/22 Number of Days to Update: 76	Telephone: 202-586-8719	
COAL ASH EPA: Coal Combustion Residues Surface Impoundments List A listing of coal combustion residues surface impoundments with high hazard potential ratings.		
Date of Government Version: 07/01. Date Data Arrived at EDR: 09/10/20 Date Made Active in Reports: 10/20 Number of Days to Update: 40	Telephone: N/A	
PCB TRANSFORMER: PCB Transforme The database of PCB transformer re	egistration Database stration submittals.	
Date of Government Version: 05/24. Date Data Arrived at EDR: 11/30/20 Date Made Active in Reports: 12/15 Number of Days to Update: 15	Telephone: 202-566-0517	
RADINFO: Radiation Information Database The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.		
Date of Government Version: 07/02 Date Data Arrived at EDR: 07/05/20 Date Made Active in Reports: 10/05 Number of Days to Update: 92	Telephone: 202-343-9775	
HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.		
Date of Government Version: 10/19. Date Data Arrived at EDR: 03/01/20 Date Made Active in Reports: 04/10 Number of Days to Update: 40	Telephone: 202-564-2501	
HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA		

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

	Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007	Source: Environmental Protection Agency Telephone: 202-564-2501	
	Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008	
	Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008	
		Data Release Frequency: No Update Planned	
DOT OPS: Incident and Accident Data Department of Transporation, Office of Pipeline Safety Incident and Accident data.			
[Date of Government Version: 07/31/2012	Source: Department of Transporation, Office of Pipeline Safety	
_	Date Data Arrived at EDR: 08/07/2012	Telephone: 202-366-4595	
	Date Made Active in Reports: 09/18/2012 Number of Days to Update: 42	Last EDR Contact: 08/09/2018 Next Scheduled EDR Contact: 11/12/2018	
I.	Number of Days to Opuate. 42	Data Release Frequency: Varies	
CONS	ENT: Superfund (CERCLA) Concept Decrees		
Ν	ENT: Superfund (CERCLA) Consent Decrees Major legal settlements that establish responsil periodically by United States District Courts after	pility and standards for cleanup at NPL (Superfund) sites. Released	
[Date of Government Version: 06/30/2018	Source: Department of Justice, Consent Decree Library	
	Date Data Arrived at EDR: 07/17/2018	Telephone: Varies	
	Date Made Active in Reports: 10/05/2018 Number of Days to Update: 80	Last EDR Contact: 10/01/2018 Next Scheduled EDR Contact: 12/31/2018	
		Data Release Frequency: Varies	
BBS	Riennial Reporting System		
۲ a	BRS: Biennial Reporting System The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.		
[Date of Government Version: 12/31/2015	Source: EPA/NTIS	
0	Date Data Arrived at EDR: 02/22/2017	Telephone: 800-424-9346	
	Date Made Active in Reports: 09/28/2017	Last EDR Contact: 08/24/2018	
r	Number of Days to Update: 218	Next Scheduled EDR Contact: 12/03/2018 Data Release Frequency: Biennially	
٦	N RESERV: Indian Reservations This map layer portrays Indian administered lar han 640 acres.	nds of the United States that have any area equal to or greater	
	Date of Government Version: 12/31/2014	Source: USGS	
	Date Data Arrived at EDR: 07/14/2015	Telephone: 202-208-3710	
	Date Made Active in Reports: 01/10/2017	Last EDR Contact: 10/09/2018	
١	Number of Days to Update: 546	Next Scheduled EDR Contact: 01/21/2019 Data Release Frequency: Semi-Annually	
		Data helease i requercy. Serin-Arritually	
FUSRAP: Formerly Utilized Sites Remedial Action Program DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.			
	Date of Government Version: 08/08/2017	Source: Department of Energy	
	Date Data Arrived at EDR: 09/11/2018	Telephone: 202-586-3559	
	Date Made Active in Reports: 09/14/2018	Last EDR Contact: 09/11/2018	
ſ	Number of Days to Update: 3	Next Scheduled EDR Contact: 11/19/2018 Data Release Frequency: Varies	
	A: Uranium Mill Tailings Sites	for federal government use in national defense programs. When the mills	

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017 Date Data Arrived at EDR: 10/11/2017 Date Made Active in Reports: 11/03/2017 Number of Days to Update: 23	Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 08/20/2018 Next Scheduled EDR Contact: 12/03/2018 Data Release Frequency: Varies		
LEAD SMELTER 1: Lead Smelter Sites A listing of former lead smelter site locations.			
Date of Government Version: 07/17/2018 Date Data Arrived at EDR: 08/09/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 57	Source: Environmental Protection Agency Telephone: 703-603-8787 Last EDR Contact: 10/04/2018 Next Scheduled EDR Contact: 01/14/2019 Data Release Frequency: Varies		
LEAD SMELTER 2: Lead Smelter Sites A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust			
Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010 Number of Days to Update: 36	Source: American Journal of Public Health Telephone: 703-305-6451 Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned		
US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS) The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.			
Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017 Number of Days to Update: 100	Source: EPA Telephone: 202-564-2496 Last EDR Contact: 09/26/2017 Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually		
US AIRS MINOR: Air Facility System Data A listing of minor source facilities.			
Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017 Number of Days to Update: 100	Source: EPA Telephone: 202-564-2496 Last EDR Contact: 09/26/2017 Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually		
US MINES: Mines Master Index File Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.			
Date of Government Version: 08/01/2018 Date Data Arrived at EDR: 08/29/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 37	Source: Department of Labor, Mine Safety and Health Administration Telephone: 303-231-5959 Last EDR Contact: 08/29/2018 Next Scheduled EDR Contact: 12/10/2018 Data Release Frequency: Semi-Annually		
	Database Listing mines are facilities that extract ferrous metals, such as iron		

ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005 Date Data Arrived at EDR: 02/29/2008 Date Made Active in Reports: 04/18/2008 Number of Days to Update: 49

Source: USGS Telephone: 703-648-7709 Last EDR Contact: 08/31/2018 Next Scheduled EDR Contact: 12/10/2018 Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011 Number of Days to Update: 97

Source: USGS Telephone: 703-648-7709 Last EDR Contact: 08/31/2018 Next Scheduled EDR Contact: 12/10/2018 Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2018 Date Data Arrived at EDR: 09/11/2018 Date Made Active in Reports: 09/14/2018 Number of Days to Update: 3

Source: Department of Interior Telephone: 202-208-2609 Last EDR Contact: 09/10/2018 Next Scheduled EDR Contact: 12/24/2018 Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/07/2018 Date Data Arrived at EDR: 09/05/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 30

Source: EPA Telephone: (913) 551-7003 Last EDR Contact: 09/18/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/05/2018	Telephone: 202-564-2280
	•
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 09/05/2018
Number of Days to Update: 9	Next Scheduled EDR Contact: 12/17/2018
	Data Release Frequency: Quarterly
O: Unovaladad Ordaanaa Sitaa	

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2017	Source: Department of Defense
Date Data Arrived at EDR: 06/19/2018	Telephone: 703-704-1564
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 87	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Varies

DC	DOCKET HWC: Hazardous Waste Compliance Docket Listing A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.		
	Date of Government Version: 05/31/2018 Date Data Arrived at EDR: 07/26/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 71	Source: Environmental Protection Agency Telephone: 202-564-0527 Last EDR Contact: 08/31/2018 Next Scheduled EDR Contact: 12/10/2018 Data Release Frequency: Varies	
FU	FUELS PROGRAM: EPA Fuels Program Registered Listing This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.		
	Date of Government Version: 08/22/2018 Date Data Arrived at EDR: 08/22/2018 Date Made Active in Reports: 10/05/2018 Number of Days to Update: 44	Source: EPA Telephone: 800-385-6164 Last EDR Contact: 08/22/2018 Next Scheduled EDR Contact: 12/03/2018 Data Release Frequency: Quarterly	
AIF	RS: Minor and Title V Sources Listing A listing of Minor and Title V sources.		
	Date of Government Version: 06/26/2018 Date Data Arrived at EDR: 07/31/2018 Date Made Active in Reports: 08/24/2018 Number of Days to Update: 24	Source: Department of Natural Resources Telephone: 515-281-8468 Last EDR Contact: 09/24/2018 Next Scheduled EDR Contact: 01/07/2019 Data Release Frequency: Varies	
CC	COAL ASH: Coal Ash Disposal Site Listing A listing of coal combustion residue landfill locations.		
	Date of Government Version: 09/04/2018 Date Data Arrived at EDR: 09/05/2018 Date Made Active in Reports: 10/02/2018 Number of Days to Update: 27	Source: Department of Natural Resources Telephone: 515-281-8308 Last EDR Contact: 09/05/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Quarterly	
DR	YCLEANERS: Iowa Drycleaner List A listing of drycleaners in Iowa.		
	Date of Government Version: 07/06/2018 Date Data Arrived at EDR: 07/27/2018 Date Made Active in Reports: 08/24/2018 Number of Days to Update: 28	Source: Department of Natural Resources Telephone: 515-242-5100 Last EDR Contact: 10/15/2018 Next Scheduled EDR Contact: 01/28/2019 Data Release Frequency: Varies	
Fin	Financial Assurance 1: Financial Assurance Information Listing A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.		
	Date of Government Version: 08/30/2018 Date Data Arrived at EDR: 09/07/2018 Date Made Active in Reports: 10/02/2018	Source: Department of Natural Resources Telephone: 515-242-5086	

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-5086
3/29/2018
Contact: 12/17/2018
ency: Quarterly
2

Financial Assurance 2: Financial Assurance Information Listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 08/29/2018 Date Data Arrived at EDR: 08/30/2018 Date Made Active in Reports: 10/02/2018 Number of Days to Update: 33 Source: Department of Natural Resources Telephone: 515-242-5818 Last EDR Contact: 08/29/2018 Next Scheduled EDR Contact: 12/17/2018 Data Release Frequency: Varies

NPDES: List of NPDES Permittees

The files listed below contain information on facilities that hold NPDES permits, or those that are authorized to discharge wastewater to surface waters in Iowa.

Date of Government Version: 08/08/2018	Source: Department of Natural Resources
Date Data Arrived at EDR: 08/10/2018	Telephone: 515-281-4736
Date Made Active in Reports: 08/24/2018	Last EDR Contact: 08/09/2018
Number of Days to Update: 14	Next Scheduled EDR Contact: 11/26/2018
	Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 09/18/2018 Date Made Active in Reports: 10/02/2018 Number of Days to Update: 14 Source: Department of Natural Resources Telephone: 515-725-0302 Last EDR Contact: 09/17/2018 Next Scheduled EDR Contact: 12/31/2018 Data Release Frequency: Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Natural Resources in Iowa.

Date of Government Version: N/A	Source: Department of Natural Resources
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/03/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 186	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Natural Resources in Iowa.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 12/26/2013 Number of Days to Update: 178 Source: Department of Natural Resources Telephone: N/A Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/10/2018 Date Data Arrived at EDR: 08/10/2018 Date Made Active in Reports: 09/10/2018 Number of Days to Update: 31 Source: Department of Energy & Environmental Protection Telephone: 860-424-3375 Last EDR Contact: 08/09/2018 Next Scheduled EDR Contact: 11/26/2018 Data Release Frequency: No Update Planned

NJ	MANIFEST: Manifest Information Hazardous waste manifest information.	
	Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 07/13/2018 Date Made Active in Reports: 08/01/2018 Number of Days to Update: 19	Source: Department of Environmental Protection Telephone: N/A Last EDR Contact: 10/09/2018 Next Scheduled EDR Contact: 01/21/2019 Data Release Frequency: Annually
NY	NY MANIFEST: Facility and Manifest Data Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSI facility.	
	Date of Government Version: 07/01/2018 Date Data Arrived at EDR: 08/01/2018 Date Made Active in Reports: 08/31/2018 Number of Days to Update: 30	Source: Department of Environmental Conservation Telephone: 518-402-8651 Last EDR Contact: 08/01/2018 Next Scheduled EDR Contact: 11/12/2018 Data Release Frequency: Quarterly
RI	MANIFEST: Manifest information Hazardous waste manifest information	
	Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 02/23/2018 Date Made Active in Reports: 04/09/2018 Number of Days to Update: 45	Source: Department of Environmental Management Telephone: 401-222-2797 Last EDR Contact: 08/21/2018 Next Scheduled EDR Contact: 12/03/2018 Data Release Frequency: Annually
WI	MANIFEST: Manifest Information Hazardous waste manifest information.	
	Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 06/15/2018 Date Made Active in Reports: 07/09/2018 Number of Days to Update: 24	Source: Department of Natural Resources Telephone: N/A Last EDR Contact: 09/06/2018 Next Scheduled EDR Contact: 12/24/2018 Data Release Frequency: Annually
		Petrochemicals, Gas Liquids (LPG/NGL), and Specialty (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases

Electric Power Transmission Line Data

Source: PennWell Corporation

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(Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes Source: National Institutes of Health Telephone: 301-594-6248 Information on Medicare and Medicaid certified nursing homes in the United States. **Public Schools** Source: National Center for Education Statistics Telephone: 202-502-7300 The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states. **Private Schools** Source: National Center for Education Statistics Telephone: 202-502-7300 The National Center for Education Statistics' primary database on private school locations in the United States. Daycare Centers: Child Care Facilities Source: Department of Human Services Telephone: 515-281-4357

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA Telephone: 877-336-2627 Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: National Wetland Inventory of Iowa Source: Department of Natural Resources Telephone: 319-335-1575

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WATERLOO BIG ROCK AASF 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703

TARGET PROPERTY COORDINATES

Latitude (North):	42.554788 - 42° 33' 17.24"
Longitude (West):	92.383858 - 92° 23' 1.89"
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	550583.2
UTM Y (Meters):	4711346.5
Elevation:	876 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5944548 CEDAR FALLS, IA
Version Date:	2013
East Map:	5944028 WATERLOO NORTH, IA
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

- Groundwater flow direction, and
 Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
19013C0167F	FEMA FIRM Flood data
Additional Panels in search area:	FEMA Source Type
19013C0180F 19013C0159F 19013C0186F	FEMA FIRM Flood data FEMA FIRM Flood data FEMA FIRM Flood data
NATIONAL WETLAND INVENTORY	NWI Electronic
NWI Quad at Target Property CEDAR FALLS	Data Coverage YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID Not Reported LOCATION FROM TP GENERAL DIRECTION GROUNDWATER FLOW

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

Era:	Paleozoic	Category:	Stratified Sequence
System:	Devonian		
Series:	Middle Devonian		
Code:	D2 (decoded above as Era, System & 3	Series)	

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5454370.2s



SITE NAME:	Waterloo Big Rock AASF
ADDRESS:	2245 West Big Rock Road
LAT/LONG:	Waterloo IA 50703 42.554788 / 92.383858

CLIENT: CONTACT: INQUIRY #: DATE:	AECOM Brittany Kirchmann 5454370.2s October 16, 2018 9:03 am				
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DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained
Hydric Status: Unknown	
Corrosion Potential - Uncoated Steel:	Low
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

	Soil Layer Information						
	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 2	
Soil Component Name:	Urban land
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat poorly drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 30 inches
No Layer Information available.	

Soil Map ID: 3	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: >0 inches

Depth to Watertable Min: >0 inches

			Soil Laye	r Information			
	Boundary		Boundary		Classification		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	hydraulic conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 4

Soil Component Name:	Flagler
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat excessively drained
Hydric Status: Unknown	
Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

	Soil Layer Information						
Boundary		Boundary		Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	7 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
2	7 inches	14 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
3	14 inches	22 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1

	Boundary		Classification		Saturated hydraulic		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	0011100001011
4	22 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
5	33 inches	64 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1

Soil Map ID: 5	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained
Hydric Status: Not hydric	
Corrosion Potential - Uncoated Steel:	Low
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

			Soil Laye	r Information			
	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 6	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: >0 inches

Depth to Watertable Min: >0 inches

	Soil Layer Information						
	Boundary		Boundary Classification		ication	Saturated	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 7

Soil Component Name:	Flagler
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat excessively drained
Hydric Status: Not hydric	
Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

Soil Layer Information							
	Boundary		Classi	Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	hydraulic conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	7 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
2	7 inches	14 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
3	14 inches	22 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1

	Bou	indary		Classi	fication	Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
4	22 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
5	33 inches	64 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1

Soil Map ID: 8	
Soil Component Name:	Lawler
Soil Surface Texture:	loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat poorly drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	High
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 30 inches

	Boundary			Classi	Classification		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
1	7 inches	14 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
2	20 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
3	37 inches	59 inches	very gravelly loamy sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
4	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
5	14 inches	20 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
6	31 inches	37 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS Federal FRDS PWS	1.000 Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
11	USGS40000319678	1/2 - 1 Mile NW
19	USGS40000319606	1/2 - 1 Mile WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

		LOCATION
MAP ID	WELL ID	FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	IAPU40000201303	1/8 - 1/4 Mile East
2	IAPU40000201300	1/4 - 1/2 Mile NE
A3	IAPU40000295263	1/2 - 1 Mile SE
A4	IAPR40000083898	1/2 - 1 Mile SE
5	IAPU4000037647	1/2 - 1 Mile NE
6	IAPU40000037450	1/2 - 1 Mile WSW
B7	IAPU40000073131	1/2 - 1 Mile SW
8	IAPU4000037393	1/2 - 1 Mile NW
B9	IAPU40000186776	1/2 - 1 Mile SW
B10	IAPW40000091594	1/2 - 1 Mile SW
12	IAPU4000037427	1/2 - 1 Mile WSW
13	IAPU40000073204	1/2 - 1 Mile East
14	IAPU4000073155	1/2 - 1 Mile SSW
C15	IAPU40000186779	1/2 - 1 Mile SW
C16	IAPW40000011005	1/2 - 1 Mile SW
C17	IAPU40000186778	1/2 - 1 Mile SW
C18	IAPW40000030505	1/2 - 1 Mile SW
20	IAPU40000324156	1/2 - 1 Mile NE
D21	IAPU40000295217	1/2 - 1 Mile SSW
D22	IAPU4000073138	1/2 - 1 Mile SSW
D23	IAPR40000073495	1/2 - 1 Mile SSW
24	IAPU4000037425	1/2 - 1 Mile SW
25	IAPU4000073134	1/2 - 1 Mile SSW
26	IAPU40000201287	1/2 - 1 Mile NNE

STATE DATABASE WELL INFORMATION

MAP ID

WELL ID IAPU40000211048 LOCATION FROM TP 1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 5454370.2s



ADDRESS:	Waterloo Big Rock AASF 2245 West Big Rock Road Waterloo IA 50703 42.554788 / 92.383858	CONTACT: INQUIRY #:	AECOM Brittany Kirchmann 5454370.2s October 16, 2018 9:02 am	
Conversion 2018 EDD Jac & 2015 Tem Tem Pal 2015				

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Da	Itabase	EDR ID Number
1 East 1/8 - 1/4 Mile Lower			WELLS	IAPU40000201303
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of 21878 175 Primary use: Domestic/household	of Iowa Well Type: Construction/Permit Date:	Permitted private wells t Date: unkn	
2 NE 1/4 - 1/2 Mile Higher		IA	WELLS	IAPU40000201300
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State (17390 150 Primary use: Heating and air conditi	Well Type:Permitted private wellsConstruction/Permit Date:unkn		
A3 SE 1/2 - 1 Mile Lower		IA	WELLS	IAPU40000295263
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 6 83899 160 Drilling method: Drilled; Known well	Well Type:Wells registered for testingConstruction/Permit Date:unkn		
A4 SE 1/2 - 1 Mile Lower		IA	WELLS	IAPR4000083898
Database: Depth Reliability: Sample Date: Sampling Location: Bacteria Results: Safe/Unsafe Nitrate Level: Nitrate Remarks: Method Accuracy: Material Accuracy: Diameter Accuracy: Year Accuracy:	Private Wells Tested K 25-JUN-01 KITCHEN FAUCET 0 S Not Reported Not Reported Not Reported K U	Well Depth: Private Permit #: Analysis Date: Safe/Unsafe Bacteria Level: Bacteria Remarks: Nitrate Results: Construction Method: Casing Material: Casing Diameter: Year Constructed: Agent:	Not U Not DRII STE 6 0	Reported Reported LLED EL
Map ID Direction Distance				
--	--	--------------------------------	---------------------------------------	
Elevation		Databas	se EDR ID Number	
5 NE 1/2 - 1 Mile Higher		IA WELL	LS IAPU40000037647	
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of Iowa 77148 Well 1 105 Const Bedrock depth: 26; Well type: Unknown	31	IGS well database 7/18/1969	
6 WSW 1/2 - 1 Mile Lower		IA WELL	LS IAPU40000037450	
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of Iowa 2717 Well 7 60 Const Bedrock depth: 41; Well type: Public Supply	Гуре: truction/Permit Date:	IGS well database 12/28/1946	
B7 SW 1/2 - 1 Mile Lower		IA WELL	LS IAPU40000073131	
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of Iowa 73533 Well 1 140 Const Bedrock depth: 80; Well type: Heat Pump		IGS well database 4/1/2011	
8 NW 1/2 - 1 Mile Lower		IA WELL	LS IAPU40000037393	
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of Iowa 78078 Well 1 101 Const Bedrock depth: 50; Well type: Unknown	Гуре: truction/Permit Date:	IGS well database 6/11/1974	
B9 SW 1/2 - 1 Mile Lower		IA WELI	LS IAPU40000186776	
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of Iowa 2153248 Well 7 140 Const Status: Active Logged	Гуре: truction/Permit Date:	Private well tracking system 4/1/2011	

Map ID Direction					
Distance Elevation				Database	EDR ID Number
B10 SW 1/2 - 1 Mile Lower				IA WELLS	IAPW40000091594
Database:	Private Well Tracking S	System Wells		0.400	
PWTS Well #: Tier #:	2153248 89		Permit #: Range #:	3406 13	4
Elevation:	0		Elevation Accuracy:		Reported
Total Well Depth:	140		Bedrock Depth:	0	leponed
Depth to Water:	11		Well Finished:	-	PR-11
Driller:	Shawver Well Co.		Construction Method:		ry Drill
Remarks:	Not Reported		Well Use:		mercial
Well Status:	Active Log		Heat Pump Wells:	0	
Permitted Private Well:	X		Abandoned Well:	Not F	Reported
Renovated Well:	Not Reported		Registered for Tests:		Reported
11 NW 1/2 - 1 Mile Lower				FED USGS	USGS40000319678
Organization ID:	USGS-IA		Organization Name:	USG	S Iowa Water Science Center
Monitor Location:	090N13W33CBB		Type:	Well	
Description:	Across from airports m	grs home nortl	h side airport		
HUC:	07080205		Drainage Area:	Not F	Reported
Drainage Area Units:	Not Reported		Contrib Drainage Area:		Reported
Contrib Drainage Area Unts:	Not Reported		Aquifer:		an-Devonian aquifers
Formation Type:	Devonian System		Aquifer Type:		Reported
Construction Date:	Not Reported		Well Depth:	120	
Well Depth Units:	ft		Well Hole Depth:	120	
Well Hole Depth Units:	ft				
Ground water levels.Number of	Measurements	8	Level reading date:	1000	-02-25
Feet below surface:	10.40	0	Feet to sea level:		Reported
Note:	Not Reported				loponou
Level reading date:	1998-12-29		Feet below surface:	9.50	
Feet to sea level:	Not Reported		Note:		Reported
Level reading date:	1998-10-27		Feet below surface:	8.92	
Feet to sea level:	Not Reported		Note:	Not F	Reported
Level reading date:	1998-08-25		Feet below surface:	7.44	
Feet to sea level:	Not Reported		Note:	Not F	Reported
Level reading date:	1998-07-21		Feet below surface:	6.70	
Feet to sea level:	Not Reported		Note:	Not F	Reported
Level reading date:	1998-06-25		Feet below surface:	6.82	
Feet to sea level:	Not Reported		Note:	Not F	Reported
Level reading date:	1998-04-27		Feet below surface:	8.83	
Feet to sea level:	Not Reported		Note:	Not F	Reported
Level reading date:	1998-03-04		Feet below surface:	13.00	
Feet to sea level:	Not Reported		Note:	Not F	Reported

Map ID Direction				
Distance Elevation		Da	tabase	EDR ID Number
12 WSW 1/2 - 1 Mile Lower		A I	WELLS	IAPU40000037427
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 77323 130 Bedrock depth: 60; Well type: Unkr	Well Type: Construction/Permit Date:		well database 3/1972
13 East 1/2 - 1 Mile Lower		A I	WELLS	IAPU40000073204
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 56749 170 Bedrock depth: 63; Well type: Com	Well Type: Construction/Permit Date:		well database 1/2002
14 SSW 1/2 - 1 Mile Lower		A I	WELLS	IAPU40000073155
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 32329 100 Bedrock depth: 25; Well type: Publi	Well Type: Construction/Permit Date:		well database /1990
C15 SW 1/2 - 1 Mile Lower		A I	WELLS	IAPU40000186779
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 2088585 unkn Status: Retired	of Iowa Well Type: Construction/Permit Date:	Priva unkr	ate well tracking system
C16 SW 1/2 - 1 Mile Lower		IA 1	WELLS	IAPW40000011005
Database: PWTS Well #: Tier #: Elevation: Total Well Depth: Depth to Water: Driller:	Private Well Tracking System Wells 2088585 89 0 0 0 Enviro-Tec Inc.	S Permit #: Range #: Elevation Accuracy: Bedrock Depth: Well Finished: Construction Method:	0 Not I	29 Reported Reported Reported

Remarks: Well Status: Permitted Private Well: Renovated Well:	Not Reported Retired X Not Reported	Well Use: Heat Pump Wells: Abandoned Well: Registered for Tests:	50 Not F	pump Reported Reported
C17 SW 1/2 - 1 Mile Lower			IA WELLS	IAPU40000186778
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State o 2104767 unkn Status: Retired	f Iowa Well Type: Construction/Permit Dat		te well tracking system
C18 SW 1/2 - 1 Mile Lower			IA WELLS	IAPW4000030505
Database:	Private Well Tracking System Wells			
PWTS Well #:	2104767	Permit #:	1813	2
Tier #:	89	Range #:	13	
Elevation:	0	Elevation Accuracy:		Reported
Total Well Depth:	0	Bedrock Depth:	0	
Depth to Water:	0	Well Finished:		Reported
Driller:	Not Reported	Construction Method:		Reported
Remarks:	Not Reported	Well Use:		pump
Well Status: Permitted Private Well:	Retired X	Heat Pump Wells: Abandoned Well:	1 Not F	Papartad
Renovated Well:	Not Reported	Registered for Tests:		Reported Reported
19 WSW 1/2 - 1 Mile Lower			FED USGS	USGS40000319606
Organization ID:	USGS-IA	Organization Name:	USG	S Iowa Water Science Center
Monitor Location:	089N13W05DABA 04413 1950Water	•		lonartad
Type:	Well	Description:		Reported
HUC: Drainaga Araa Unita:	07080205	Drainage Area:		Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:		Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:		Reported
Formation Type:	Cedar Valley Limestone	Aquifer Type:		Reported

Well Depth:

Well Hole Depth:

Construction Date:

Well Depth Units:

Well Hole Depth Units:

1950

Not Reported

ft

125

Not Reported

Map ID Direction Distance Elevation		D	atabase	EDR ID Number
20 NE 1/2 - 1 Mile Higher			WELLS	IAPU40000324156
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 11671 32 Well plugged: nil; Well type: < 18" d	Well Type: Construction/Permit Date:	Regi n.a.	stered abandoned wells
D21 SSW 1/2 - 1 Mile Lower		IA	WELLS	IAPU40000295217
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 73496 120 Drilling method: Drilled; Known well	Well Type: Construction/Permit Date:	Well	s registered for testing
D22 SSW 1/2 - 1 Mile Lower		IA	WELLS	IAPU4000073138
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State 29727 135 Bedrock depth: 110; Well type: Priva	Well Type: Construction/Permit Date:		well database /1986
D23 SSW 1/2 - 1 Mile Lower		AI	WELLS	IAPR40000073495
Database: Depth Reliability: Sample Date: Sampling Location: Bacteria Results: Safe/Unsafe Nitrate Level: Nitrate Remarks: Method Accuracy: Material Accuracy: Diameter Accuracy: Year Accuracy:	Private Wells Tested K 26-MAY-00 KITCHEN FAUCET 0 S < Not Reported Not Reported K U	Well Depth: Private Permit #: Analysis Date: Safe/Unsafe Bacteria Level Bacteria Remarks: Nitrate Results: Construction Method: Casing Material: Casing Diameter: Year Constructed: Agent:	Not I S Not I O DRIL STE 6 0	Reported Reported LLED EL TT MEYERS

Map ID Direction Distance				
Elevation		[Database	EDR ID Number
24 SW 1/2 - 1 Mile Lower		I.	A WELLS	IAPU40000037425
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of 4413 125 Bedrock depth: 54; Well type: Public	Well Type: Construction/Permit Date:	IGS 1/7/1	well database 1950
25 SSW 1/2 - 1 Mile Lower		l	A WELLS	IAPU40000073134
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of 29728 135 Bedrock depth: 112; Well type: Priva	Well Type: Construction/Permit Date:		well database /1986
26 NNE 1/2 - 1 Mile Lower		l	A WELLS	IAPU40000201287
Database:	All Known Water Wells in the State of	of Iowa		
Well ID: Well Depth: Notes:	17399 150 Primary use: Domestic/household	Well Type: Construction/Permit Date:	Pern unkn	nitted private wells 1
27 East 1/2 - 1 Mile Lower		I	A WELLS	IAPU40000211048
Database: Well ID: Well Depth: Notes:	All Known Water Wells in the State of 19421 130 Primary use: Domestic/household	of Iowa Well Type: Construction/Permit Date:	Pern unkn	nitted private wells

AREA RADON INFORMATION

State Database: IA Radon

Radon Test Results

Zipcode	Num Tests	Minimum	Maximum	Average
50703	46	0.5	19.6	4.8

Federal EPA Radon Zone for BLACK HAWK County: 1

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 50703

Number of sites tested: 8

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	4.225 pCi/L	50%	50%	0%

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA Telephone: 877-336-2627 Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: National Wetland Inventory of Iowa Source: Department of Natural Resources Telephone: 319-335-1575

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS) The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS) Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

All Known Water Wells in the State of Iowa

- Source: Department of Natural Resources
- Telephone: 319-335-1353
- Well types included are agricultural drainage, permitted private, public, registered abandoned, SDWIS public, water use permit sites, wells registered for testing.

Agricultural Drainage Wells

Source: Department of Natural Resources

Telephone: 515-281-5029

Agricultural drainage wells are required to be registered both with the Iowa Department of Natural Resources as a part of the 1987 Groundwater Protection Act, and with the U.S. Environmental Protection Agency as a part of the Underground Injection Control Program.

Private Well Tracking System Wells

Source: Department of Natural Resources Telephone: 319-335-1353

Water Use Permits

Source: Department of Natural Resources Telephone: 515-725-0336 Wells under Water Use permits. A water use permit is required of any person or entity that withdraws or diverts at least 25,000 gallons of water in a 24-hour period during any calendar year.

Private Wells Tested

Source: Department of Natural Resources Telephone: 515-335-1353 This is a point coverage for private wells which have been tested for bacteria and nitrate contamination under the Grants to Counties program.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database Source: Department of Natural Resources Oil and gas well locations.

RADON

State Database: IA Radon Source: Department of Public Health Telephone: 515-281-4340 Radon Test Results

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information Source: USGS Telephone: 703-356-4020 The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones Source: EPA Telephone: 703-356-4020 Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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Waterloo Big Rock AASF

2245 West Big Rock Road Waterloo, IA 50703

Inquiry Number: 5454370.2s October 16, 2018

EDR Summary Radius Map Report



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

FORM-NULL-PVC

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Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2245 WEST BIG ROCK ROAD WATERLOO, IA 50703

COORDINATES

Latitude (North):	42.5547880 - 42° 33' 17.23"
Longitude (West):	92.3838580 - 92° 23' 1.88"
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	550583.2
UTM Y (Meters):	4711346.5
Elevation:	876 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: Source:

U.S. Geological Survey Target Property: Е U.S. Geological Survey

TΡ

AERIAL PHOTOGRAPHY IN THIS REPORT

Source:

Portions of Photo from:	20150913
Source:	USDA

Target Property Address: 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	ALLSITES, AIRS		TP
A2	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	AST		ТР
A3	ARMY AVIATION SUPPOR	2245 W. BIG ROCK RD.	NPDES		ТР
A4	IA ARNG WATERLOO AVI	2245 WEST BIG ROCK R	TIER 2		ТР
A5	BECKER CHAPMAN POST	2245 W BIG ROCK RD	FINDS		ТР
A6	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	US AIRS		ТР
A7	IOWA ARMY NATIONAL G	2245 WEST BIG ROCK R	NPDES		ТР
A 8	AASF #2	AASF #2 2245 W BIG R	FINDS		ТР
A9	IOWA ARMY NATIONAL G	2245 WEST BIG ROCK R	FINDS, ECHO		ТР
A10	IOWA ARMY NATIONAL G	2245 W BIG ROCK RD	CORRACTS, RCRA-TSDF, RCRA-SQG, RAATS		ТР
A11	AASF #2	AASF #2 2245 W BIG R	UST		ТР
A12	IOWA ARMY NATIONAL G	2245 W. BIG ROCK RD.	NPDES		ТР
A13	IA ARNG WATERLOO AVI	2245 WEST BIG ROCK R	FINDS		ТР

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD WATERLOO, IA 50703	ALLSITES Status: Closed Site Id Number: 1175 AIRS Status: MINOR EI Facility Id: 07-01-115	N/A
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD WATERLOO, IA	AST Registration Number: 18822 Registration Number: 18823 Registration Number: 18824 Registration Number: 18825	N/A
ARMY AVIATION SUPPOR 2245 W. BIG ROCK RD. WATERLOO, IA 50703	NPDES	N/A
IA ARNG WATERLOO AVI 2245 WEST BIG ROCK R WATERLOO, IA 50703	TIER 2 Facility Id: 864 Facility Id: FAIDSIT2A00000864 State Id: IA	N/A
BECKER CHAPMAN POST 2245 W BIG ROCK RD WATERLOO, IA 50703	FINDS Registry ID:: 110070130403	N/A
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD WATERLOO, IA 50703	US AIRS Database: US AIRS MINOR, Date of Government Version: 1	N/A 10/12/2016
IOWA ARMY NATIONAL G 2245 WEST BIG ROCK R WATERLOO, IA 50703	NPDES	N/A
AASF #2 AASF #2 2245 W BIG R WATERLOO, IA 50703	FINDS Registry ID:: 110036255405	N/A
IOWA ARMY NATIONAL G 2245 WEST BIG ROCK R WATERLOO, IA 50703	FINDS	N/A

EXECUTIVE SUMMARY

	Registry ID:: 110005756379 ECHO Registry ID: 110005756379	
IOWA ARMY NATIONAL G 2245 W BIG ROCK RD	CORRACTS EPA ID:: IAD981504269	IAD981504269
WATERLOO, IA 50703	RCRA-TSDF EPA ID:: IAD981504269	
	RCRA-SQG EPA ID:: IAD981504269	
	RAATS Status: 01 Facility ID: IAD981504269	
AASF #2 AASF #2 2245 W BIG R WATERLOO, IA 50703	UST Facility Id: 6228 Registration: 198605894	N/A
IOWA ARMY NATIONAL G 2245 W. BIG ROCK RD. WATERLOO, IA 50703	NPDES	N/A
IA ARNG WATERLOO AVI 2245 WEST BIG ROCK R WATERLOO, IA 50703	FINDS Registry ID:: 110043626234	N/A

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

	Database(s)					
	Zip Da	1				
	Site Address					
۲۶						
ORPHAN SUMMARY						
ORPH						
	lame	NO SITES FOUND				
	Site Name					
	EDR ID					
cords.						
Count: 0 records.	City					

TC5454370.2s Page 34

OVERVIEW MAP - 5454370.2S



SITE NAME: Waterl ADDRESS: 2245 V Waterl LAT/LONG: 42.554	/est Big Rock Road po IA 50703	CONTACT: INQUIRY #:	AECOM Brittany Kirchmann 5454370.2s October 16, 2018 9:00 am
		Copyrig	ht © 2018 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 5454370.2S



$\Box A T LONG. 42.004768752.000000 DATE. OCODE 10, 2010 5.02 and$	ADDRESS: 2245 West Big Rock Road Waterloo IA 50703	CLIENT: AECOM CONTACT: Brittany Kirchmann INQUIRY #: 5454370.2s DATE: October 16, 2018 9:02 am
--	---	---

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted
STANDARD ENVIRONMEN	TAL RECORDS							
Federal NPL site list								
NPL Proposed NPL NPL LIENS	1.000 1.000 TP		0 0 NR	0 0 NR	0 0 NR	0 0 NR	NR NR NR	0 0 0
Federal Delisted NPL si	te list							
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Federal CERCLIS NFRA	P site list							
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRAC	TS facilities l	ist						
CORRACTS	1.000	1	0	0	0	0	NR	1
Federal RCRA non-COR	RACTS TSD I	facilities list						
RCRA-TSDF	0.500	1	0	0	0	NR	NR	1
Federal RCRA generato	rs list							
RCRA-LQG RCRA-SQG RCRA-CESQG	0.250 0.250 0.250	1	0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 1 0
Federal institutional con engineering controls re								
LUCIS US ENG CONTROLS US INST CONTROL	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equiva	alent CERCLIS	S						
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill a solid waste disposal sit								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking	storage tank l	lists						
LUST LAST INDIAN LUST	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
State and tribal register	ed storage tai	nk lists						
FEMA UST	0.250		0	0	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted
UST AST INDIAN UST	0.250 0.250 0.250	1 1	0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	1 1 0
State and tribal institution control / engineering co		95						
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntar	y cleanup sit	es						
VCP INDIAN VCP	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
State and tribal Brownfic	elds sites							
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMEN	NTAL RECORD	s						
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / S Waste Disposal Sites	Solid							
INDIAN ODI DEBRIS REGION 9 ODI IHS OPEN DUMPS	0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0	0 0 0 0	NR NR NR NR	NR NR NR NR	0 0 0 0
Local Lists of Hazardou Contaminated Sites	s waste /							
US HIST CDL ALLSITES DEL SHWS US CDL	TP 0.500 1.000 TP	1	NR 0 0 NR	NR 0 0 NR	NR 0 0 NR	NR NR 0 NR	NR NR NR NR	0 1 0 0
Local Land Records								
LIENS LIENS 2	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
Records of Emergency	Release Repo	orts						
HMIRS SPILLS SPILLS 90	TP TP TP		NR NR NR	NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0
Other Ascertainable Rec	cords							
RCRA NonGen / NLR FUDS DOD SCRD DRYCLEANERS US FIN ASSUR EPA WATCH LIST	0.250 1.000 1.000 0.500 TP TP		0 0 0 NR NR	0 0 0 NR NR	NR 0 0 NR NR	NR 0 NR NR NR	NR NR NR NR NR	0 0 0 0 0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION TSCA TRIS SSTS ROD RMP RAATS PRP PADS ICIS FTTS MLTS COAL ASH DOE COAL ASH DOE COAL ASH DOE COAL ASH EPA PCB TRANSFORMER RADINFO HIST FTTS DOT OPS CONSENT INDIAN RESERV FUSRAP UMTRA LEAD SMELTERS US AIRS US MINES ABANDONED MINES FINDS ECHO UXO DOCKET HWC	0.250 TP TP TP 1.000 TP TP TP TP TP TP TP TP 0.500 TP TP TP 1.000 1.000 0.500 TP TP 0.250 0.250 TP TP 1.000 TP TP	Property 1 1 4 1	0 R R R O R R R R R R R R R R R R R R R	0 NR NR NR NR NR NR NR NR NR NR NR NR NR	NR NR O R NR N	NR NR O NR NR N	NR R R R R R R R R R R R R R R R R R R	$\begin{array}{c} 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ $
FUELS PROGRAM AIRS COAL ASH DRYCLEANERS Financial Assurance NPDES TIER 2	0.250 TP 0.500 0.250 TP TP TP	1 3 1	0 NR 0 NR NR NR	0 NR 0 NR NR NR	NR NR NR NR NR NR	NR NR NR NR NR NR	NR NR NR NR NR NR	0 1 0 0 3 1
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP EDR Hist Auto EDR Hist Cleaner	1.000 0.125 0.125		0 0 0	0 NR NR	0 NR NR	0 NR NR	NR NR NR	0 0 0
EDR RECOVERED GOVER	NMENT ARCHIV	VES						
Exclusive Recovered Go								
RGA HWS	TP		NR	NR	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals		18	0	0	0	0	0	18

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID	MAP FINDINGS		
Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 Target Property	IOWA ARMY NATIONAL GUARD - WATERLOO 2245 W BIG ROCK RD WATERLOO, IA 50703	ALLSITES AIRS	S107669067 N/A
Actual: 876 ft.	Click here for full text details ALLSITES Site Id Number: 1175 Status: Closed		
	AIRS Facility Id: 07-01-115 Status: MINOR EI		
A2 Target Property	IOWA ARMY NATIONAL GUARD 2245 W BIG ROCK RD WATERLOO, IA	AST	A100408818 N/A
Actual: 876 ft.	Click here for full text details AST Registration Number: 18822 Registration Number: 18823 Registration Number: 18824 Registration Number: 18825		
A3 Target Property	ARMY AVIATION SUPPORT FACILITY #2 2245 W. BIG ROCK RD. WATERLOO, IA 50703	NPDES	S122561870 N/A
Actual: 876 ft.	Click here for full text details		
A4 Target Property	IA ARNG WATERLOO AVIATION 2245 WEST BIG ROCK ROAD ROAD WATERLOO, IA 50703	TIER 2	S109946710 N/A
Actual: 876 ft.	Click here for full text details TIER 2 Facility Id: 864 Facility Id: FAIDSIT2A00000864 State Id: IA		

Map ID	MAP FINDINGS		
Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A5 Target Property	BECKER CHAPMAN POST RIFLE RANGE 2245 W BIG ROCK RD WATERLOO, IA 50703	FINDS	1024047188 N/A
Actual: 876 ft.	Click here for full text details FINDS Registry ID:: 110070130403		
A6 Target Property	IOWA ARMY NATIONAL GUARD - WATERLOO 2245 W BIG ROCK RD WATERLOO, IA 50703	US AIRS	1016935615 N/A
Actual: 876 ft.	Click here for full text details		
A7 Target Property	IOWA ARMY NATIONAL GUARD AASF 2 2245 WEST BIG ROCK RD. WATERLOO, IA 50703	NPDES	S122537119 N/A
Actual: 876 ft.	Click here for full text details		
A8 Target Property	AASF #2 AASF #2 2245 W BIG ROCK RD WATERLOO, IA 50703	FINDS	1011288083 N/A
Actual: 876 ft.	Click here for full text details FINDS Registry ID:: 110036255405		
A9 Target Property	IOWA ARMY NATIONAL GUARD - WATERLOO 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703	FINDS ECHO	1016085222 N/A
Actual: 876 ft.	Click here for full text details FINDS Registry ID:: 110005756379		
	ECHO Registry ID: 110005756379		

Map ID	MAP FINDINGS		
Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A10 Target Property	IOWA ARMY NATIONAL GUARD - AASF 2 2245 W BIG ROCK RD WATERLOO, IA 50703	CORRACTS RCRA-TSDF RCRA-SQG RAATS	1000439559 IAD981504269
Actual: 876 ft.	Click here for full text details CORRACTS EPA ID:: IAD981504269		
	RCRA-TSDF EPA ld: IAD981504269		
	RCRA-SQG EPA ld: IAD981504269		
	RAATS Status: 01 Facility ID: IAD981504269		
A11 Target Property	AASF #2 AASF #2 2245 W BIG ROCK RD WATERLOO, IA 50703	UST	U003634984 N/A
Actual: 876 ft.	Click here for full text details UST Registration: 198605894 Facility Id: 6228		
A12 Target Property	IOWA ARMY NATIONAL GUARD AASF2 - TRUCK LOADING RAM 2245 W. BIG ROCK RD. WATERLOO, IA 50703	NPDES	S122545207 N/A
Actual: 876 ft.	Click here for full text details		
A13 Target Property	IA ARNG WATERLOO AVIATION 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703	FINDS	1014699342 N/A
Actual: 876 ft.	Click here for full text details FINDS Registry ID:: 110043626234		

5	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
₹	AIRS	Minor and Title V Sources Listing	Department of Natural Resources	06/26/2018	07/31/2018	08/24/2018
₹	ALLSITES	Contaminated Sites Tracking Database	Department of Natural Resources	07/16/2018	07/18/2018	08/23/2018
₹	AST	Aboveground Storage Tank Sites	Department of Public Safety	07/31/2018	08/02/2018	08/24/2018
≤	BROWNFIELDS	Brownfields Site Listing	Department of Natural Resources	07/16/2018	07/18/2018	08/23/2018
≤	COAL ASH	Coal Ash Disposal Site Listing	Department of Natural Resources	09/04/2018	09/05/2018	10/02/2018
≤	DEL SHWS	Delisted Contaminated Sites Listing	Department of Natural Resources	12/31/2017	01/24/2018	02/23/2018
₹	DRYCLEANERS	lowa Drycleaner List	Department of Natural Resources	07/06/2018	07/27/2018	08/24/2018
≤	Financial Assurance 1	Financial Assurance Information Listing	Department of Natural Resources	08/30/2018	09/07/2018	10/02/2018
≤	Financial Assurance 2	Financial Assurance Information Listing	Department of Natural Resources	08/29/2018	08/30/2018	10/02/2018
≤	INST CONTROL	Sites with Institutional Controls	Department of Natural Resources	07/16/2018	07/18/2018	08/24/2018
≤	LAST	Leaking Aboveground Storage Tank Sites	Department of Natural Resources	07/16/2018	07/18/2018	08/24/2018
≤	LIENS	Liens Filed Listing	Department of Natural Resources	07/05/2018	07/24/2018	08/24/2018
۲	LUST	Leaking Underground Storage Tank Data	Department of Natural Resources	08/30/2018	09/07/2018	10/02/2018
₹	NPDES	List of NPDES Permittees	Department of Natural Resources	08/08/2018	08/10/2018	08/24/2018
₹	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Natural Resources		07/01/2013	01/03/2014
۲	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan			07/01/2013	12/26/2013
₹	SHWS	Registry of Hazardous Waste or Hazardous Substance Disposal	Department of Natural Resources	12/31/2017	01/24/2018	02/23/2018
₹	SPILLS	Spills Database	Department of Natural Resources	09/04/2018	09/06/2018	10/02/2018
₹	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	10/17/2012	01/03/2013	03/05/2013
₹	SWF/LF	Permitted Solid Waste Management Facilities	Department of Natural Resources	09/04/2018	09/05/2018	10/02/2018
₹	TIER 2	Tier 2 Information Listing	Department of Natural Resources	12/31/2017	09/18/2018	10/02/2018
₹	UST	Underground Storage Tank Data	Department of Natural Resources	08/30/2018	09/07/2018	10/02/2018
₹	VCP	Land Recycling Program Sites	Department of Natural Resources	07/16/2018	07/18/2018	08/23/2018
SU	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
SN	ABANDONED MINES	Abandoned Mines	Department of Interior	09/10/2018	09/11/2018	09/14/2018
SU	BRS	Biennial Reporting System	EPA/NTIS	12/31/2015	02/22/2017	09/28/2017
SU	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2005	08/07/2009	10/22/2009
SU	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	07/01/2014	09/10/2014	10/20/2014
SU	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	06/30/2018	07/17/2018	10/05/2018
SU	CORRACTS	Corrective Action Report	EPA	03/01/2018	03/28/2018	06/22/2018
SU	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
SU	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/31/2018	07/26/2018	10/05/2018
SU	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
SU	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	07/31/2012	08/07/2012	09/18/2012
SU	Delisted NPL	National Priority List Deletions	EPA	07/17/2018	08/09/2018	09/07/2018
SU	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	09/02/2018	09/05/2018	09/14/2018
SU	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
SU	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
SU	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
SN	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
SN	ERNS	Emergency Response Notification System	National Response Center, United States Coast	06/18/2018	06/27/2018	09/14/2018
SU	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	11/07/2016	01/05/2017	04/07/2017
SU	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	12/31/2005	02/06/2006	01/11/2007
מ כ		Underground Storage Lank Listing	rema ref	102/91/90	05/30/2017	10/13/21/01
	FINUS			08/07/2018	09/05/2018	10/05/2018
ה כ כ			EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
n C		FIFRA/ I SCA Tracking System - FIFRA (Federal Insecticide, Fu	EFA	6002/60/40	6002/91/40	6002/LL/G0

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st	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
SU	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/31/2015	07/08/2015	10/13/2015
ns	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	08/22/2018	08/22/2018	10/05/2018
ŝ	FUSBAP	Formerly Utilized Sites Remedial Action Program	Denartment of Fnerov	08/08/2017	09/11/2018	09/14/2018
n n	HIST FTTS		Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
		ELEDATION Tracking System henerging & Enforcement Oscellie	Environmental Protection Agency	10/10/2000	03/01/2007	10/2/01/2002
		LI TAVI JOAN HARNING OVERHI HISPERIAH & EHIOUEHHEIH VASE EIS Lizzardana Matariala Information Donorting Rustom		0007/81/01	1002/10/00	04/10/2010
				0102/02/00	0102/12/00	01/00/00
S O	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
SN	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
SU	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/13/2018	05/18/2018	07/20/2018
NS	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/12/2018	05/18/2018	07/20/2018
SU	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/08/2018	05/18/2018	07/20/2018
SU	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/12/2018	05/18/2018	07/20/2018
SU	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/01/2018	05/18/2018	07/20/2018
ns	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	04/24/2018	05/18/2018	07/20/2018
<u>v</u>		Leaking Underground Storage Tanks on Indian Land		04/25/2018	05/18/2018	07/20/2018
b d		Leaking Underground Storage Tanks on Indian Land	Environmental Drotection Agency	01/10/018	05/10/2010	07/20/2018
201		Denote on the Otation of Anen Dimens on Indian Land				
				0661/10/21	12/03/20015	011/24/2000
2				12/31/2014	G1UZ/41//0	1102/01/10
SU	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/13/2018	05/18/2018	07/20/2018
SU		Underground Storage Tanks on Indian Land	EPA Region 10	04/12/2018	05/18/2018	07/20/2018
SU	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/08/2018	05/18/2018	07/20/2018
SU	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/12/2018	05/18/2018	07/20/2018
SU	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/01/2018	05/18/2018	07/20/2018
SU	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	04/24/2018	05/18/2018	07/20/2018
SU	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	04/25/2018	05/18/2018	07/20/2018
SU	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/10/2018	05/18/2018	07/20/2018
SU	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA Region 1	07/27/2015	09/29/2015	02/18/2016
ns	INDIAN VCP R7	Voluntary Cleanup Priority Lisitno	EPA. Region 7	03/20/2008	04/22/2008	05/19/2008
ns	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	07/17/2018	08/09/2018	10/05/2018
SU	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
ns	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	07/17/2018	08/09/2018	10/05/2018
ns	LUCIS	Land Use Control Information System	Department of the Navy	05/14/2018	05/18/2018	07/20/2018
ns	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	08/30/2016	09/08/2016	10/21/2016
SU	NPL	National Priority List	EPA	07/17/2018	08/09/2018	09/07/2018
SU	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
SU	IDO	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
SN	PADS	PCB Activity Database System	EPA	06/01/2017	06/09/2017	10/13/2017
SU	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	05/24/2017	11/30/2017	12/15/2017
SU	PRP	Potentially Responsible Parties	EPA	10/25/2013	10/17/2014	10/20/2014
SU	Proposed NPL	Proposed National Priority List Sites	EPA	07/17/2018	08/09/2018	09/07/2018
SU	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
SU	RADINFO	Radiation Information Database	Environmental Protection Agency	07/02/2018	07/05/2018	10/05/2018
SN	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
SU	RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
SU	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
SU	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
SN	RCRA-TSDF	RCRA - Treatment. Storage and Disposal	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
1						

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St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
ns		Risk Management Plans	Environmental Protection Agency	08/01/2018	08/22/2018	10/05/2018
SN		Records Of Decision	EPA	07/17/2018	08/09/2018	10/05/2018
SN	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
SU	SEMS	Superfund Enterprise Management System	EPA	07/17/2018	08/09/2018	09/07/2018
SU		Superfund Enterprise Management System Archive	EPA	07/17/2018	08/09/2018	09/07/2018
SN	SSTS	Section 7 Tracking Systems	EPA	12/31/2009	12/10/2010	02/25/2011
SN	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2016	01/10/2018	01/12/2018
SU	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/21/2017	01/05/2018
SU	UMTRA	Uranium Mill Tailings Sites	Department of Energy	06/23/2017	10/11/2017	11/03/2017
SN		Aerometric Information Retrieval System Facility Subsystem (EPA	10/12/2016	10/26/2016	02/03/2017
SU	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
SU	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	06/18/2018	06/20/2018	09/14/2018
SU		Clandestine Drug Labs	Drug Enforcement Administration	05/18/2018	06/20/2018	09/14/2018
SU	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	07/31/2018	08/28/2018	09/14/2018
SU	_	Financial Assurance Information	Environmental Protection Agency	05/31/2018	06/27/2018	10/05/2018
SU	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	05/18/2018	06/20/2018	09/14/2018
SU	US INST CONTROL	Sites with Institutional Controls	Environmental Protection Agency	07/31/2018	08/28/2018	09/14/2018
SU	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	08/01/2018	08/29/2018	10/05/2018
SN		Ferrous and Nonferrous Metal Mines Database Listing	USGS	12/05/2005	02/29/2008	04/18/2008
SN	US MINES 3	Active Mines & Mineral Plants Database Listing	NSGS	04/14/2011	06/08/2011	09/13/2011
SN		Unexploded Ordnance Sites	Department of Defense	09/30/2017	06/19/2018	09/14/2018
СТ	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	08/10/2018	08/10/2018	09/10/2018
R	_	Manifest Information	Department of Environmental Protection	12/31/2017	07/13/2018	08/01/2018
Z	_	Facility and Manifest Data	Department of Environmental Conservation	07/01/2018	08/01/2018	08/31/2018
Ē	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2017	02/23/2018	04/09/2018
M	WI MANIFEST	Manifest Information	Department of Natural Resources	12/31/2017	06/15/2018	07/09/2018
SN	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
SN	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
SU	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
SU		Sensitive Receptor: Public Schools	National Center for Education Statistics			
SU	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
Ā	Daycare Centers	Sensitive Receptor: Child Care Facilities	Department of Human Services			
SN	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
SU	IWN	National Wetlands Inventory	U.S. Fish and Wildlife Service			
₹	State Wetlands	National Wetland Inventory of Iowa	Department of Natural Resources			
SU			U.S. Geological Survey			
SU	-		PennWell Corporation			
S	Electric Power Transmission Line Data	ata	Pennwell Corporation			

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St Acronym Full Name

Government Agency

Gov Date Arvl. Date Active Date

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WATERLOO BIG ROCK AASF 2245 WEST BIG ROCK ROAD WATERLOO, IA 50703

TARGET PROPERTY COORDINATES

Latitude (North):	42.554788 - 42° 33' 17.24"
Longitude (West):	92.383858 - 92° 23' 1.89"
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	550583.2
UTM Y (Meters):	4711346.5
Elevation:	876 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5944548 CEDAR FALLS, IA
Version Date:	2013
East Map:	5944028 WATERLOO NORTH, IA
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

- Groundwater flow direction, and
 Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
19013C0167F	FEMA FIRM Flood data
Additional Panels in search area:	FEMA Source Type
19013C0180F 19013C0159F 19013C0186F	FEMA FIRM Flood data FEMA FIRM Flood data FEMA FIRM Flood data
NATIONAL WETLAND INVENTORY	NWI Electronic
NWI Quad at Target Property CEDAR FALLS	Data Coverage YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID Not Reported LOCATION FROM TP GENERAL DIRECTION GROUNDWATER FLOW

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

Era:	Paleozoic	Category:	Stratified Sequence
System:	Devonian		
Series:	Middle Devonian		
Code:	D2 (decoded above as Era, System & 3	Series)	

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5454370.2s



SITE NAME:	Waterloo Big Rock AASF
ADDRESS:	2245 West Big Rock Road
LAT/LONG:	Waterloo IA 50703 42.554788 / 92.383858

CLIENT: CONTACT: INQUIRY #: DATE:	AECOM Brittany Kirchmann 5454370.2s October 16, 2018 9:03 am
Copyrig	ht © 2018 EDR, Inc. © 2015 TomTom Rel. 2015.

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained
Hydric Status: Unknown	
Corrosion Potential - Uncoated Steel:	Low
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

	Boundary Classification			fication	Saturated hydraulic		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
			Soil Layer	^r Information			
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	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 2	
Soil Component Name:	Urban land
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat poorly drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 30 inches
No Layer Information available.	

Soil Map ID: 3	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: >0 inches

Depth to Watertable Min: >0 inches

			Soil Laye	r Information			
	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity So	Soil Reaction (pH)
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 4

Soil Component Name:	Flagler
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat excessively drained
Hydric Status: Unknown	
Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

	Soil Layer Information						
	Boundary		Boundary		Classification		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	hydraulic conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	7 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
2	7 inches	14 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
3	14 inches	22 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1

	Boundary		Classi	fication	Saturated hydraulic		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
4	22 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
5	33 inches	64 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1

Soil Map ID: 5	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained
Hydric Status: Not hydric	
Corrosion Potential - Uncoated Steel:	Low
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

			Soil Laye	r Information			
	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 6	
Soil Component Name:	Sparta
Soil Surface Texture:	loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: >0 inches

Depth to Watertable Min: >0 inches

			Soil Layer	^r Information			
	Boundary			Classi	ication	Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	· · · · ·	Soil Reaction (pH)
1	0 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
2	11 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
3	14 inches	33 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1
4	33 inches	59 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.11 Min: 42.33	Max: 6 Min: 5.1

Soil Map ID: 7

Soil Component Name:	Flagler
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat excessively drained
Hydric Status: Not hydric	
Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

Soil Layer Information								
Boundary		Classification		Saturated hydraulic				
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	vity Soil Reaction	
1	0 inches	7 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1	
2	7 inches	14 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1	
3	14 inches	22 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1	

	Boundary			Classification		Saturated hydraulic	
Layer	Upper Lower		Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
4	22 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1
5	33 inches	64 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 705 Min: 141.11	Max: 7.3 Min: 5.1

Soil Map ID: 8	
Soil Component Name:	Lawler
Soil Surface Texture:	loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat poorly drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	High
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 30 inches

	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)
1	7 inches	14 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
2	20 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
3	37 inches	59 inches	very gravelly loamy sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
4	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
5	14 inches	20 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1
6	31 inches	37 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6.5 Min: 5.1

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS Federal FRDS PWS	1.000 Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
11	USGS40000319678	1/2 - 1 Mile NW
19	USGS40000319606	1/2 - 1 Mile WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

		LOCATION
MAP ID	WELL ID	FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	IAPU40000201303	1/8 - 1/4 Mile East
2	IAPU40000201300	1/4 - 1/2 Mile NE
A3	IAPU40000295263	1/2 - 1 Mile SE
A4	IAPR40000083898	1/2 - 1 Mile SE
5	IAPU4000037647	1/2 - 1 Mile NE
6	IAPU40000037450	1/2 - 1 Mile WSW
B7	IAPU40000073131	1/2 - 1 Mile SW
8	IAPU4000037393	1/2 - 1 Mile NW
B9	IAPU40000186776	1/2 - 1 Mile SW
B10	IAPW40000091594	1/2 - 1 Mile SW
12	IAPU4000037427	1/2 - 1 Mile WSW
13	IAPU40000073204	1/2 - 1 Mile East
14	IAPU4000073155	1/2 - 1 Mile SSW
C15	IAPU40000186779	1/2 - 1 Mile SW
C16	IAPW40000011005	1/2 - 1 Mile SW
C17	IAPU40000186778	1/2 - 1 Mile SW
C18	IAPW40000030505	1/2 - 1 Mile SW
20	IAPU40000324156	1/2 - 1 Mile NE
D21	IAPU40000295217	1/2 - 1 Mile SSW
D22	IAPU4000073138	1/2 - 1 Mile SSW
D23	IAPR40000073495	1/2 - 1 Mile SSW
24	IAPU40000037425	1/2 - 1 Mile SW
25	IAPU40000073134	1/2 - 1 Mile SSW
26	IAPU40000201287	1/2 - 1 Mile NNE

STATE DATABASE WELL INFORMATION

MAP ID

WELL ID IAPU40000211048 LOCATION FROM TP 1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 5454370.2s



ADDRESS:	Waterloo Big Rock AASF 2245 West Big Rock Road Waterloo IA 50703 42.554788 / 92.383858	CONTACT: INQUIRY #:	AECOM Brittany Kirchmann 5454370.2s October 16, 2018 9:02 am
		Conver	abt © 2018 EDR Inc. © 2015 TomTom Ref. 2015

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
1 East <u>Click here for full text details</u> 1/8 - 1/4 Mile Lower	IA WELLS	IAPU40000201303
2 NE <u>Click here for full text details</u> 1/4 - 1/2 Mile Higher	IA WELLS	IAPU40000201300
A3 SE <u>Click here for full text details</u> 1/2 - 1 Mile Lower	IA WELLS	IAPU40000295263
A4 SE <u>Click here for full text details</u> 1/2 - 1 Mile Lower	IA WELLS	IAPR40000083898
5 NE <u>Click here for full text details</u> 1/2 - 1 Mile Higher	IA WELLS	IAPU4000037647
6 WSW <u>Click here for full text details</u> 1/2 - 1 Mile Lower	IA WELLS	IAPU4000037450
B7 SW <u>Click here for full text details</u> 1/2 - 1 Mile Lower	IA WELLS	IAPU40000073131
8 NW <u>Click here for full text details</u> 1/2 - 1 Mile Lower	IA WELLS	IAPU40000037393
B9 SW <u>Click here for full text details</u> 1/2 - 1 Mile Lower	IA WELLS	IAPU40000186776 Page: 1

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
B10 SW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPW4000091594
11 NW 1/2 - 1 Mile Lower	Click here for full text details	FED USGS	USGS40000319678
12 WSW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000037427
13 East 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000073204
14 SSW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000073155
C15 SW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000186779
C16 SW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPW40000011005
C17 SW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000186778
C18 SW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPW40000030505 Page: 2

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
19 WSW 1/2 - 1 Mile Lower	Click here for full text details	FED USGS	USGS40000319606
20 NE 1/2 - 1 Mile Higher	Click here for full text details	IA WELLS	IAPU40000324156
D21 SSW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000295217
D22 SSW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000073138
D23 SSW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPR40000073495
24 SW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000037425
25 SSW 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000073134
26 NNE 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000201287
27 East 1/2 - 1 Mile Lower	Click here for full text details	IA WELLS	IAPU40000211048 Page: 3

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: IA Radon

Radon Test Results

Zipcode	Num Tests	Minimum	Maximum	Average
50703	46	0.5	19.6	4.8

Federal EPA Radon Zone for BLACK HAWK County: 1

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L. : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 50703

Number of sites tested: 8

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	4.225 pCi/L	50%	50%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA Telephone: 877-336-2627 Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: National Wetland Inventory of Iowa Source: Department of Natural Resources Telephone: 319-335-1575

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS) The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS) Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

All Known Water Wells in the State of Iowa

- Source: Department of Natural Resources
- Telephone: 319-335-1353
- Well types included are agricultural drainage, permitted private, public, registered abandoned, SDWIS public, water use permit sites, wells registered for testing.

Agricultural Drainage Wells

Source: Department of Natural Resources

Telephone: 515-281-5029

Agricultural drainage wells are required to be registered both with the Iowa Department of Natural Resources as a part of the 1987 Groundwater Protection Act, and with the U.S. Environmental Protection Agency as a part of the Underground Injection Control Program.

Private Well Tracking System Wells

Source: Department of Natural Resources Telephone: 319-335-1353

Water Use Permits

Source: Department of Natural Resources Telephone: 515-725-0336 Wells under Water Use permits. A water use permit is required of any person or entity that withdraws or diverts at least 25,000 gallons of water in a 24-hour period during any calendar year.

Private Wells Tested

Source: Department of Natural Resources Telephone: 515-335-1353 This is a point coverage for private wells which have been tested for bacteria and nitrate contamination under the Grants to Counties program.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database Source: Department of Natural Resources Oil and gas well locations.

RADON

State Database: IA Radon Source: Department of Public Health Telephone: 515-281-4340 Radon Test Results

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information Source: USGS Telephone: 703-356-4020 The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones Source: EPA Telephone: 703-356-4020 Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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Appendix B Preliminary Assessment Documentation

Appendix B.1 Interview Records

Interviewee: Mark Boevers	Can your name/role be used in the P.	A Report? $\underline{\mathbf{Y}}$ or N		
Title: First Sergeant	Can you recommend anyone we can	interview?		
hone Number: 119-231-1133 Y or N Carry Walter (1970s-2001)				
Email: mark.a.boevers.mil@mail.mil				
Roles or activities with the Facility/Years wor	king at the Facility:			
First Sergeant Hoever has been with the facility since 1999. The facility was built in 1971 or 1972.				
PFAS Use: Identify accidental/intentional release locations, time frame of release, frequency of releases, storage container size (maintenance, fire training, firefighting, buildings with suppression systems (as builts), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?				
Mr. Character indicated TriMax and Halotron fire		Known Uses		
Waterloo AASF. Halotron fire extinguishers are extinguishers. Currently, the facility has five Hal		Use		
two TriMax-30 fire extinguishers on the ramp im		Procurement		
one TriMax-60 fire extinguisher in the motor pool area. Bulk AFFF is used at the facility to refill the TriMax fire extinguishers. AFFF is procured through USPFO and is returned to Camp Dodge if not used. During the site visit, 4 5-gallon containers of 6% AFFF were observed at the Waterloo AASF. The facility provided a SDS for the				
on the ramp at Waterloo AASF during fire exting		Inventory, Off-Spec		
occurred near the middle of the ramp, south of the time of this release, the ramp had concrete pads s	Containment			
ramp was expanded from 2007-2008 during which time, the cracked asphalt was replaced by concrete. In addition, detention ponds at the south, west, and southwest ends of the ramp were added. The second potential PFAS release occurred on the				
Mr. Govern also indicated that a fire truck was p arrived in 1999. The truck was turned back in to		Dining Facilities		
because of several issues (e.g., broken or worn pa	arts). To Mr. Boevers knowledge,	Vehicle Washing		
the truck was not used at the facility from 1999 uthe site visit, Mr. Hoevers contacted Mr. Conversion	intil the time it was returned. During (retired) via telephone. Mr.	Ramp Washing		
Waiter indicated that annual training was condu Airport using the Waterloo AASF fire truck at th	cted with the Waterloo Regional	Fuel Spill Washing and Fueling Stations		
Dunkerton Road on Waterloo Regional Airport p available regarding the amount or type of AFFF		Chrome Plating or Waterproofing		

washing activities occurred. Currently, the City of Waterloo and the Waterloo	
Airport provide fire-fighting services for the Waterloo AASF. To Mr. Boevers	
knowledge, neither the City of Waterloo nor the Waterloo airport has ever responded	
to an emergency event at or near the Waterloo AASF. The closest emergency event	
was a plane crash 20-25 miles away from the facility.	
According to Mr. Wadser the Waterloo AASF was served by a septic system until the 1994.	

Appendix B.2 Visual Site Inspection Checklists

Visual Site Inspection Checklist

Names(s) of people performing VSI: <u>Indy Harrington</u> Jennifer Zorinsky					
Recorded by:					
ARNG Contact: Curtis Madsen					
D	Date and Time: 8/22/2018; 1300				
Method of visit (walking, driv	ing, adjacent): walking				
Source/Release Information					
<u>Site Name / Area Name / Unique ID:</u>	Waterloo Army Aviation Support Facility (AASF)				
<u>Site / Area Acreage:</u>	26 acres				
Historic Site Use (Brief Description):	Waterloo AASF was built in 1971 or 1972 and is located on State of Iowa property.				
Current Site Use (Brief Description):	Waterloo AASF operations				
Physical barriers or access restrictions: Access to the area is restricted to AASF personnel.					
1. Was PFAS used (or spilled) at the site/area? <u>Y</u> / N 1a. If yes, document how PFAS was used and usage time (e.g., fire fighting training 2001 to 2014): Two potential PFAS release events occurred on the ramp during fire extinguisher training.					
2. Has usage been documented? Y / N 2a. If yes, keep a record (place electronic files on a disk): Records are not available. Potential releases were recalled by First Sergeant work Encourses					
3. What types of businesses are located near the site? Industrial / Commercial / Plating / Waterproofing / Residential 3a. Indicate what businesses are located near the site Residences and farm land to the north and east; Waterloo Regional Airport to the west and south					
4. Is this site located at an airport/flightline? <u>Y</u> / N 4a. If yes, provide a description of the airport/flightline tenants: Waterloo Regional Airport					

Visual Survey Inspection Log

Other Significant Sit	te Features:
1. Does the facility ha	ve a fire suppression system? Y / \underline{N}
	1a. If yes, indicate which type of AFFF has been used:
	N/A
	1b. If yes, describe maintenance schedule/leaks:
	N/A
	1c. If yes, how often is the AFFF replaced:
	N/A
	1d. If yes, does the facility have floor drains and where do they lead? Can we obtain an as built drawing?
	The first yes, does the facility have noor drains and where do they read? Can we obtain an as built drawing:
	N/A
Transport / Pathw	vav Information
Migration Potential:	
	hage flow off installation? Y / N
1. Doos site, area aran	1a. If so, note observation and location:
2. Is there channelized	I flow within the site/area? Y / \underline{N}
	2a. If so, please note observation and location:
3. Are monitoring or c	drinking water wells located near the site? $\underline{Y} / \mathbf{N}$
	3a. If so, please note the location:
	Municipal/Commercial Public Water Supply well less than one miles south of the facility
1 Are curfees water is	ntakes located near the site? Y / N
4. Are surface water in	
	4a. If so, please note the location:
5. Can wind dispersio	n information be obtained? \underline{Y} / N
	5a. If so, please note and observe the location.
	Waterloo Regional Airport
6 Does an adjacent no	on-ARNG PFAS source exist? \underline{Y} / N
o. Does un aujacent n	6a. If so, please note the source and location.
	Waterloo Regional Airport, off-facility FTA
	6b. Will off-site reconnaissance be conducted? Y / \underline{N}

Visual Survey Inspection Log

Significant Topogra	phical Features:				
1. Has the infrastructu	ure changed at the site/area? $\underline{Y} / \mathbf{N}$				
1a. If so, please describe change (ex. Structures no longer exist):					
Septic system was replaced in the early 2000s; asphalt on ramp was replaced with concrete in 2007-2008.					
2 Is the site/area way	etated? $\underline{\mathbf{Y}} / \mathbf{N}$				
2. Is the site/area vege					
	2a. If not vegetated, briefly describe the site/area composition: vegetated except for ramp and parking areas				
	regented encopy for famp and parking areas				
3. Does the site or are	ea exhibit evidence of erosion? Y / \underline{N}				
	3a. If yes, describe the location and extent of the erosion:				
4. Does the site/area	exhibit any areas of ponding or standing water?	<u>Y</u> /N			
	4a. If yes, describe the location and extent of the ponding:				
	detention ponds to the west, southwest, and south of the ramp				
	• • • • • • • •				
Receptor Informa	ation				
1. Is access to the site					
	1a. If so, please note to what extent:				
	The facility has controlled access				
	Site Western / Construction Western	/ T			
2. Who can access the		/ <u>Trespassers</u> / Residential / Recreational			
2. Who can access the	2a. Circle all that apply, note any not covered above:				
	Zu. Chele an that apply, note any not covered above.				
3. Are residential area	as located near the site?	<u>Y</u> /N			
	3a. If so, please note the location/distance:				
	0.25 mile to the east				
4. Are any schools/da	y care centers located near the site?	<u>Y</u> /N			
	4a. If so, please note the location/distance/type:				
	school and daycare approximately 2.5 miles southwest of facility				
_					
5. Are any wetlands lo		$\underline{\mathbf{Y}}$ / N			
	5a. If so, please note the location/distance/type:				
	freshwater pond habitat approximately 0.75 miles to the souther freshwater emergent wetland habitat 0.75 miles to the northeast				
	neshwater emergent wettand nabitat 0.75 miles to the holtileast				

Additional Notes

Photographic Log

Photo ID/Name Date & Location		Photograph Description	
Photograph No. 1	8/22/2018 Waterloo AASF	Looking south. Ramp	
Photograph No. 2	8/22/2018 Waterloo AASF	Looking southwest. Southwest detention pond.	
Photograph No. 3	8/22/2018 Waterloo AASF	TriMax-60 AFFF fire extinguisher.	
Photograph No. 4	8/22/2018 Waterloo AASF	Halotron non-AFFF fire extinguisher.	
Photograph No. 5	8/22/2018 Waterloo AASF	5-gallon buckets of 6% AFFF.	
	6/22/2010 watchoo AASI		

Appendix B.3 Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Waterloo Army Aviation Support Facility (AASF)

Why has this location been identified as a site?

Interview indicated potential PFAS release during fire extinguisher training.

Are there any other activities nearby that could also impact this location?

Yes – adjacent Waterloo Regional Airport

Training Events

Have any training events with AFFF occurred at this site? AFFF fire extinguishers emptied on ramp

If so, how often? One release between 2001 and 2003; one release between 2011 and 2013

How much material was used? Is it documented? Unknown, not documented

Identify Potential Pathways: Do we have enough information to fully understand over land surface water flow, groundwater flow, and geological formations on and around the facility? Any direct pathways to larger water bodies?

Surface Water:

Surface water flow direction? South and southwest

Average rainfall? 35 inches

Any flooding during rainy season? No

Direct or indirect pathway to ditches? No

Direct or indirect pathway to larger bodies of water? No

Does surface water pond any place on site? Detention ponds to the west, southwest, and south of ramp

Any impoundment areas or retention ponds? Yes

Any NPDES location points near the site? Yes

How does surface water drain on and around the flight line? Drainages have been diverted around the AASF and Waterloo Regional Airport

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? South

Depth to groundwater? Approximately 5 to 15 feet

Uses (agricultural, drinking water, irrigation)? Unknown

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? *Yes, municipal/commercial public water supply well located less than one mile south of the facility*

Is groundwater used for drinking water? No

Are there drinking water supply wells on installation? No

Do they serve off-post populations? No

Are there off-post drinking water wells downgradient? Yes

Waste Water Treatment Plant:

Has the installation ever had a WWTP, past or present? No

If so, do we understand the process and which water is/was treated at the plant? *N/A*

Do we understand the fate of sludge waste? *N/A*

Is surface water from potential contaminated sites treated? *N/A*

Equipment Rinse Water

1. Is firefighting equipment washed? Where does the rinse water go? *No – fire fighting services are provided by the City of Waterloo and the Waterloo Regional Airport.*

2. Are nozzles tested? How often are nozzles tested? Where are nozzles tested? Are nozzles cleaned after use? Where does the rinse water flow after cleaning nozzles? N/A

3. Other? *N/A*

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker: Yes

Construction Worker: Yes

Recreational User: No

Residential: Yes

Child: No

Ecological: Yes

Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)? *Residences and farm land to the north and east; Waterloo Regional Airport to the west and south*

Documentation

Ask for Engineering drawings (if applicable).

Has there been a reconstruction or changes to the drainage system? When did that occur? *Septic system was replaced in the early 2000s; asphalt on ramp was replaced with concrete in 2007-2008.*

Appendix C Photographic Log

Army National Guard, Preliminary	Waterloo AASF	Waterloo, Iowa
Assessment for PFAS		··· att1100, 101/a
Photograph No. 1		
Photograph No. 1	100 m	the contract of the contract o
Description:		
Looking south. Ramp.	4 - 28 - 44 - 18 - 18 - 18 - 18 - 18 - 18 - 1	1
	and the second	h. m.
		iller Franklitzar
		- And antime
		P
Photograph No. 2		
Description:	in the second second	
Looking southwest. Southwest		
detention pond.		and the second
and the second sec		
	and the second second	
State and	- mill	
	SPORT CON	

APPENDIX C – Photographic Log				
Army National Guard, Prelimin Assessment for PFAS		Waterloo, Iowa		
Photograph No. 3				
Description:				
TriMax-60 AFFF fire extinguisher.				
Photograph No. 4		-		
Description:				
Halotron non-AFFF fire extinguisher.				

APPENDIX C – Photographic Log				
Army National Guard, Pre Assessment for PFA	eliminary AS	Waterloo AASF	Waterloo, Iowa	
Photograph No. 5			us.	
Description:				
5-gallon buckets of 6% AFFF.				