THIRD FIVE-YEAR REVIEW REPORT

JOHN DEERE OTTUMWA WORKS
CITY OF OTTUMWA
WAPELLO COUNTY, IA

March 2008

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
KANSAS CITY, KANSAS

Approved by:

Craig W. Smith, Jr.
Cecil Tapp

Date:

3/19/08

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List of Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
FS	Feasibility Study
IDNR	Iowa Department of Natural Resources
IDOT	Iowa Department of Transportation
JDOW	John Deere Ottumwa Works
MCL	Maximum Contaminant Level
MTBE	Methyl tert-Butyl Ether
NCP	National Contingency Plan
RA	Remedial Action
RAO	Remedial Action Objective
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation / Feasibility Study
ROD	Record of Decision
SDWA	Safe Drinking Water Act
SI	Site Investigation
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

Executive Summary

The selected remedy for the John Deere Ottumwa Works (JDOW) site includes three components: deed restrictions; continued maintenance of the site perimeter fence; and groundwater and surface water monitoring. On August 28, 1992, the United States Environmental Protection Agency (USEPA) approved a Preliminary Closeout Report for the site. The Preliminary Closeout Report included a waiver for the pre-final site inspection required by the Consent Decree.

The USEPA recognized that all construction necessary for completion of the remedial action (RA) was completed on September 30, 1997, when the Certification of Completion of the RA was approved. The record of decision (ROD) specified that groundwater data will be evaluated during the Five-Year Review. Furthermore, the ROD stated that there are no federal or state applicable or relevant and appropriate requirements (ARARs) for the no-action alternative. Compliance with federal and state ARARs is not required as remedial action is not necessary to protect human health and the environment. The ROD determined that no action was appropriate for groundwater, surface water, and sediment because contamination present in those media do not pose a significant threat to human health.

During the remedial investigation (RI) fill/soil sampling indicated detectable concentrations of acetone, methylene chloride, toluene, tetrachloroethene, xylenes, polynuclear aromatic hydrocarbons, aluminum, arsenic, beryllium, copper, lead, and zinc. Groundwater was impacted by the remaining waste, with arsenic, barium, cadmium, chromium, and/or lead above the USEPA Safe Drinking Water Act (SDWA) and/or Iowa Department of Natural Resources (IDNR) groundwater standards. Ten of the fourteen original monitoring wells were abandoned according to Iowa Administrative Code 567-39.8.

With respect to implementation of the RA in accordance with the Consent Decree, ROD, and RA Work Plan, no areas of noncompliance were noted during the third Five-Year Statutory Review. The RA is believed to be protective of human health and the environment regarding engineering and institutional controls. These conditions have not changed even though the maximum contaminant levels (MCLs) for four contaminants monitored during the RA have been revised. Enactment in 2005 of the Iowa Uniform Environmental Covenants Act, Iowa Code chapter 455I, presents an opportunity to supplement the existing deed restrictions recorded under the terms of the Consent Decree. Environmental Covenants pursuant to the Act would enhance the future enforceability and permanence of the existing institutional controls.

The contaminated fill/soil remaining on-site continues to be a potential source of groundwater contamination. Thus, the land use and public access restrictions must remain in affect. JDOW staff should continue fence inspection and maintenance activities as required under the Consent Decree, ROD, and RA Work Plan. It will be necessary to continue the Five-Year Reviews, with the fourth Five-Year Review scheduled for March

2013. The four remaining monitoring wells should be sampled for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), arsenic and lead using a USEPA-approved low-flow groundwater sampling technique. Well PZ-2 should be replaced as it likely to be submerged at times during the year at its present location.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: John Deere Ottumwa Works		
EPA ID: IAD005291182		
Region: 7	**State:** IA	**City/County:** Ottumwa / Wapello
SITE STATUS		
NPL status: Deleted from the Final NPL on 1/22/2001		
Remediation status: Complete		
Multiple OUs?* NO	**Construction completion date:** 09/ 30/ 1997	
Has site been put into reuse? YES		
REVIEW STATUS		
Lead agency: U.S. EPA		
Author name: Bill Gresham		
Author title: Remedial Project Manager	**Author affiliation:** U.S. EPA, Region 7	
Review period:** 04/ 10/ 2003 to 3 / 30 / 2008		
Date(s) of site inspection: 11 / 27 / 2007		
Type of review:	Five Year Review of Non-NPL Remedial Action Site	
Review number:	3 (third)	
Triggering action:	Previous Five-Year Review Report	
Triggering action date *(from WasteLAN)*: 3 / 30 / 2003		
Due date *(five years after triggering action date)*: 3 / 30 / 2008		

* ["OU" refers to operable unit.]

Issues:

The concentration of total arsenic at piezometer PZ-2 was recently detected to be approximately 3.5 times above its SDWA MCL. Historically, PZ-2 had lead concentrations ranging from approximately 3 times to 6 times the MCL and a cadmium concentration of approximately 1.7 times the MCL. Groundwater analytical results from the other three sampling locations were below the SDWA MCLs.

Five-Year Review Summary Form, cont'd.

Recommendations and Follow-up Actions:

JDOW should continue using an USEPA-approved low-flow technique in future Five-Year Review groundwater sampling events.

The monitoring wells and piezometer well boxes covers should be opened at least yearly in an attempt to allow the ease in opening the covers for the 5-year review sampling. In the event that oxidization is present on the well box covers and/or the rim of well box, pure silicone (gel form) should be applied to the rim of the cover to allow for ease in opening.

It is recommended that well PZ-2 be moved from its present location, which is in a ditch between Highway 34/63 and the JDOW facility. At its present location, surface runoff is likely to submerge the well casing. The new well should be installed at least six months prior to the next sampling event and should be constructed at a similar completion depth as PZ-2. Subsequently, well PZ-2 should be decommissioned according to Iowa Administrative Code (IAC) 567-39.8.

The fourth Five-Year Review is due on March 30, 2013. It is recommended that JDOW continue security fence inspection and maintenance activities as required under the CD, ROD, and RA Work Plan.

Protectiveness Statement(s):

All immediate threats at the site have been addressed, and the remedy is protective of human health and the environment as demonstrated by the analytical results of the groundwater sampling during the post-RA monitoring.

Long-Term Protectiveness:

The RA is believed to be protective of human health and the environment regarding engineering and institutional controls. The site is fenced and well maintained. In addition, security guards are posted at all entrances. All visitors were required to state reason for being onsite, present photo identification, sign in and out, provide vehicle information, display a visitor's pass, and comply with the site safety requirements, including wearing the appropriate personal protective equipment for the task. The on-site soils are isolated from the human population with asphalt and concrete pavement, compacted gravel, or clean top soil with a vegetated mat. The remedy should continue in affect as long as the contaminated fill/soil remains onsite.

Other Comments:

The ROD specified that the groundwater data will be evaluated during the Five-Year Review: Furthermore, the ROD stated that there are no federal or state ARARs for the no-action alternative. Compliance with federal and state ARARs is not required as no remedial action is necessary to protect human health and the environment. The ROD

determined that no action was appropriate for groundwater, surface water, and sediment because contamination present in these media do not pose a significant threat to human health. The City of Ottumwa provides approximately 25,000 residents with water, and has an ordinance prohibiting the installation and use of drinking water wells. The source of the city-supplied water is from the Des Monies River where the intake is located approximately 4,000 feet upriver from the JDOW landfill. A secondary source of water for the city is from Black Lake. It is located approximately 500 feet downgradient of the JDOW landfill. Approximately 700 people located within three miles of the JDOW site obtain their drinking water from private wells.

With respect to implementation of the RA in accordance with the CD, ROD, and the RA Work Plan, no areas of noncompliance were noted during this third Five-Year Statutory Review. The RA is believed to be protective of human health and the environment regarding engineering and institutional controls. These conditions have not changed even though the maximum contaminant levels (MCLs) for four contaminants monitored during the RA have been revised. Enactment in 2005 of the Iowa Uniform Environmental Covenants Act, Iowa Code chapter 455I, presents an opportunity to supplement the existing deed restrictions recorded under the terms of the Consent Decree. Environmental Covenants pursuant to the Act would enhance the future enforceability and permanence of the existing institutional controls.

THIRD FIVE-YEAR REVIEW REPORT

John Deere Ottumwa Works

1.0 INTRODUCTION

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended, and Section 300.430(f)(4)(ii) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) require that periodic (at least once every five years) reviews be conducted at sites where hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use or unrestricted exposure following the completion of remedial action.

This report documents the third Five-Year Review of the John Deere Ottumwa Works (JDOW) site in Ottumwa, Iowa. The review was conducted in November, 2007 by the U.S. Environmental Protection Agency (USEPA) Region VII in conjunction with JDOW and Hyde Environmental, Inc. The third Five-Year Review was conducted to determine if the Remedial Action (RA) taken at the site remains protective of human health and the environment. CERCLA §121 states:

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

The Agency interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii):

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

RA activities at JDOW were initiated on April 13, 1993. The first Five-Year Review was completed by CDM Federal Programs Corporation on March 30, 1998. The second Five-Year Review was completed by Howard R. Green Company on April 10, 2003. The third Five-Year Review included a review of site documents to determine if the RA was conducted in accordance with the USEPA Record of Decision (ROD) and the Remedial Design/Remedial Action (RD/RA) Consent Decree for the site. All reviewed documents were supplied by John Deere and had previously been submitted to the USEPA Region VII office in Kansas City, Kansas.

2.0 SITE CHRONOLOGY

Important site events and relevant dates in the history of the JDOW site are listed below:

	Date Started	Date Completed
DISCOVERY	8/1/1980	
PRELIMINARY ASSESSMENT	7/1/1983	7/1/1983
SITE INSPECTION	7/1/1983	7/1/1983
HRS PACKAGE		7/12/1985
NON-NPL PRP SEARCH	2/15/1986	5/15/1986
PROPOSAL TO NPL		6/24/1988
PRE-REM/REM AERIAL SURVEY	3/14/1989	6/16/1989
REMOVAL ASSESSMENT	8/21/1989	8/24/1989
ADMIN ORDER ON CONSENT		9/20/1989
NEGOTIATION (GENERIC)	1/27/1989	9/20/1989
FINAL LISTING ON NPL		2/21/1990
HUMAN HEALTH RISK ASSESSMENT		7/15/1991
ECOLOGICAL RISK ASSESSMENT		7/15/1991
PRP RI/FS	9/20/1989	9/23/1991
RECORD OF DECISION		9/23/1991
REMOVAL ASSESSMENT	3/28/1991	10/4/1991
HEALTH ASSESSMENT	2/15/1991	12/30/1991
NEGOTIATION (GENERIC)	12/23/1991	6/4/1992
LODGED BY DOJ		8/11/1992
CONSENT DECREE	6/4/1992	9/25/1992
REMOVAL ASSESSMENT	4/13/1993	4/27/1993
FIVE YEAR REMEDY ASSESSMENT	6/15/1997	3/30/1998
DELETION FROM NPL	11/22/2000	1/22/2001
SECOND FIVE YEAR REMEDY ASSESSMENT	1/31/2003	5/9/2003
THIRD FIVE YEAR REMEDY ASSESSMENT		

3.0 BACKGROUND

3.1 Physical Characteristics

The JDOW Site is located in the City of Ottumwa, Wapello County, Iowa (Figure 1). The site is located in the east half of the southeast quarter of Section 25, Township 72 North, Range 14 West and the west half of the southwest quarter of Section 30, and the northwest of Section 31, Township 72 North, Range 13 West, Wapello County, Iowa. The facility occupies approximately 105 acres and is bounded by the Wabash Railroad on the southwest, U.S. Highways 34 & 63 on the northeast and southwest, and Vine Street on the northwest.

The site is located within the Des Moines River floodplain and is approximately 1,000 feet southwest of the river. Flood water periodically inundated the site until 1955, when a series of dikes were constructed to control river levels. The alluvial aquifer in the vicinity of the site is classified as IIB, a potential source of drinking water. Topography of the site is essentially flat. A swampy area is located across the Des Moines River from the site and is unaffected by site activities. Approximately 150 feet east of the northern portion of the site is Black Lake, a secondary source of drinking water for the City of Ottumwa. Black Lake is used only intermittently when the primary source, the Des Moines River, cannot provide all of the municipal water supply needs for the city. Total annual withdrawal from Black Lake by the city is normally 15 to 30 million gallons.

Immediately underlying the site are approximately 13 to 26 feet of alluvial deposits consisting primarily of unconsolidated silty clay, silty sand, sand, and gravel. Groundwater in the alluvial aquifer flows in a generally east-northeasterly direction toward the Des Moines River. Underlying the alluvium is a shale unit approximately 100 to 150 feet in thickness. The shale unit is not a major source of groundwater in the area because of its impermeable nature.

3.2 Land and Resource Use

The site has been used for manufacturing of farm implements since 1900. A former disposal area of approximately 20 acres exists beneath the site buildings, equipment storage areas and raw material storage areas. Approximately 90 percent of the disposal area is currently covered with building or asphalt and/or concrete pavement. Waste material was buried to depths of 4 to 10 feet and consisted of amber to black-colored friable sand and vitrified greenish-yellow material with pieces of wood and coal, metal fragments, and paint chips.

Institutional controls placed on the site as part of the RA and ROD dictate that the site will remain zoned for non-residential land use. Interim deed restrictions were filed in April 1992 for the JDOW property and the right-of-way for U.S. Highway 34/63, which is owned by the State of Iowa. Both JDOW and the IDOT filed their respective deed restrictions. The

final deed restrictions limit access and land use by requiring continued maintenance of the perimeter fence and by limiting future site use. Future use of the site was restricted to prevent residential development of the property.

Engineering controls implemented as part of the RA and ROD included the entire site being enclosed by a six-foot high chain link fence topped with barbed wire. The perimeter fence location is illustrated on Figure 2. Perimeter fence inspections have been completed by JDOW personnel on a monthly basis since June 1993, when the RA Work Plan was approved. The routine fence inspections include observing the condition of the barbed wire, fence poles, and chain link material. In addition, the operation and security of the fence gates and the proximity of the fence bottom are routinely observed. Monthly reports are completed and provided to JDOW management. Breaches in the fence are repaired by JDOW. The perimeter fence and gates were intact when sampling activities were conducted in November, 2007. Security guards were posted at entrances, and visitors were required to state their reason for being on site, present photo identification, sign in and out, provide vehicle information, display a visitor's pass, and comply with the site safety requirements.

Groundwater beneath the site is not used by JDOW or the community. Water from Black Lake is used as a secondary source of drinking water for the City of Ottumwa. Black Lake is downgradient from JDOW, but site contaminants have not been detected in samples collected since 1993.

3.3 History of Contamination

From 1911 to 1973, JDOW disposed of facility-generated wastes on-site by landfilling. Wastes buried on-site included solvents, paint sludge, heat-treating cyanide, heat treating sludge, petroleum distillates, and foundry sand. After emplacement, some of the waste material was burned on a regular basis.

In 1965, JDOW purchased what is now the southwestern portion of the site. Prior to JDOW acquiring this additional property, it had been used as a salvage yard. An oily coating existed on the ground surface of parts of this parcel at the time of purchase by JDOW. A single building remaining from the salvage operation is used by JDOW for storage.

JDOW granted a right-of-way easement for a portion of the site to the Iowa Department of Transportation (IDOT) for construction of U.S. Highway 34 & 63. Based on historical aerial photos and soil borings completed during the Remedial Investigation (RI), it appears that a portion of the area which contains waste material extends onto what is now the IDOT right-of-way. This area encompasses approximately 8.3 acres.

3.4 Initial Response

In May 1985, the USEPA conducted a Site Investigation (SI). Analysis of soil and sediment samples collected during the investigation showed elevated levels of metals and

organics in samples collected in the vicinity of the drum and hazardous waste storage area and from the drainage ditch adjacent to the JDOW property. Based upon SI data, the site was evaluated for possible inclusion on the National Priorities List (NPL) by completing a Hazard Ranking Scoring (HRS). An HRS score of 42.32 was assigned to the site, and a score of 28.5 was sufficient to place the site on the NPL. The USEPA proposed the site for listing on June 24, 1988 and it became final on the NPL on February 21, 1990.

On September 20, 1989, the USEPA and JDOW entered into an Administrative Order on Consent that required JDOW to perform an RI to determine the nature and extent of any contamination. In addition, the order required a Feasibility Study (FS) to evaluate appropriate measures to address contaminants identified during the RI. Following work plan approval, the field investigation was completed in November 1990. The final RI and FS reports were completed in July 1991 and approved by the USEPA in consultation with IDNR (USEPA 1991b). The USEPA issued a Record of Decision (ROD) on September 23, 1991. A remedial design / remedial action (RD/RA) Consent Decree, which was negotiated by the USEPA, JDOW, and the State of Iowa, lodged by the Department of Justice, and entered on September 25, 1992, specified the site cleanup actions that were required to be completed by JDOW initiated the required RA at the site in August 1992 and completed the RA in November 1995. JDOW submitted a letter certifying completion of the RA on September 30, 1997. The response actions are summarized in Section 4.0 of this report.

3.5 Basis for Taking Action

During the RI, soil and fill samples were collected from four previously identified areas known as landfill 1, landfill 2, landfill 3, and the South Scar Area, as well as two areas of concern known as the Hazardous Waste/Drum Storage Area and the Oil Spill Area. Figure 2 shows the locations of these areas and the general boundaries of what is now known to be a more extensive single disposal area.

Groundwater and surface water samples were collected from selected sample locations from August of 1993 through September of 1995. Two semi-annual sampling rounds were completed the first year, followed by two annual rounds of sampling rounds during the second and third years. Samples were analyzed for Target Compounds List (TCL), VOCs, turbidity, and the following Target Analyte List (TAL) metals: arsenic, barium, cadmium, chromium, and lead. In addition, samples collected during the first year were analyzed for TCL SVOCs.

3.5.1 Contaminants Detected

Table 1 lists the hazardous substances that have been detected at the JDOW site in each media. A baseline risk assessment was prepared (Geraghty & Miller 1991) that evaluated current and hypothetical risks associated with exposure to media of concern. The baseline

risk assessment identified no unacceptable risks to human health or the environment, with the following exception: a potential non-carcinogenic health threat to children associated with potential exposure to fill material if the site was allowed to be used for residential purposes.

4.0 REMEDIAL ACTION

4.1 Remedy Selection

A notice and brief summary of the proposed plan for remedial response was published in the *Ottumwa Courier* on July 13, 1991, in accordance with the public notice requirements stated in Section 117(a) of CERCLA. The public notice provided a brief overview of the site and identified the USEPA as the lead agency and the IDNR as the support agency. The notice informed the public of its role in the decision-making process and provided information on the public comment period, the location of information repositories, and methods by which the public could submit oral or written comments on the proposed plan and RI/FS reports. The notice also presented the preferred remedial alternative, later stated in the ROD, and requested public comments on this alternative.

A public community meeting was held on August 8, 1991, at the Ottumwa Public Library to present the proposed plan and remedial investigation / feasibility study (RI/FS) reports. One written comment and three oral comments were received during the public comment period and the public meeting. None of the reviewers opposed the selected remedy.

The ROD was signed on September 23, 1991. The selected remedy for soil remediation was institutional and engineering controls. The remedy included restricting public access to the site and isolating the soils with asphalt and concrete pavement, compacted gravel, or clean top soil with a vegetated mat. Metal concentrations in the soil represent the principal threat at the site based on the risk to sensitive populations, the risk posed through possible ingestion of vegetables grown in contaminated soil, and the risk for possible future residents. No action was selected for groundwater, surface water, and sediment, based on the conclusion that those media do not pose a significant threat to human health. Groundwater and surface water monitoring were continued to verify that no exposures resulting from the conditions at the site occur in the future.

The ROD specified that the groundwater data will be evaluated during the Five-Year Review:

> *If results of the five-year review support EPA's current determination that the site does not present a significant potential threat to human health or the environment via groundwater or surface water, monitoring could be modified or terminated. If the periodic review indicates that continued monitoring is necessary to ensure that no potential unacceptable exposures occur in the future, monitoring will be continued for an additional period of time and a second review performed. Groundwater and surface water monitoring and periodic reviews will continue to ensure that the site does not present a significant threat to human health or the environment. If however an endangered exists or a periodic review indicates that unacceptable migration of site-related contaminants or exposures may occur, the USEPA has the option to amend the ROD, reevaluating remedial options.*

The ROD also stated that there are no federal or state ARARs for the no-action alternative. Compliance with federal and state ARARs was not required as no remedial action is necessary to protect human health and the environment. The ROD determined that no-action was appropriate for groundwater, surface water, and sediment because contamination present in these media do not pose a significant threat to human health. These conditions have not changed.

4.2 Remedial Action Objectives

Based on the findings of the RI and the baseline risk assessment, the following remedial action objectives (RAO) were established in the RA.

- To prevent or minimize the potential for human exposure to contaminated soil and groundwater so that health-based allowable exposure limits are not exceeded.
- To prevent or minimize the potential for future off-site migration of contaminants.

After the development of the RAO, alternatives were assembled from the available remedial technologies that passed a preliminary screening process, based on technical feasibility, effectiveness, and cost. The risk assessment indicated that groundwater, surface water, and sediment contamination did not pose a significant threat to human health or the environment, therefore, only the "no action" alternative was evaluated for these media. Remedial alternatives for contaminated soils and waste materials that were retained for detailed and comparative analysis were a) no action; b) institutional controls; c) concrete cap and institutional controls; and d) in-situ stabilization/solidification with concrete cap and institutional controls.

Several of the alternatives could be implemented to effectively meet the RAO. Through the process of RI/FS review, proposed plan, community review and comment, and the ROD, the USEPA selected institutional controls as the preferred alternative for the soil/waste material. This response action addressed soil contamination as the principal threat to human health and the environment.

Surface water, sediment, and groundwater do not pose a significant threat to human health because, while contaminants have been detected, there are no demonstrated pathways by which human exposure has been shown to occur. However, the selected alternative required that groundwater and surface water monitoring be conducted to verify that no unacceptable exposure to risks posed by groundwater or surface water affected by the site occur in the future.

The selected alternative included implementation of deed restrictions and a maintenance program. The deed restrictions would limit access and land use for both the JDOW property and the right-of-way for Highway 63/34. The restrictions would require continued maintenance of the existing site perimeter fence to restrict unauthorized public access, and

limit future use of the site to prevent residential development of the property or other use which would lead to a similar exposure potential.
The major components of the selected RA included (USEPA 1991):

- Filing of deed restriction for the property.
- Maintenance of the perimeter fence.
- Groundwater and surface water monitoring to ensure that no unacceptable contaminant concentrations occur in these media.
- Inspection and evaluation of the site every five years.

The Performance Standards for the RA that were stated in the Statement of Work for the RA Work Plan, Appendix A to the Consent Decree (USEPA 1992b), were segregated into two areas: perimeter fence monitoring and sampling.

The Performance Standards associated with maintaining the perimeter fence are as follows:

- Conduct regular inspections of the perimeter fence to ensure that access to the JDOW property is restricted.
- Repair or replace, as needed, any breaches in the fence identified during the site inspections. The fence shall be repaired to meet as-built specifications.

The Performance Standards associated with collecting representative groundwater and surface water data are as follows:

- Collection, storage, and delivery of groundwater and surface water samples in accordance with USEPA accepted practices.
- Analysis of groundwater and surface water samples at a laboratory specifically approved by USEPA for this project.

4.3 Remedy Implementation

The selected remedy included three components: deed restrictions; continued maintenance of the perimeter fence; and groundwater and surface water monitoring. The following subsections summarize the implementation of the three components.

4.3.1 Deed Restrictions

Interim deed restrictions were filed in April 1992 for the JDOW property and the right-of-way for U.S. Highway 34 & 63, owned by the State of Iowa. JDOW and the IDOT filed their own respective deed restrictions. The deed restrictions limit access and land use by requiring continued maintenance of the perimeter fence and by limiting future site use. Future use of the site was restricted to prevent residential development of the property.

4.3.2 Site Perimeter Fence Maintenance

Site perimeter fence inspections have been completed by JDOW personnel on a monthly basis since June 1993 (when the RA Work Plan was approved). The routine fence inspections include observing the condition of the fence top barbed wire, fence poles, and chain link material. In addition, the operation and security of the fence gates and the proximity of the fence bottom are observed. Monthly reports are completed and provided to JDOW management and breaches in the fence are repaired by JDOW.

4.3.3 Groundwater and Surface Water Monitoring

Groundwater and surface water monitoring were completed to evaluate if constituent concentrations in the groundwater and surface water increased with respect to concentrations detected during the RI. Groundwater and surface water samples were collected over a three-year period. Two semi-annual sampling rounds were completed the first year, followed by two annual rounds of sampling rounds during the second and third years. Samples were analyzed for Target Compounds List (TCL) VOCs, turbidity, and the following TAL metals: arsenic, barium, cadmium, chromium, and lead. In addition, samples collected during the first year were analyzed for TCL SVOCs. Figure 2 illustrates the locations sampled during the RI and post-RI sampling events.

4.3.3.1 Surface Water Sampling Results

No VOCS were detected above the method detection limits in any of the surface water samples collected from Black Lake. Pentachlorophenol, an SVOC, was detected at 3 $\mu g/L$ in a surface water sample collected in August 1993. Pentachlorophenol was not detected in previous or subsequent surface water samples. The pentachlorophenol may have been associated with the flooding which occurred in 1993.

Unfiltered and filtered surface water samples were collected for the metals analyses. A review of the results indicates that the metal concentrations have not shown trends of increasing concentration since the RI was completed. Table 2 summarizes the results of the total metals analyses on the surface water samples collected during the RI and post-RI.

4.3.3.2 Groundwater Sampling Results

No VOCs were detected in the first round of groundwater monitoring (August 1993). Two SVOCs were detected: bis(2-ethylhexyl)phthalate was detected in monitoring wells MW-2 and MW-3 at an estimated concentration of 1 $\mu g/L$; and di-n-butylphthalate was detected in the sample from monitoring well MW-3 at an estimated concentration of 1 $\mu g/L$. Both bis(2-ethylhexyl)phthalate and di-n-butylphthalate are common laboratory contaminants and their presence may have been the result of laboratory contamination.

In the second round (February 1994), four VOCs (xylene, toluene, 2-butanone, and carbon disulfide) were detected at levels 2 to 3 orders of magnitude less than the MCLs. Xylene (detected at MW-6) had been previously detected at several wells during the RI, at concentrations less than 50 *µg/L*. Toluene was detected at a concentration of 4J *µg/L* in well PZ-2. Toluene was not detected subsequently at that location. Carbon disulfide and 2-butanone are common lab contaminants. Three SVOC constituents, bis(2-ethylhexyl)phthalate, 2,4-dichlorophenol, and naphthalene, were detected at low estimated concentrations during the second semiannual monitoring round. Bis(2-ethylhexyl)phthalate was detected in samples from monitoring wells MW-2, MW-3, MW-4, and PZ-2 at low estimated concentrations ranging from 1J *µg/L* to 3J *µg/L*. Also, 2,4-dichlorophenol and naphthalene were detected at a low estimated concentrations of 1J *µg/L* and 2J *µg/L* respectively in the sample from monitoring well MW-4. These constituents were not previously detected in groundwater samples from monitoring wells MW-4 or MW-10, located upgradient from MW-4. The MCLs are not established for 2,4-dichlorophenol, or naphthalene.

During the third and fourth rounds of monitoring (September 1994 and September 1995), xylene was again detected in monitoring well MW-6 at low concentrations (130 *µg/L* & 5 *µg/L).*

Table 3 summarizes the total metals data for the two RI sampling rounds and first four post-RI sampling rounds. Both filtered and unfiltered groundwater samples were collected.

Analytical results from over the past ten years have shown no increase in concentrations of VOCs, SVOCs and metals in groundwater and surface water from Black Lake. All VOC and SVOC concentrations were below MCLs. With the exception of arsenic and lead in well PZ-2, metal concentrations were all below MCLs.

After the ROD was signed on September 23, 1991, the USEPA modified some metal MCLs. Among the contaminants monitored during the Remedial Action, the MCL for barium increased from 1 to 2 *mg/L;* the MCL for cadmium decreased from 0.01 to 0.005 *mg/L;* the MCL for chromium increased from 0.05 to 0.1 *mg/L;* the MCL for lead changed from 0.05 *mg/L* to an action level of *0.015 mg/L* at the tap, and the MCL for arsenic was lowered from 0.050 *mg/L* to 0.010 *mg/L* in January 2006.

During the most recent sampling event (November 2007), arsenic was detected above the current MCL of 0.010 *mg/L* at one location, PZ-2. The metals concentrations in the groundwater downgradient of the site have shown no signs of increasing.

5.0 PROGRESS SINCE THE FIRST FIVE-YEAR REVIEW

The first Five-Year Review was completed on March 3, 1998 by CDM Federal Programs (CDM) for the USEPA. CDM's protectiveness statement from Section 8.0 of the Five-Year Review Final Report dated October 1997 was as follows:

> *During both RI and post-RI monitoring periods, concentrations of contaminants of concern were below the Federal MCLS. There were no indications of increasing concentrations of any contaminants.*
>
> *The RA is believed to be protective of human health and the environment regarding institutional controls. The site is fenced and well maintained.*

The recommendation from CDM's review was to conduct one complete round of groundwater sampling from all monitoring wells prior to permanently abandoning 10 of the 14 wells. No surface water sampling was required or conducted as part of the Pre-Abandonment or Five-Year Review sampling events. Figure 2 illustrates the locations sampled during the Pre-Monitoring Well Abandonment event.

The Pre-Monitoring Well Abandonment groundwater sampling event was conducted in March of 1999 and did not include any surface water sampling. The results of this fifth post-RI round of groundwater sampling are summarized in Table 4.

Common laboratory contaminants acetone, carbon disulfide, and isophorone were detected in all of the samples analyzed during the pre-well abandonment groundwater sampling event. Acetone was detected at concentrations ranging from 7.3 $\mu g/L$ to 8.6 $\mu g/L$. Carbon Disulfide was detected at concentrations ranging from 0.96 ug/L to 4.7 ug/L. Isophorone was detected at concentrations ranging from 0.97 $\mu g/L$ to 2.1 $\mu g/L$. Review of the VOC and SVOC data indicated no trends of increasing concentrations.

Following the fifth post-RI groundwater sampling, 10 of the 14 groundwater monitoring wells and piezometers were authorized to be abandoned. In November of 1999, wells MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, and PZ-1 were abandoned according to Iowa Administrative Code 567-39.8.

The sixth groundwater sampling event was conducted in February of 2003 on the four remaining wells: MW-1, MW-6, MW-12, and PZ-2. Prior to sampling these monitoring wells, repairs were made to wells MW-6 and PZ-2. The manhole structure over well MW-6 was reset and a new road box was installed at well PZ-2. In addition, new locks were installed at all four locations to replace the former corroded ones.

The seventh groundwater sampling event was conducted by HEI in November of 2007. Based on the approved Field Sampling Plan dated November 2007, the following wells were sampled:

- MW-12, the background well.
- PZ-2, upgradient from Black Lake.
- MW-1, downgradient of the former landfills.
- MW-6, downgradient of the Oil Spill Area.

The locations of the four monitoring wells are shown in Figure 3. Figure 4 illustrates the potentiometric surface map based on the data collected in 1995.

Prior to sampling, the aluminum manway covers on monitoring wells MW-1 and MW-6 could not be opened. The covers were subsequently opened by breaking them with a hammer. Additionally, the manway cover for monitoring well MW-12 was missing and the well was covered with a loose metal plate. The JDOW staff was advised of the broken and missing manway covers, and replacement covers were ordered and installed after sampling. In each case, the locking well plug was in place and did not appear to have been tampered with. The results of the seventh post-RI round of groundwater sampling (sampled November 27, 2007) are summarized in Table 5 and complete laboratory reports are provided in Appendix A.

The VOC and SVOC contaminant concentrations are below their respective MCLs. With the exception of the arsenic concentration in well PZ-2, the metal contaminant concentrations are below their respective MCLs.

In March 1999, November 1999, January and February of 2003, and November 2007, site inspections were conducted. The most recent inspection was completed by Bill Gresham of the USEPA. The perimeter fence and gates were found to be intact during the Pre-Abandonment Groundwater Sampling, Well Abandonment, and the Five-Year Groundwater Sampling Activities. In addition, security guards were posted at entrances. Visitors were required to state the reason for being onsite, present photo identification, sign in and out, provide vehicle information, and comply with the site safety requirements, including wearing the appropriate personal protective equipment for the task.

On November 22, 2000, the USEPA Region VII announced the deletion of the JDOW site from the NPL effective January 22, 2001 unless significant adverse or critical comments were received by December 22, 2000. Only dissenting comments on the Direct Final Action to Delete were requested by the USEPA. In concurrence with the IDNR, the USEPA determined that the criteria for deletion of the JDOW site from the NPL had been met. The criteria for the JDOW site included:

1. All appropriate response under CERCLA has been implemented and no further action by USEPA is appropriate;
2. The IDNR concurs with the proposed deletion decision;
3. A notice has been published in the local newspaper and has been distributed to appropriate federal, state, and local officials and other interested parties announcing the commencement of a 30-day dissenting public review.

In making the determination to delete the JDOW site from the NPL, USEPA and IDNR considered whether any of the following prerequisites had been met:

1. Responsible parties or other persons have implemented all appropriate response actions required;
2. All appropriate Fund-financed response under CERCLA have been implemented, and no further response action by responsible parties is appropriate; or
3. The remedial investigation has shown that the release poses no significant threat to public health or the environment and, therefore, taking of remedial measures is not appropriate.

Even though the JDOW site has been deleted from the NPL, if hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure, USEPA is statutorily required to conduct a subsequent review of the site at least every five years after the initiation of the remedial action at the site to ensure that the remedy remains protective of public health and the environment.

6.0 FIVE-YEAR REVIEW PROCESS

A public notice of the proposed RA for the JDOW site was published in the *Ottumwa Courier* on July 13, 1991, in accordance with the public notice requirements stated in Section 117(a) of CERCLA. The notice provided a brief overview of the JDOW site and identified the USEPA as the lead agency and the Iowa Department of Natural Resources (IDNR) as the support agency. The notice informed the public of its role in the decision-making process and provided information on the public comment period, the location of information repositories, and methods by which the public could submit oral or written comments on the proposed RA and the RI/FS reports. A public community meeting was held on August 8, 1991, at the Ottumwa Public Library to present the proposed RA and RI/FS Reports. One written comment and three oral comments were received during the public comment period and the public meeting. None of the respondents opposed the proposed RA.

On August 28, 1992, the USEPA approved a Preliminary Closeout Report for the JDOW site. This report documents that all construction necessary for completion of the remedial action at the JDOW site was completed. In addition, the Preliminary Closeout Report included a waiver for the pre-final inspection required on the Consent Decree and a schedule for completion of the tasks associated with the RA. The RA was initiated on April 13, 1993. This triggered the start of the Five-Year Review Process.

Debbie Kring, USEPA Region VII Project Coordinator at that time, conducted an inspection of the JDOW site on August 21, 1997. The fence was in good condition and the areas of concern were well vegetated. Steps undertaken to prevent waste and promote pollution prevention at JDOW include: establishing a recycling program for solvents, pallets, cardboard, light bulbs, and printer cartridges; replacing polychlorinated biphenyl filled transformers; removing underground storage tanks; and using water-based paint where possible. On September 30, 1997, the USEPA approved a Certification of Completion of the RA at the JDOW site. The Certification provided by Deere states that the requirements of the Performance Standards in the Consent Decree have been met.

The first Five-Year Review was completed on March 30, 1998. As part of the first Five-Year Review, CDM reviewed all the pertinent site documents to determine if the RA was conducted in accordance with the USEPA ROD, and the RD/RA CD for the JDOW site. Documents reviewed by CDM included the following:

- USEPA Record of Decision (USEPA 1991),
- Remedial Design/Remedial Action Consent Decree (USEPA 1992),
- USEPA Preliminary Closeout Report (USEPA 1992),
- Remedial Investigation Report (Geraghty & Miller 1991),
- Remedial Action Progress Report (Geraghty & Miller 1993b-1995),
- Remedial Action Work Plan (Geraghty & Miller 1993), and
- Remedial Action Compliance Certification Letter (John Deere 1997).

CDM concluded that with respect to implementation of the RA in accordance with the Consent Decree, ROD, and the RA Work Plan, no areas of noncompliance were noted during the first Five-Year Statutory Review. The analytical results during the RI and post-RI sampling events showed no increase in concentrations of VOCs, SVOCs or metals in the groundwater or surface water from Black Lake. VOC and SVOC concentrations were below their respective MCLs with the exception of arsenic and lead in well PZ-2. The first Five-Year Review Report recommended one additional round of groundwater sampling prior to the permanent abandonment of 10 of the 14 monitoring wells and piezometers. USEPA's approval of the first Five-Year Review Report on March 30, 1998, triggered the second Five-Year Review Process.

On March 4 - 5, 1999, the Pre-Abandonment groundwater sampling event was conducted. Monitoring wells MW-1 through MW-8, MW-10 through MW-12, PZ-1, and PZ-2 were sampled for VOCs, SVOCs, arsenic, barium, cadmium, chromium, and lead.

On October 13, 1999, Debbie Kring, USEPA Region VII Project Coordinator at that time, authorized the permanent abandonment of monitoring wells MW-2 through MW-8, MW-10, MW-11, and PZ-1. The aforementioned monitoring wells were permanently abandoned according to Iowa Administrative Code (IAC) 567-39.8 on November 15 - 16, 1999.

On November 20, 2001, Bill Gresham, current USEPA Region 7 Remedial Project Manager, conducted an on-site inspection of the JDOW site.

Howard R. Green Company personnel conducted an onsite inspection on January 31 and February 3, 2003. The site was found to be secure with the perimeter fence intact and the gates occupied by JDOW security personnel. Visitors were required to state their reason for being onsite, present photo identification, sign in and out, provide vehicle information, display a visitor's pass, and comply with the site safety requirements. On-site soils were found to be isolated from the human population with asphalt and concrete pavement, compacted gravel, or clean topsoil with a vegetated mat. Repairs to the protective manhole structure at MW-6 and road box at PZ-2 were necessary. Groundwater sampling activities were conducted on February 3, 2003, as part of the second Five-Year Review process. The remaining three groundwater monitoring wells (MW-1, MW-6, MW-12, and PZ-2) were sampled for VOCs, SVOCs, arsenic, barium, cadmium, chromium, and lead.

A Public Notice announcing the second Five-Year Review process was published in the *Ottumwa Courier* on February 8, 2003 and in the February 2003 JDOW Facts Sheet on the USEPA web site. Documents reviewed as part of the second Five-Year Review included:

- USEPA Record of Decision (USEPA, 1991),
- Remedial Design/Remedial Action Consent Decree (USEPA 1992),
- USEPA Preliminary Closeout Report (USEPA 1992),
- Remedial Investigation Report (Geraghty & Miller 1991),
- Remedial Action Progress Report (Geraghty & Miller 1993b-1995),

- Remedial Action Work Plan (Geraghty & Miller 1993), and
- Remedial Action Compliance Certification Letter (John Deere 1997),
- Five-Year Review Report (CDM Federal Programs Corporation, 1997),
- Field Sampling Plan and Monitoring Well Abandonment Procedure (Howard R. Green Company, 1998)
- Revised Sampling Plan and Monitoring Well Abandonment Procedure (Howard R. Green Company, 1999),
- Monitoring Well Abandonment Report (Howard R. Green Company, 2000),
- Comprehensive Five-Year Review Guidance (USEPA, 2001) and
- Field Sampling Plan for Second Five-Year Review (Howard R. Green Company, 2002).

On November 27, 2007, Bill Gresham, the current USEPA Region 7 Remedial Project Manager, conducted an inspection of the site, including Five-Year Review Interviews and a Five-Year Review Site Inspection. The results of the interviews and inspection are provided in Appendix B. A representative of HEI collected groundwater samples on November 27, 2007. Samples were collected from monitoring wells MW-1, MW-6, MW-12, and PZ-2, and were analyzed for VOCs, SVOCs, arsenic and lead. A Public Notice announcing the second Five-Year Review process was published in the *Ottumwa Courier* on December 1, 2007 and under the JDOW Facts Sheet on the USEPA web site on November 29, 2007.

7.0 TECHNICAL ASSESSMENT

The following section states three questions and answers as they pertain to the protectiveness statement.

7.1 Question A

Is the remedy functioning as *intended by the decision documents?* YES.

The review of documents listed in Section 6.0, ARARs, RAOs, risk assumptions, site inspections, and groundwater analytical results indicate the remedy selected for the JDOW site is functioning as intended on the ROD and RAO. Isolating the contaminated soils from the public has been achieved through the use of engineering and institutional controls. The site has continued to have nonresidential land use. Site inspections have found the perimeter fence and gates to be in good condition and security to be tight. Implementation of recycling programs has prevented pollution and reduced wastes. Analytical results over the past ten years have shown no increases in concentrations of VOCs, SVOCs or metals in the groundwater or surface water from Black Lake. All VOC and SVOC concentrations have been below their respective MCLs. With the exception of arsenic in well PZ-2, metal concentrations have also been below their respective MCLs.

7.2 Question B

Are the exposure assumptions, toxicity, cleanup levels, and remedial action objectives used at the time of the remedy selected still valid? NO.

The exposure assumptions and RAOs for the JDOW site have not changed and the remedy selected appears to be working. The toxicity and assumed corresponding cleanup levels for the groundwater have changed since the ROD was signed on September 23, 1991. Since that date, the USEPA adopted or revised a number of MCLs. Five of the groundwater contaminants monitored for during the RA have changed, as summarized in Table 6.

While changes in MCLs have occurred, only arsenic has been found above its current MCL (well PZ-2). This well is hydrogeologically downgradient of the hazardous materials storage area and upgradient of Black Lake. Historically, well PZ-2 has had elevated concentrations of arsenic (18 – 47 ug/L) and lead (1 - 93 ug/L).

7.3 Question C

Has any other information come to light that could call into question the protectiveness of the remedy? NO.

No ecological targets have been identified. The remedy was determined to be, and remains, effective.

7.4 Technical Assessment Summary

The physical condition of the site has not changed so as to affect the protectiveness of the remedy. The land use remains non-residential and exposure to the contaminated soils remains restricted through the use of a fence with barbed wire and manned gates.

Metal concentrations in soil represent the principal threat at the site, based on the risk to sensitive populations, the risk posed through possible ingestion of vegetables grown in contaminated soil, and the risk to possible future residents. The selected remedy for soil remains institutional and engineering controls. The remedy includes restricting public access to the site and isolating the soils with asphalt and concrete pavement, compacted gravel, or clean topsoil with a vegetated mat.

The selected remedy for groundwater, surface water, and sediment was no action, based on a conclusion that those media do not pose a significant threat to human health. The ROD states that there are no federal or state ARARs for the no-action alternative. Compliance with federal and state ARARs is not required as no remedial action is necessary. Groundwater and surface water monitoring have continued to verify that no exposures result from the conditions at the site.

After the ROD was signed on September 23, 1991, the USEPA adopted or revised a number of MCLs. Five of the site contaminants monitored during the RA have been modified as follows: the MCL for barium increased from 1 to 2 *mg/L;* the MCL for cadmium decreased from 0.01 to 0.005 *mg/L;* the MCL for chromium increased from 0.05 to 0.1 *mg/L;* the MCL for lead changed from *0.05 mg/L* to an action level of 0.015 mg/L at the tap, and the MCL for arsenic was lowered from 0.050 mg/L to 0.010 *mg/L* on January 23, 2006.

Analytical results over the past 10 years have shown no increase in concentrations of VOCs, SVOCs or metals in the groundwater or surface water from Black Lake. VOC and SVOC concentrations have been below their respective MCLs. With the exception of the arsenic in well PZ-2, metal concentrations are currently below their respective MCLs. Based on the cumulative sampling results, the selected remedy is working as intended in the ROD and RAO.

8.0 ISSUES

There are no issues related to current JDOW site operations, conditions, or activities that prevent the selected remedy from continuing to be protective. The past 15 years of monitoring and site inspections have shown that the institutional and engineering controls mandated in the ROD and implemented during the RA have worked successfully to protect human health and the environment. Enactment in 2005 of the Iowa Uniform Environmental Covenants Act, Iowa Code chapter 455I, created a statutory regime of institutional controls that could be applied to the site.

9.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Due to elevated concentrations of arsenic in well PZ-2, it is recommended that future Five-Year Review groundwater sampling events continue to use USEPA- approved low-flow sampling techniques. Concentrations of arsenic and lead are lower than the results of five years ago, which may be attributable to this sampling technique.

The monitoring well covers and caps should be opened at least yearly so that they do not become stuck. In the event that oxidization is present on the well box covers and/or the rim of well box, pure silicone (gel form) should be applied to the rim of the cover to allow for ease in opening.

It is recommended that well PZ-2 be moved from its present location, which is in a ditch between Highway 34/63 and the JDOW facility. At its present location, surface runoff is likely to submerge the well casing. This well should be installed at least six months prior to the next sampling event. Well PZ-2 should be decommissioned according to Iowa Administrative Code (IAC) 567-39.8 after a successful installation of the replacement well.

Fence and gate inspections should continue on a monthly basis by JDOW personnel. Any breaches in the fence should be reported to management and repaired by JDOW.

Non-residential land use restrictions should remain in effect for the duration of the contaminated fill/soil remaining onsite. Enactment in 2005 of the Iowa Uniform Environmental Covenants Act, Iowa Code chapter 455I, presents an opportunity to supplement the existing deed restrictions recorded under the terms of the Consent Decree. Environmental Covenants pursuant to the Act would enhance the future enforceability and permanence of the existing institutional controls.

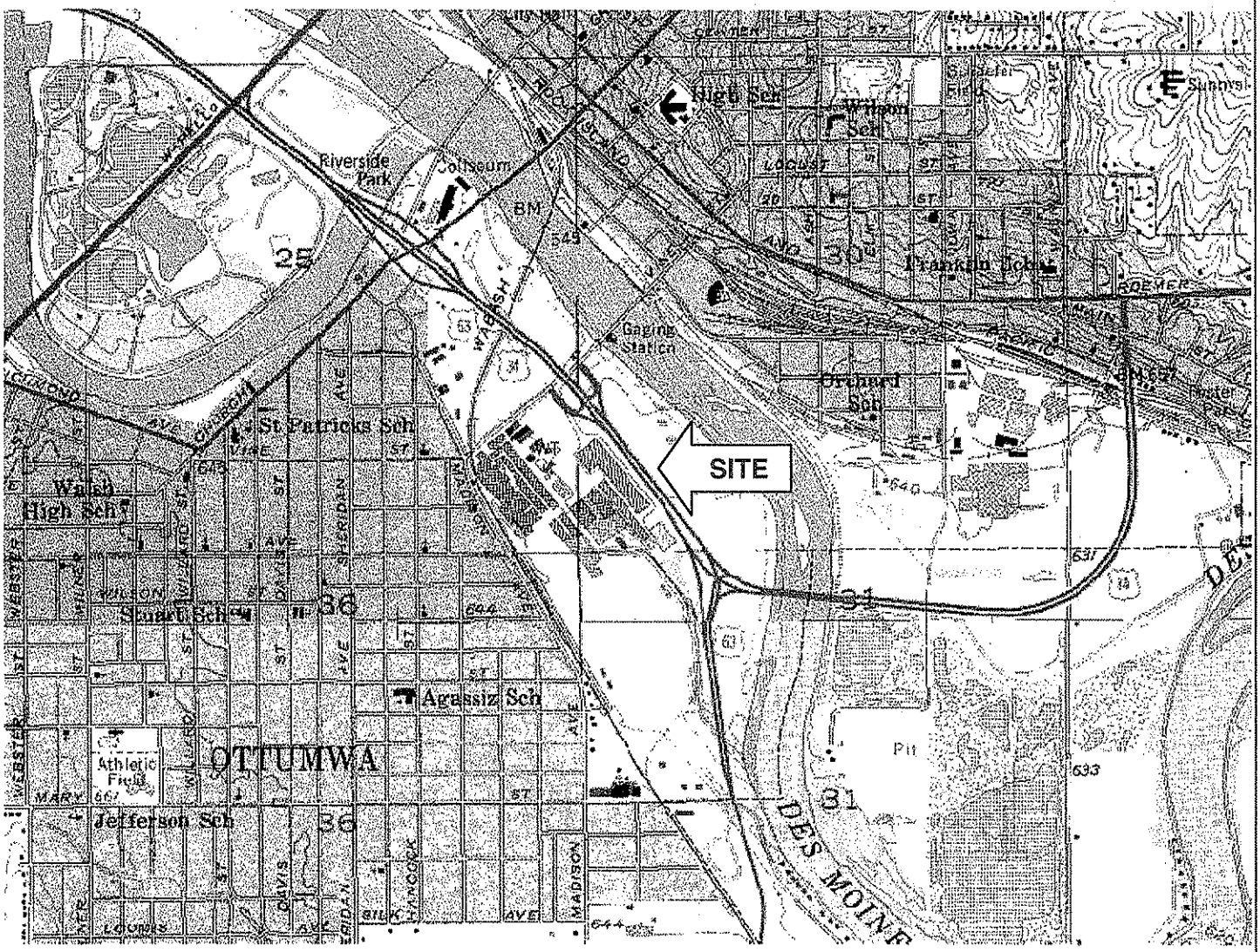
10.0 PROTECTIVENESS STATEMENT

The RA is believed to be protective of human health and the environment through the implementation of engineering and institutional controls. The site is fenced and well maintained. Security guards are posted at all entrances. All visitors were required to state reason for being onsite, present photo identification, sign in and out, provide vehicle information, display a visitor's pass, and comply with the site safety requirements. Contaminated fill/soils are isolated from human contact with asphalt and concrete pavement, compacted gravel, or clean topsoil with a vegetated mat. Land-use restrictions require non-residential activities. During both RI and post-RI monitoring periods, concentrations of groundwater contaminants of concern were below the Federal MCLs, with the exception of arsenic and lead in well PZ-2.

11.0 NEXT REVIEW

It will be necessary to continue the Five-Year Review processes, and the Fourth Five-Year Review is scheduled for March 2013. The four remaining monitoring wells should be sampled for VOCs, SVOCs, arsenic and lead using a USEPA-approved low-flow sampling technique.

FIGURES



U.S.G.S. 7.5 Minute Series Topographic Map
State of Iowa Quadrangle
Ottumwa North

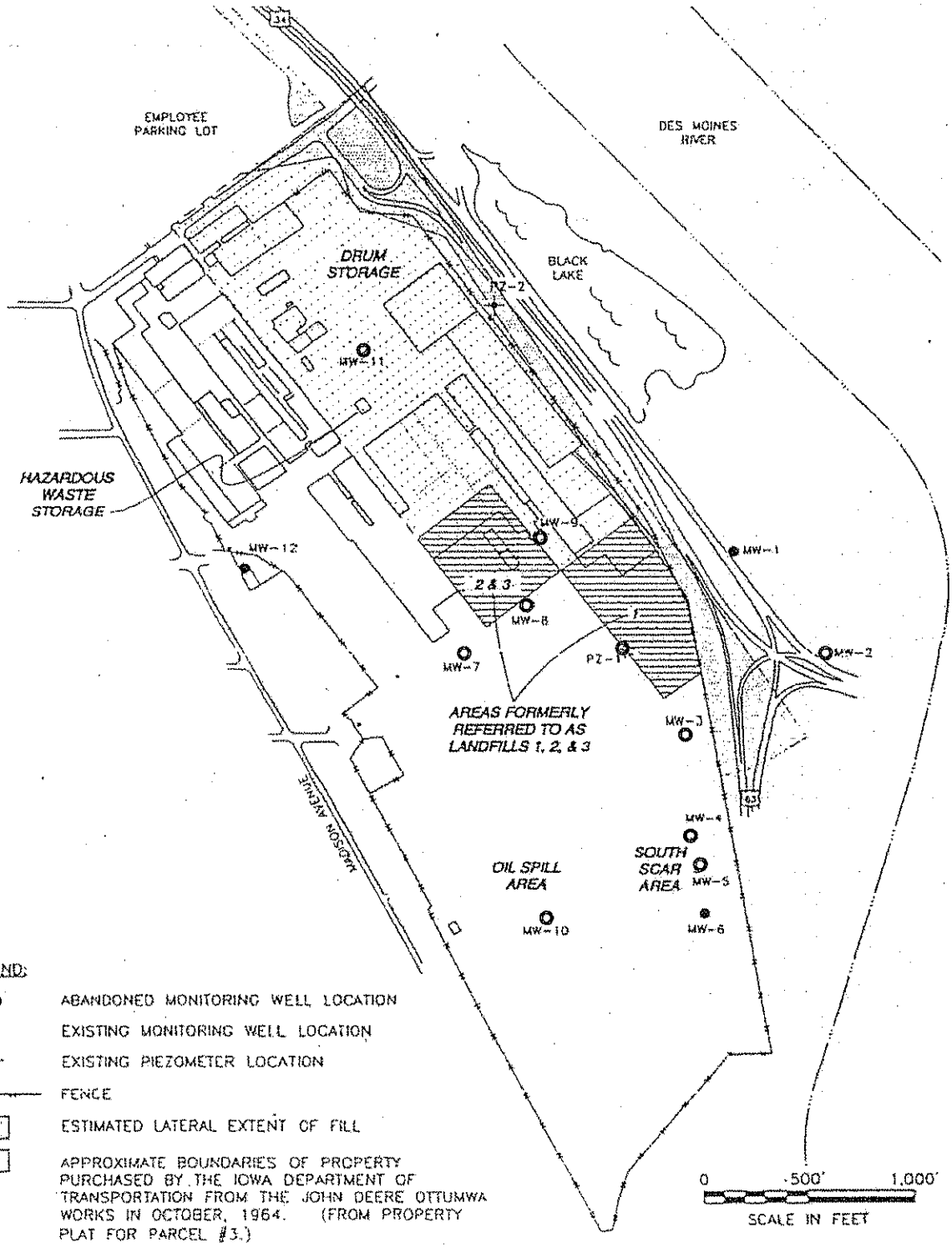
Source: TopoZone & Maps a la carte, Inc.

HYDE ENVIRONMENTAL, INC.

FIGURE 1
LOCATION MAP

John Deere Ottumwa Works
Ottumwa, Iowa

January 2008, Project AA17



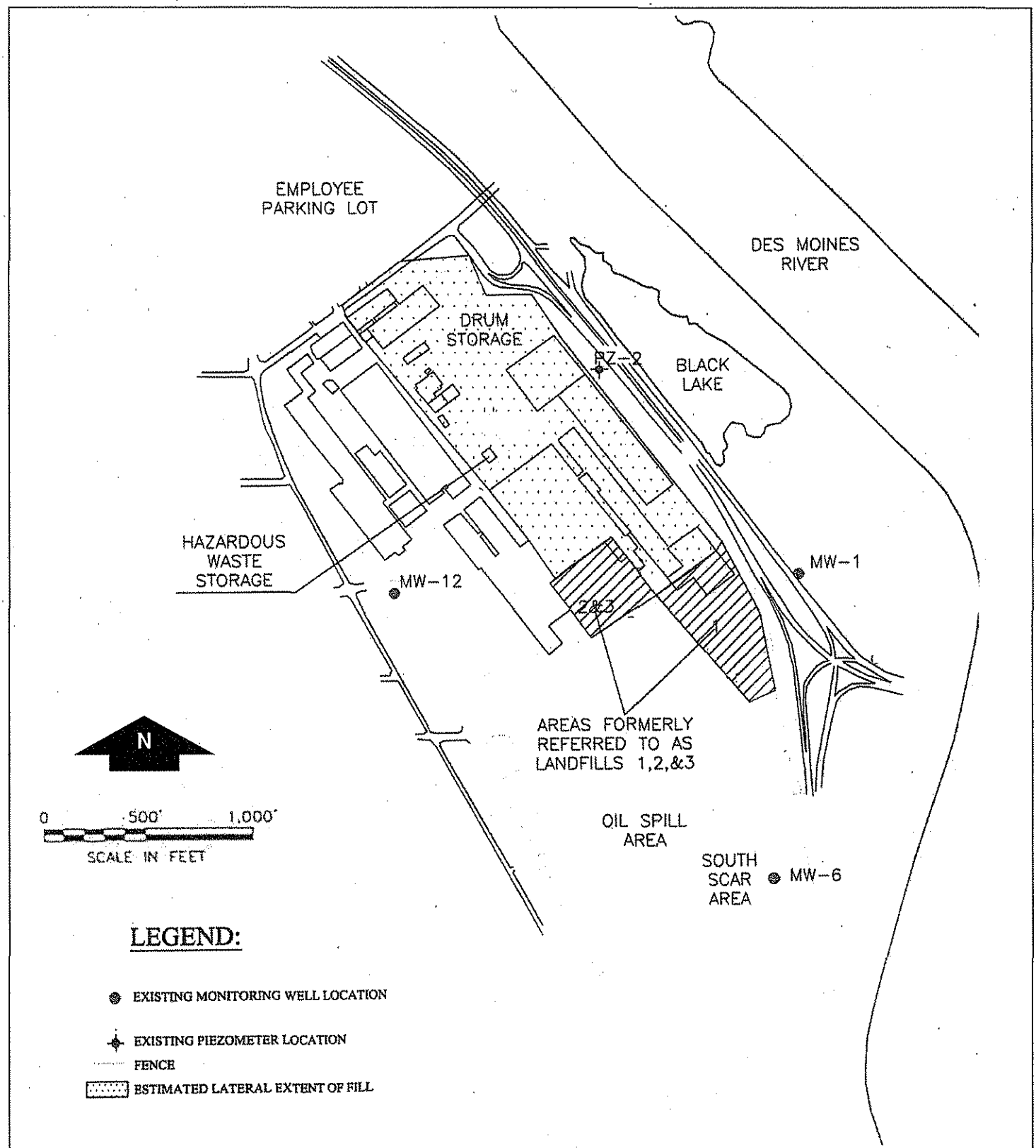
Source: Field Sampling Plan, Howard R. Green Co, 2002

HYDE ENVIRONMENTAL, INC.

FIGURE 2
SITE MAP

John Deere Ottumwa Works
Ottumwa, Iowa

January 2008, Project AA17



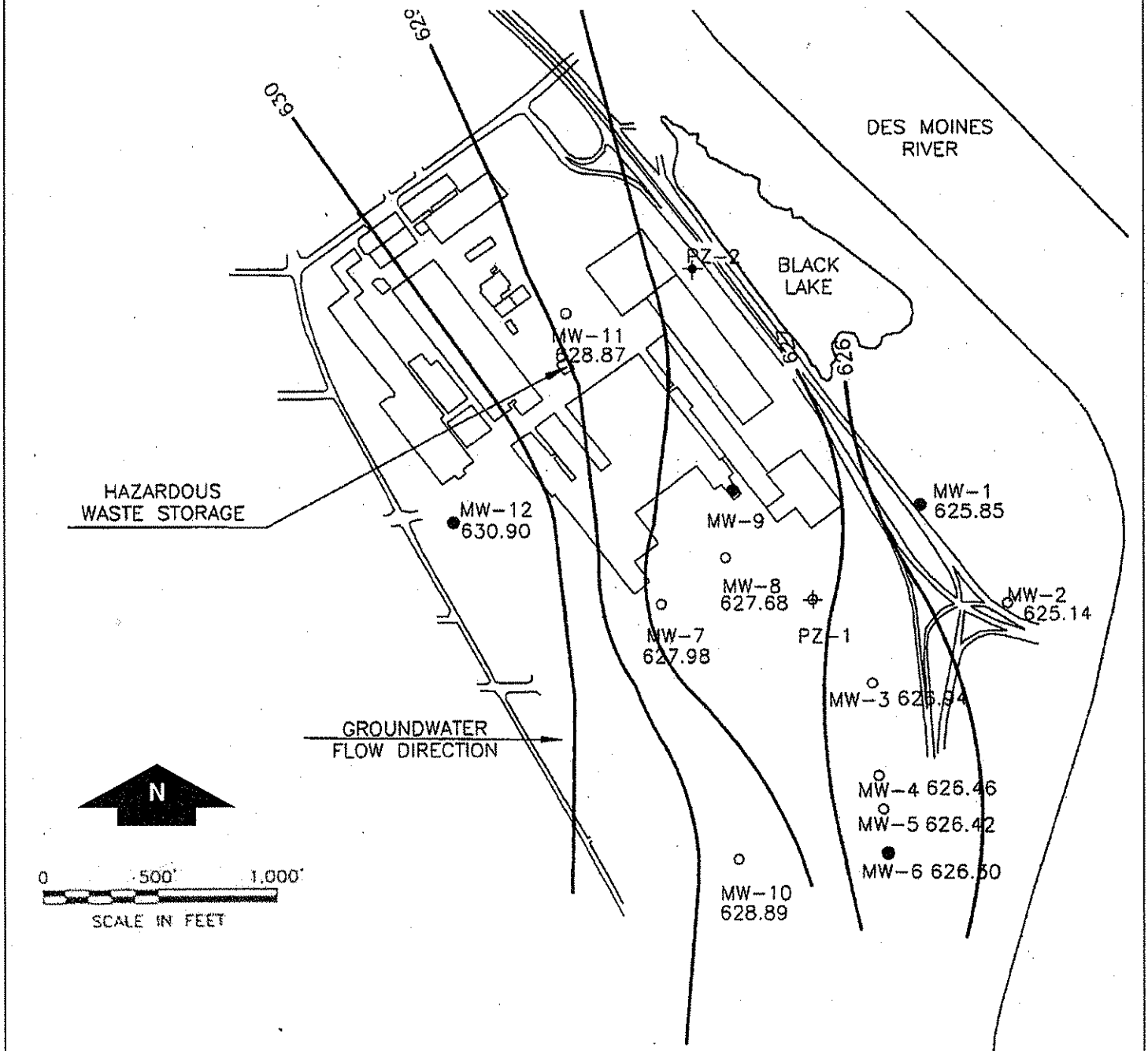
Source: John Deere, 2008

HYDE ENVIRONMENTAL, INC.

FIGURE 3
SAMPLE LOCATION MAP

John Deere Ottumwa Works
Ottumwa, Iowa

January 2008, Project AA17



LEGEND:

- ABANDONED MONITORING WELL LOCATION
- EXISTING MONITORING WELL LOCATION
- EXISTING PIEZOMETER LOCATION
- ABANDONED PIEZOMETER LOCATION
- 627.45 GROUNDWATER ELEVATION MEASURED ON 9/12/95

Source: H.R. Green, 2002 *Field Sampling Plan*, based on 1995 water level data. Prepared for the Five Year Review Report in January 2008

HYDE ENVIRONMENTAL, INC.

FIGURE 4
POTENTIOMETRIC SURFACE MAP
John Deere Ottumwa Works
Ottumwa, Iowa
January 2008, Project AA17

TABLES

TABLE 1
CONTAMINANTS DETECTED BY MEDIA TYPE
JOHN DEERE OTTUMWA WORKS

Soil	Groundwater
Acetone	Acetone
Methylene Chloride	1,2-dichloroethene
Toluene	Benzene
Tetrachloroethene	Toluene
Xylenes.	Xylenes
Polynuclear Aromatic Hydrocarbons	Bis(2ethylhexyl)phthalate
Beryllium	Di-n-butylphthalate
Lead	1,2,4-trichlorobenzene
Aluminum	Arsenic
Arsenic	Barium
Copper	Cadmium
Zinc	Chromium
	Lead
Sediments	**Surface Water**
Arsenic	Arsenic
Barium	Barium
Cadmium	Cadmium
Chromium	Chromium
Copper	Lead
Lead	Manganese
Nickel	Zinc
Selenium	Pentachlorophenol

TABLE 2
SURFACE WATER SUMMARY FOR METALS
JOHN DEERE OTTUMWA WORKS
Concentrations in mg/L

Contaminant	RI	Post RI	
	Total	***Total***	***Dissolved***
Arsenic	<0.005	<0.003 BUJ - 0.0033	0.0016 B - 0.003
Barium	0.43 J	0.0499 B -0.0858 B	0.0249 - 0.0713 B
Cadmium	<0.001	<0.0024 - 0.0047 B	<0.0024 - <0.005
Chromium	<0.01	<0.0065 - <0.0091	<0.0065 - <0.0091
Lead	<0.005	<0.001 - 0.0059	<0.001 J - 0.0061 J

UJ - Estimated Concentration. Sample results are below the instrument detection limit.
B - Sample results are between the contract-required detection limit and the instrument detection limit
RI - Sample collection date - May 9, 1990
Post RI - Range of results for samples collected between August 1993 and September 1995.

TABLE 3
GROUNDWATER SUMMARY FOR TOTAL METALS
JOHN DEERE OTTUMWA WORKS
Concentrations in mg/L

Monitoring Well	*Contaminant*	*RI*	*Post RI*	*MCL*
MW-1	Arsenic	<0.002 UJ - 0.035	<0.001 - 0.019 B	0.05
	Barium	0.32 -1.6	0.231 - 0.291	2.0
	Cadmium	<0.005 - 0.0099	<0.0024 - <0.005	0.005
	Chromium	<0.006 - 0.12	<0.0065 - <0.0091	0.1
	Lead	0.002 J - 0.13	<0.001 - <0.01 J	0.015
MW-2	Arsenic	<0.002 UJ - 0.036	<0.001	0.05
	Barium	0.11 - 1.1	0.129 B - 0.164 B	2.0
	Cadmium	<0.005 - 0.0043	<0.0024 - <0.0045	0.005
	Chromium	<0.006 - 0.073	<0.0065 - <0.0091	0.1
	Lead	0.001 J - 0.085	<0.001 - 0.0018 B	0.015
MW-3	Arsenic	<0.002 UJ - 0.013	<0.001	0.05
	Barium	0.13 J - 0.77	0.109 B - 0.164 B	2.0
	Cadmium	<0.005 - 0.018	<0.0024 - <0.005	0.005
	Chromium	<0.006 - 0.038	<0.006 - 0.091	0.1
	Lead	<0.001 J - 0.038	<0.001 - <0.0026 UJ	0.015
MW-4	Arsenic	0.018 J - 0.062	0.0084 B - 0.0185	0.05
	Barium	0.55 J - 6.2 J	0.206 - 0.345	2.0
	Cadmium	<0.005 - 0.0093	<0.0024 - <0.005	0.005
	Chromium	0.006 - 0.12 J	<0.0065 - <0.0091	0.1
	Lead	0.003 J - 0.22 J	<0.001 - 0.0042	0.015
MW-6	Arsenic	0.004 - 0.0057	<0.001 - .0063 B	0.05
	Barium	0.35 - 13 J	0.139 B - 0.223	2.0
	Cadmium	<0.005 - <0.0025	<0.0024 - 0.0065	0.005
	Chromium	0.007 - 0.24 J	<0.0065 - <0.0091	0.1
	Lead	0.003 J - 0.33 J	<0.001 J - 0.0037 UJ	0.015
MW-11	Arsenic	0.035 - 0.006	0.004 B	0.05
	Barium	1.1 J - 8 J	0.0434 B	2.0
	Cadmium	0.005 - 0.069	<0.005	0.005
	Chromium	0.014 - 0.093 J	<0.008	0.1
	Lead	0.006 J - 0.1 J	<0.001 UJ	0.015
PZ-2	Arsenic	0.021 - 0.022	0.0185 - 0.0471	0.05
	Barium	0.41 - 0.46	0.161 B - 0.238	2.0
	Cadmium	<0.005	<0.0024 - <0.0045	0.005
	Chromium	0.015 - 0.018	<0.0065 - <0.0091	0.1
	Lead	0.053 - 0.093	<0.001 J - 0.0011 J	0.015
MW-12	Arsenic	0.01 - 0.62 J	<0.001	0.05
	Barium	0.6 J - 11	0.0438 B - 0.113 B	2.0
	Cadmium	<0.005 - 0.059	<0.0024 - <0.005	0.005
	Chromium	0.012 - <0.2	<0.0065 - <0.0091	0.1
	Lead	0.006 J - 0.62	<0.001 - <0.0033 UJ	0.015

UJ - Estimated Concentration. Sample results are below the instrument detection limit.

B - Sample results are between the contract-required detection limit and the instrument detection limit

RI - Sample collection date - May 9, 1990

Post RI - Range of results for samples collected between August 1993 and September 1995.

TABLE 4

SUMMARY OF PRE-MONITORING WELL ABANDONMENT GROUNDWATER SAMPLING

JOHN DEERE OTTUMWA WORKS

Concentrations in µg/L

Contaminant	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-10	MW-11	MW-12	PZ-1	PZ-2	MCL
Arsenic	43	30	ND	ND	26	ND	25	65	ND	ND	ND	50	25	50
Barium	270	160	120	74	210	160	180	190	50	44	110	410	260	2000
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	6
Cadmium	7.5	6.6	5.2	5.8	5.8	5.8	6.3	6.2	7.1	5.4	4.1	32	8.6	5
Chromium	2.5	3.6	ND	ND	2.2	1.2	1.5	ND	ND	ND	2.2	35	1.3	100
Cis1,2-dichlorethene	ND	ND	ND	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	70
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.62	ND	NS
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140	ND	15
Xylene	ND	ND	ND	ND	ND	5.1	ND	ND	ND	ND	ND	ND	ND	10000

ND = Not detected above the method detection limit

NS = No standard

MCL = Maximum Contaminant Limit

TABLE 5
SUMMARY OF FIVE-YEAR REVIEW GROUNDWATER SAMPLING RESULTS
JOHN DEERE OTTUMWA WORKS
Sampled November 27, 2007
Concentrations in µg/L

Contaminant	MW-1	MW-1 (DUP)	MW-6	MW-12	PZ-2	TRIP BLANK	MCL
Arsenic	1.37	1.32	1.62	ND	35.8	NA	10
Lead	ND	ND	ND	ND	5.85	NA	15
VOC's (SW 8260B)							
sec-Butylbenzene	ND	ND	0.670 J	ND	ND	ND	NS
Methylene Chloride	ND	0.500 J	0.460 J	ND	ND	0.820 J	NS
Methyl tert-Butyl Ether	ND	ND	ND	ND	0.310 J	ND	NS
1,2,4-Trimethylbenzene	ND	ND	0.730 J	ND	ND	ND	NS
Xylenes, total	ND	ND	1.01 J	ND	ND	ND	10000
SVOC's (SW 8270C)							
Bis(2-ethylhexyl)phthalate	3.89 J	ND	ND	ND	ND	NA	6
Diethyl phthalate	5.98 J	ND	ND	ND	ND	NA	NS

ND=Not detected above the method detection limit
NS=No Standard
DUP=Duplicate Sample
NA=Not Analyzed
J=Analyte detected at a level less than the Reporting Limit and greater than or equal to the Method Detection Limit. Concentrations within this range are estimated.
MCL=Maximum Contaminant Level

TABLE 6
SUMMARY OF SAFE DRINKING WATER ACT MAXIMUM CONTAMINANT LEVELS
JOHN DEERE OTTUMWA WORKS
Concentrations in mg/L

Contaminant	Media	SDWA MCL Standard		Citation Year
Arsenic	Groundwater	Previous	0.05	SWDA, 1986
		New	0.01	SDWA, 2006
Barium	Groundwater	Previous	1	SWDA, 1986
		New	2	SWDA, 1993
Cadmium	Groundwater	Previous	0.01	SWDA, 1986
		New	0.005	SWDA, 1987
Chromium	Groundwater	Previous	0.05	SWDA, 1986
		New	0.1	SWDA, 1987
Lead (at tap)	Groundwater	Previous	0.05	SWDA, 1986
		New	0.015	SWDA, 1992

APPENDICES

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

December 11, 2007

Client:
HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186

Work Order: CQK1394
Project Name: John Deere Ottumwa Works
Project Number: [none]

Attn: Robert B. Thomson

Date Received: 11/29/07

The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
PZ-2	CQK1394-01	11/27/07 11:35
MW-1	CQK1394-02	11/27/07 14:15
Duplicate	CQK1394-03	11/27/07 14:15
Trip Blank	CQK1394-04	11/27/07 14:15
MW-6	CQK1394-05	11/27/07 15:50
MW-12	CQK1394-06	11/27/07 17:15

Samples were received into laboratory at a temperature of 0 °C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.
Iowa Certification Number: 007

TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample analyzed.

Approved By:

Angela Miller

TestAmerica Cedar Falls
Angie Miller
Project Coordinator

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-01 (PZ-2 - Ground Water)						**Sampled: 11/27/07 11:35**			**Recvd: 11/29/07 11:30**	
Sampled By: Robert B. Thomson					**Phone**	**262-798-8600**				
Total Metals by SW 846 Series Methods										
Arsenic	**0.0358**		mg/L		0.00500	5	12/04/07 13:58	llw	7111199	SW 7060A
Lead	**0.00585**		mg/L		0.00400	1	12/03/07 11:32	llw	7111199	SW 7421
Volatile Organic Compounds										
Acetone	<4.62		ug/L	4.62	10.0	1	11/30/07 18:18	MMK	7120024	SW 8260B
Acrylonitrile	<1.28		ug/L	1.28	10.0	1	11/30/07 18:18	MMK	7120024	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	11/30/07 18:18	MMK	7120024	SW 8260B
Bromobenzene	<0.360		ug/L	0.360	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Bromochloromethane	<0.760		ug/L	0.760	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Bromodichloromethane	<0.200		ug/L	0.200	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Bromoform	<0.430		ug/L	0.430	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	11/30/07 18:18	MMK	7120024	SW 8260B
n-Butylbenzene	<0.310		ug/L	0.310	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
sec-Butylbenzene	<0.190		ug/L	0.190	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
tert-Butylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Carbon disulfide	<0.180		ug/L	0.180	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Carbon Tetrachloride	<0.310		ug/L	0.310	2.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Chlorobenzene	<0.170		ug/L	0.170	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Chlorodibromomethane	<0.260		ug/L	0.260	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Chloroethane	<0.500		ug/L	0.500	4.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Chloroform	<0.170		ug/L	0.170	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
2-Chlorotoluene	<0.350		ug/L	0.350	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
4-Chlorotoluene	<0.210		ug/L	0.210	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2-Dibromo-3-chloropropane	<0.860		ug/L	0.860	10.0	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2-Dibromoethane (EDB)	<0.250		ug/L	0.250	10.0	1	11/30/07 18:18	MMK	7120024	SW 8260B
Dibromomethane	<0.300		ug/L	0.300	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2-Dichlorobenzene	<0.210		ug/L	0.210	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,3-Dichlorobenzene	<0.220		ug/L	0.220	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,4-Dichlorobenzene	<0.160		ug/L	0.160	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Dichlorodifluoromethane	<0.390		ug/L	0.390	3.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,1-Dichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2-Dichloroethane	<0.200		ug/L	0.200	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,1-Dichloroethene	<0.370		ug/L	0.370	2.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
cis-1,2-Dichloroethene	<0.370		ug/L	0.370	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
trans-1,2-Dichloroethene	<0.310		ug/L	0.310	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
2,2-Dichloropropane	<0.480		ug/L	0.480	4.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,1-Dichloropropene	<0.240		ug/L	0.240	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
cis-1,3-Dichloropropene	<0.230		ug/L	0.230	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
trans-1,3-Dichloropropene	<0.170		ug/L	0.170	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Ethylbenzene	<0.250		ug/L	0.250	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Hexachlorobutadiene	<0.530		ug/L	0.530	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Hexane	<0.470		ug/L	0.470	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Isopropylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
p-Isopropyltoluene	<0.300		ug/L	0.300	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Methylene Chloride	<0.450		ug/L	0.450	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-01 (PZ-2 - Ground Water) - cont.						**Sampled: 11/27/07 11:35**			**Recvd: 11/29/07 11:30**	
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	**0.310**	J	ug/L	0.240	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
n-Propylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Styrene	<0.190		ug/L	0.190	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,1,1,2-Tetrachloroethane	<0.330		ug/L	0.330	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,1,2,2-Tetrachloroethane	<0.230		ug/L	0.230	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Tetrachloroethene	<0.380		ug/L	0.380	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Toluene	<0.140		ug/L	0.140	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,1,1-Trichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,1,2-Trichloroethane	<0.370		ug/L	0.370	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Trichloroethene	<0.240		ug/L	0.240	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Trichlorofluoromethane	<0.260		ug/L	0.260	4.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2,3-Trichloropropane	<0.700		ug/L	0.700	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,2,4-Trimethylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
1,3,5-Trimethylbenzene	<0.240		ug/L	0.240	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Vinyl chloride	<0.260		ug/L	0.260	1.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Xylenes, total	<0.300		ug/L	0.300	3.00	1	11/30/07 18:18	MMK	7120024	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*107 %*									
Surr: Toluene-d8 (80-110%)	*99 %*									
Surr: 4-Bromofluorobenzene (65-115%)	*97 %*									
Semivolatile Organics by GC/MS										
Acenaphthene	<1.89		ug/L	1.89	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Acenaphthylene	<1.41		ug/L	1.41	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Anthracene	<1.15		ug/L	1.15	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Benzidine	<33.0	ICV2, L1	ug/L	33.0	100	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Benzo (a) anthracene	<1.10		ug/L	1.10	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Benzo (b) fluoranthene	<1.90		ug/L	1.90	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Benzo (k) fluoranthene	<2.12		ug/L	2.12	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Benzo (a) pyrene	<1.93		ug/L	1.93	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Benzo (g,h,i) perylene	<2.03		ug/L	2.03	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Benzyl alcohol	<1.26		ug/L	1.26	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Butyl benzyl phthalate	<1.54		ug/L	1.54	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Bis(2-chloroethyl)ether	<1.50		ug/L	1.50	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Bis(2-chloroethoxy)methane	<1.52		ug/L	1.52	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Bis(2-ethylhexyl)phthalate	<1.60		ug/L	1.60	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Bis(2-chloroisopropyl) ether	<1.33		ug/L	1.33	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4-Bromophenyl phenyl ether	<1.96		ug/L	1.96	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Carbazole	<1.42		ug/L	1.42	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4-Chloroaniline	<1.23		ug/L	1.23	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2-Chloronaphthalene	<1.79		ug/L	1.79	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4-Chlorophenyl phenyl ether	<2.08		ug/L	2.08	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Chrysene	<1.33		ug/L	1.33	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Dibenzo (a,h) anthracene	<2.20		ug/L	2.20	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Dibenzofuran	<1.64		ug/L	1.64	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Di-n-butyl phthalate	<1.55		ug/L	1.55	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
1,2-Dichlorobenzene	<1.40		ug/L	1.40	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
1,3-Dichlorobenzene	<1.50		ug/L	1.50	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
1,4-Dichlorobenzene	<1.59		ug/L	1.59	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
3,3'-Dichlorobenzidine	<1.74		ug/L	1.74	50.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
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Received: 11/29/07
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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-01 (PZ-2 - Ground Water) - cont.						**Sampled: 11/27/07 11:35**			**Recvd: 11/29/07 11:30**	
Semivolatile Organics by GC/MS - cont.										
Diethyl phthalate	<1.34		ug/L	1.34	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Dimethyl phthalate	<1.55		ug/L	1.55	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2,4-Dinitrotoluene	<1.32		ug/L	1.32	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2,6-Dinitrotoluene	<1.93		ug/L	1.93	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Di-n-octyl phthalate	<1.78		ug/L	1.78	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Fluoranthene	<1.27		ug/L	1.27	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Fluorene	<1.56		ug/L	1.56	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Hexachlorobenzene	<2.01		ug/L	2.01	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Hexachlorobutadiene	<1.94		ug/L	1.94	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Hexachlorocyclopentadiene	<1.09		ug/L	1.09	20.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Hexachloroethane	<1.38		ug/L	1.38	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Indeno (1,2,3-cd) pyrene	<1.62		ug/L	1.62	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Isophorone	<1.49		ug/L	1.49	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2-Methylnaphthalene	<1.50		ug/L	1.50	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Naphthalene	<1.49		ug/L	1.49	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2-Nitroaniline	<1.54		ug/L	1.54	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
3-Nitroaniline	<1.68		ug/L	1.68	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4-Nitroaniline	<1.86		ug/L	1.86	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Nitrobenzene	<1.52		ug/L	1.52	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
N-Nitrosodimethylamine	<0.892		ug/L	0.892	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
N-Nitrosodiphenylamine	<1.82	ICV2	ug/L	1.82	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
N-Nitrosodi-n-propylamine	<1.95		ug/L	1.95	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Phenanthrene	<1.37		ug/L	1.37	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Pyrene	<1.28		ug/L	1.28	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Pyridine	<0.670		ug/L	0.670	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
1,2,4-Trichlorobenzene	<1.65		ug/L	1.65	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4-Chloro-3-methylphenol	<1.45		ug/L	1.45	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2-Chlorophenol	<1.38		ug/L	1.38	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Cresol(s)	<1.22		ug/L	1.22	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2,4-Dichlorophenol	<1.72		ug/L	1.72	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2,4-Dimethylphenol	<0.899		ug/L	0.899	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2,4-Dinitrophenol	<1.25		ug/L	1.25	20.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4,6-Dinitro-2-methylphenol	<1.64		ug/L	1.64	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2-Methylphenol (o-Cresol)	<1.22		ug/L	1.22	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4-Methylphenol (p-Cresol)	<1.05		ug/L	1.05	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2-Nitrophenol	<1.65		ug/L	1.65	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
4-Nitrophenol	<0.834		ug/L	0.834	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Pentachlorophenol	<1.22		ug/L	1.22	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Phenol	<0.730		ug/L	0.730	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2,4,5-Trichlorophenol	<1.78		ug/L	1.78	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
2,4,6-Trichlorophenol	<1.84		ug/L	1.84	10.0	1.03	12/10/07 18:35	AKE	7111234	SW 8270C
Surr: Nitrobenzene-d5 (15-110%)	*57 %*									
Surr: 2-Fluorobiphenyl (15-110%)	*54 %*									
Surr: Terphenyl-d14 (20-115%)	*85 %*									
Surr: Phenol-d6 (10-75%)	*26 %*									
Surr: 2-Fluorophenol (10-85%)	*39 %*									
Surr: 2,4,6-Tribromophenol (35-130%)	*86 %*									
VOC Preservation Check										
pH	<2.00		units		2.00	1	12/03/07 15:32	mmk	7120037	SW

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-02 (MW-1 - Ground Water)						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Sampled By: Robert B. Thomson					**Phone**	**262-798-8600**				
Total Metals by SW 846 Series Methods										
Arsenic	0.00137		mg/L		0.00100	1	12/04/07 14:26	llw	7111199	SW 7060A
Lead	<0.00400		mg/L		0.00400	1	12/03/07 11:51	llw	7111199	SW 7421
Volatile Organic Compounds										
Acetone	<4.62		ug/L	4.62	10.0	1	11/30/07 22:14	MMK	7120024	SW 8260B
Acrylonitrile	<1.28		ug/L	1.28	10.0	1	11/30/07 22:14	MMK	7120024	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	11/30/07 22:14	MMK	7120024	SW 8260B
Bromobenzene	<0.360		ug/L	0.360	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Bromochloromethane	<0.760		ug/L	0.760	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Bromodichloromethane	<0.200		ug/L	0.200	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Bromoform	<0.430		ug/L	0.430	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	11/30/07 22:14	MMK	7120024	SW 8260B
n-Butylbenzene	<0.310		ug/L	0.310	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
sec-Butylbenzene	<0.190		ug/L	0.190	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
tert-Butylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Carbon disulfide	<0.180		ug/L	0.180	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Carbon Tetrachloride	<0.310		ug/L	0.310	2.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Chlorobenzene	<0.170		ug/L	0.170	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Chlorodibromomethane	<0.260		ug/L	0.260	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Chloroethane	<0.500		ug/L	0.500	4.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Chloroform	<0.170		ug/L	0.170	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
2-Chlorotoluene	<0.350		ug/L	0.350	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
4-Chlorotoluene	<0.210		ug/L	0.210	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2-Dibromo-3-chloropropane	<0.860		ug/L	0.860	10.0	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2-Dibromoethane (EDB)	<0.250		ug/L	0.250	10.0	1	11/30/07 22:14	MMK	7120024	SW 8260B
Dibromomethane	<0.300		ug/L	0.300	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2-Dichlorobenzene	<0.210		ug/L	0.210	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,3-Dichlorobenzene	<0.220		ug/L	0.220	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,4-Dichlorobenzene	<0.160		ug/L	0.160	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Dichlorodifluoromethane	<0.390		ug/L	0.390	3.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,1-Dichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2-Dichloroethane	<0.200		ug/L	0.200	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,1-Dichloroethene	<0.370		ug/L	0.370	2.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
cis-1,2-Dichloroethene	<0.370		ug/L	0.370	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
trans-1,2-Dichloroethene	<0.310		ug/L	0.310	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
2,2-Dichloropropane	<0.480		ug/L	0.480	4.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,1-Dichloropropene	<0.240		ug/L	0.240	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
cis-1,3-Dichloropropene	<0.230		ug/L	0.230	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
trans-1,3-Dichloropropene	<0.170		ug/L	0.170	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Ethylbenzene	<0.250		ug/L	0.250	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Hexachlorobutadiene	<0.530		ug/L	0.530	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Hexane	<0.470		ug/L	0.470	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Isopropylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
p-Isopropyltoluene	<0.300		ug/L	0.300	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Methylene Chloride	<0.450		ug/L	0.450	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B

TestAmerica Cedar Falls
Angie Miller
Project Coordinator

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-02 (MW-1 - Ground Water) - cont.						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<0.240		ug/L	0.240	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
n-Propylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Styrene	<0.190		ug/L	0.190	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,1,1,2-Tetrachloroethane	<0.330		ug/L	0.330	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,1,2,2-Tetrachloroethane	<0.230		ug/L	0.230	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Tetrachloroethene	<0.380		ug/L	0.380	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Toluene	<0.140		ug/L	0.140	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,1,1-Trichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,1,2-Trichloroethane	<0.370		ug/L	0.370	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Trichloroethene	<0.240		ug/L	0.240	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Trichlorofluoromethane	<0.260		ug/L	0.260	4.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2,3-Trichloropropane	<0.700		ug/L	0.700	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,2,4-Trimethylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
1,3,5-Trimethylbenzene	<0.240		ug/L	0.240	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Vinyl chloride	<0.260		ug/L	0.260	1.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Xylenes, total	<0.300		ug/L	0.300	3.00	1	11/30/07 22:14	MMK	7120024	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*106 %*									
Surr: Toluene-d8 (80-110%)	*99 %*									
Surr: 4-Bromofluorobenzene (65-115%)	*97 %*									
Semivolatile Organics by GC/MS										
Acenaphthene	<1.89		ug/L	1.89	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Acenaphthylene	<1.41		ug/L	1.41	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Anthracene	<1.15		ug/L	1.15	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Benzidine	<33.0	ICV2, L1	ug/L	33.0	100	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Benzo (a) anthracene	<1.10		ug/L	1.10	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Benzo (b) fluoranthene	<1.90		ug/L	1.90	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Benzo (k) fluoranthene	<2.12		ug/L	2.12	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Benzo (a) pyrene	<1.93		ug/L	1.93	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Benzo (g,h,i) perylene	<2.03		ug/L	2.03	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Benzyl alcohol	<1.26		ug/L	1.26	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Butyl benzyl phthalate	<1.54		ug/L	1.54	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Bis(2-chloroethyl)ether	<1.50		ug/L	1.50	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Bis(2-chloroethoxy)methane	<1.52		ug/L	1.52	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Bis(2-ethylhexyl)phthalate	**3.89**	J	ug/L	1.60	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Bis(2-chloroisopropyl) ether	<1.33		ug/L	1.33	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4-Bromophenyl phenyl ether	<1.96		ug/L	1.96	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Carbazole	<1.42		ug/L	1.42	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4-Chloroaniline	<1.23		ug/L	1.23	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2-Chloronaphthalene	<1.79		ug/L	1.79	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4-Chlorophenyl phenyl ether	<2.08		ug/L	2.08	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Chrysene	<1.33		ug/L	1.33	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Dibenzo (a,h) anthracene	<2.20		ug/L	2.20	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Dibenzofuran	<1.64		ug/L	1.64	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Di-n-butyl phthalate	<1.55		ug/L	1.55	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
1,2-Dichlorobenzene	<1.40		ug/L	1.40	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
1,3-Dichlorobenzene	<1.50		ug/L	1.50	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
1,4-Dichlorobenzene	<1.59		ug/L	1.59	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
3,3'-Dichlorobenzidine	<1.74		ug/L	1.74	50.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C

TestAmerica Cedar Falls
Angie Miller
Project Coordinator

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-02 (MW-1 - Ground Water) - cont.						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Semivolatile Organics by GC/MS - cont.										
Diethyl phthalate	**5.98**	J	ug/L	1.34	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Dimethyl phthalate	<1.55		ug/L	1.55	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2,4-Dinitrotoluene	<1.32		ug/L	1.32	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2,6-Dinitrotoluene	<1.93		ug/L	1.93	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Di-n-octyl phthalate	<1.78		ug/L	1.78	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Fluoranthene	<1.27		ug/L	1.27	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Fluorene	<1.56		ug/L	1.56	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Hexachlorobenzene	<2.01		ug/L	2.01	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Hexachlorobutadiene	<1.94		ug/L	1.94	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Hexachlorocyclopentadiene	<1.09		ug/L	1.09	20.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Hexachloroethane	<1.38		ug/L	1.38	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Indeno (1,2,3-cd) pyrene	<1.62		ug/L	1.62	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Isophorone	<1.49		ug/L	1.49	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2-Methylnaphthalene	<1.50		ug/L	1.50	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Naphthalene	<1.49		ug/L	1.49	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2-Nitroaniline	<1.54		ug/L	1.54	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
3-Nitroaniline	<1.68		ug/L	1.68	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4-Nitroaniline	<1.86		ug/L	1.86	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Nitrobenzene	<1.52		ug/L	1.52	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
N-Nitrosodimethylamine	<0.892		ug/L	0.892	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
N-Nitrosodiphenylamine	<1.82	ICV2	ug/L	1.82	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
N-Nitrosodi-n-propylamine	<1.95		ug/L	1.95	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Phenanthrene	<1.37		ug/L	1.37	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Pyrene	<1.28		ug/L	1.28	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Pyridine	<0.670		ug/L	0.670	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
1,2,4-Trichlorobenzene	<1.65		ug/L	1.65	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4-Chloro-3-methylphenol	<1.45		ug/L	1.45	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2-Chlorophenol	<1.38		ug/L	1.38	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Cresol(s)	<1.22		ug/L	1.22	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2,4-Dichlorophenol	<1.72		ug/L	1.72	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2,4-Dimethylphenol	<0.899		ug/L	0.899	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2,4-Dinitrophenol	<1.25		ug/L	1.25	20.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4,6-Dinitro-2-methylphenol	<1.64		ug/L	1.64	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2-Methylphenol (o-Cresol)	<1.22		ug/L	1.22	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4-Methylphenol (p-Cresol)	<1.05		ug/L	1.05	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2-Nitrophenol	<1.65		ug/L	1.65	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
4-Nitrophenol	<0.834		ug/L	0.834	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Pentachlorophenol	<1.22		ug/L	1.22	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Phenol	<0.730		ug/L	0.730	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2,4,5-Trichlorophenol	<1.78		ug/L	1.78	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
2,4,6-Trichlorophenol	<1.84		ug/L	1.84	10.0	1.09	12/06/07 14:00	AKE	7111234	SW 8270C
Surr: Nitrobenzene-d5 (15-110%)	*61 %*									
Surr: 2-Fluorobiphenyl (15-110%)	*58 %*									
Surr: Terphenyl-d14 (20-115%)	*79 %*									
Surr: Phenol-d6 (10-75%)	*26 %*									
Surr: 2-Fluorophenol (10-85%)	*40 %*									
Surr: 2,4,6-Tribromophenol (35-130%)	*77 %*									
VOC Preservation Check										
pH	<2.00		units		2.00	1	12/03/07 15:32	mmk	7120037	SW

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-03 (Duplicate - Ground Water)						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Sampled By: Robert B. Thomson					**Phone**	**262-798-8600**				
Total Metals by SW 846 Series Methods										
Arsenic	**0.00132**		mg/L		0.00100	1	12/04/07 14:30	llw	7111199	SW 7060A
Lead	<0.00400		mg/L		0.00400	1	12/03/07 11:54	llw	7111199	SW 7421
Volatile Organic Compounds										
Acetone	<4.62		ug/L	4.62	10.0	1	11/30/07 22:44	MMK	7120024	SW 8260B
Acrylonitrile	<1.28		ug/L	1.28	10.0	1	11/30/07 22:44	MMK	7120024	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	11/30/07 22:44	MMK	7120024	SW 8260B
Bromobenzene	<0.360		ug/L	0.360	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Bromochloromethane	<0.760		ug/L	0.760	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Bromodichloromethane	<0.200		ug/L	0.200	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Bromoform	<0.430		ug/L	0.430	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	11/30/07 22:44	MMK	7120024	SW 8260B
n-Butylbenzene	<0.310		ug/L	0.310	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
sec-Butylbenzene	<0.190		ug/L	0.190	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
tert-Butylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Carbon disulfide	<0.180		ug/L	0.180	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Carbon Tetrachloride	<0.310		ug/L	0.310	2.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Chlorobenzene	<0.170		ug/L	0.170	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Chlorodibromomethane	<0.260		ug/L	0.260	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Chloroethane	<0.500		ug/L	0.500	4.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Chloroform	<0.170		ug/L	0.170	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
2-Chlorotoluene	<0.350		ug/L	0.350	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
4-Chlorotoluene	<0.210		ug/L	0.210	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2-Dibromo-3-chloropropane	<0.860		ug/L	0.860	10.0	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2-Dibromoethane (EDB)	<0.250		ug/L	0.250	10.0	1	11/30/07 22:44	MMK	7120024	SW 8260B
Dibromomethane	<0.300		ug/L	0.300	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2-Dichlorobenzene	<0.210		ug/L	0.210	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,3-Dichlorobenzene	<0.220		ug/L	0.220	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,4-Dichlorobenzene	<0.160		ug/L	0.160	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Dichlorodifluoromethane	<0.390		ug/L	0.390	3.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,1-Dichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2-Dichloroethane	<0.200		ug/L	0.200	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,1-Dichloroethene	<0.370		ug/L	0.370	2.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
cis-1,2-Dichloroethene	<0.370		ug/L	0.370	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
trans-1,2-Dichloroethene	<0.310		ug/L	0.310	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
2,2-Dichloropropane	<0.480		ug/L	0.480	4.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,1-Dichloropropene	<0.240		ug/L	0.240	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
cis-1,3-Dichloropropene	<0.230		ug/L	0.230	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
trans-1,3-Dichloropropene	<0.170		ug/L	0.170	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Ethylbenzene	<0.250		ug/L	0.250	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Hexachlorobutadiene	<0.530		ug/L	0.530	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Hexane	<0.470		ug/L	0.470	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Isopropylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
p-Isopropyltoluene	<0.300		ug/L	0.300	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Methylene Chloride	**0.500**	J	ug/L	0.450	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B

TestAmerica Cedar Falls
Angie Miller
Project Coordinator

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-03 (Duplicate - Ground Water) - cont.						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<0.240		ug/L	0.240	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
n-Propylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Styrene	<0.190		ug/L	0.190	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,1,1,2-Tetrachloroethane	<0.330		ug/L	0.330	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,1,2,2-Tetrachloroethane	<0.230		ug/L	0.230	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Tetrachloroethene	<0.380		ug/L	0.380	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Toluene	<0.140		ug/L	0.140	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,1,1-Trichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,1,2-Trichloroethane	<0.370		ug/L	0.370	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Trichloroethene	<0.240		ug/L	0.240	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Trichlorofluoromethane	<0.260		ug/L	0.260	4.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2,3-Trichloropropane	<0.700		ug/L	0.700	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,2,4-Trimethylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
1,3,5-Trimethylbenzene	<0.240		ug/L	0.240	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Vinyl chloride	<0.260		ug/L	0.260	1.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Xylenes, total	<0.300		ug/L	0.300	3.00	1	11/30/07 22:44	MMK	7120024	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*105 %*									
Surr: Toluene-d8 (80-110%)	*99 %*									
Surr: 4-Bromofluorobenzene (65-115%)	*97 %*									
Semivolatile Organics by GC/MS										
Acenaphthene	<1.89		ug/L	1.89	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Acenaphthylene	<1.41		ug/L	1.41	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Anthracene	<1.15		ug/L	1.15	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Benzidine	<33.0	ICV2, L1	ug/L	33.0	100	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Benzo (a) anthracene	<1.10		ug/L	1.10	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Benzo (b) fluoranthene	<1.90		ug/L	1.90	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Benzo (k) fluoranthene	<2.12		ug/L	2.12	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Benzo (a) pyrene	<1.93		ug/L	1.93	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Benzo (g,h,i) perylene	<2.03		ug/L	2.03	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Benzyl alcohol	<1.26		ug/L	1.26	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Butyl benzyl phthalate	<1.54		ug/L	1.54	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Bis(2-chloroethyl)ether	<1.50		ug/L	1.50	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Bis(2-chloroethoxy)methane	<1.52		ug/L	1.52	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Bis(2-ethylhexyl)phthalate	<1.60		ug/L	1.60	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Bis(2-chloroisopropyl) ether	<1.33		ug/L	1.33	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4-Bromophenyl phenyl ether	<1.96		ug/L	1.96	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Carbazole	<1.42		ug/L	1.42	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4-Chloroaniline	<1.23		ug/L	1.23	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2-Chloronaphthalene	<1.79		ug/L	1.79	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4-Chlorophenyl phenyl ether	<2.08		ug/L	2.08	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Chrysene	<1.33		ug/L	1.33	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Dibenzo (a,h) anthracene	<2.20		ug/L	2.20	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Dibenzofuran	<1.64		ug/L	1.64	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Di-n-butyl phthalate	<1.55		ug/L	1.55	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
1,2-Dichlorobenzene	<1.40		ug/L	1.40	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
1,3-Dichlorobenzene	<1.50		ug/L	1.50	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
1,4-Dichlorobenzene	<1.59		ug/L	1.59	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
3,3'-Dichlorobenzidine	<1.74		ug/L	1.74	50.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C

TestAmerica Cedar Falls
Angie Miller
Project Coordinator

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-03 (Duplicate - Ground Water) - cont.						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Semivolatile Organics by GC/MS - cont.										
Diethyl phthalate	<1.34		ug/L	1.34	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Dimethyl phthalate	<1.55		ug/L	1.55	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2,4-Dinitrotoluene	<1.32		ug/L	1.32	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2,6-Dinitrotoluene	<1.93		ug/L	1.93	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Di-n-octyl phthalate	<1.78		ug/L	1.78	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Fluoranthene	<1.27		ug/L	1.27	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Fluorene	<1.56		ug/L	1.56	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Hexachlorobenzene	<2.01		ug/L	2.01	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Hexachlorobutadiene	<1.94		ug/L	1.94	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Hexachlorocyclopentadiene	<1.09		ug/L	1.09	20.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Hexachloroethane	<1.38		ug/L	1.38	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Indeno (1,2,3-cd) pyrene	<1.62		ug/L	1.62	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Isophorone	<1.49		ug/L	1.49	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2-Methylnaphthalene	<1.50		ug/L	1.50	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Naphthalene	<1.49		ug/L	1.49	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2-Nitroaniline	<1.54		ug/L	1.54	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
3-Nitroaniline	<1.68		ug/L	1.68	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4-Nitroaniline	<1.86		ug/L	1.86	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Nitrobenzene	<1.52		ug/L	1.52	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
N-Nitrosodimethylamine	<0.892		ug/L	0.892	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
N-Nitrosodiphenylamine	<1.82	ICV2	ug/L	1.82	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
N-Nitrosodi-n-propylamine	<1.95		ug/L	1.95	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Phenanthrene	<1.37		ug/L	1.37	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Pyrene	<1.28		ug/L	1.28	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Pyridine	<0.670		ug/L	0.670	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
1,2,4-Trichlorobenzene	<1.65		ug/L	1.65	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4-Chloro-3-methylphenol	<1.45		ug/L	1.45	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2-Chlorophenol	<1.38		ug/L	1.38	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Cresol(s)	<1.22		ug/L	1.22	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2,4-Dichlorophenol	<1.72		ug/L	1.72	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2,4-Dimethylphenol	<0.899		ug/L	0.899	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2,4-Dinitrophenol	<1.25		ug/L	1.25	20.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4,6-Dinitro-2-methylphenol	<1.64		ug/L	1.64	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2-Methylphenol (o-Cresol)	<1.22		ug/L	1.22	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4-Methylphenol (p-Cresol)	<1.05		ug/L	1.05	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2-Nitrophenol	<1.65		ug/L	1.65	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
4-Nitrophenol	<0.834		ug/L	0.834	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Pentachlorophenol	<1.22		ug/L	1.22	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Phenol	<0.730		ug/L	0.730	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2,4,5-Trichlorophenol	<1.78		ug/L	1.78	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
2,4,6-Trichlorophenol	<1.84		ug/L	1.84	10.0	1.02	12/06/07 14:31	AKE	7111234	SW 8270C
Surr: Nitrobenzene-d5 (15-110%)	*61 %*									
Surr: 2-Fluorobiphenyl (15-110%)	*57 %*									
Surr: Terphenyl-d14 (20-115%)	*75 %*									
Surr: Phenol-d6 (10-75%)	*25 %*									
Surr: 2-Fluorophenol (10-85%)	*40 %*									
Surr: 2,4,6-Tribromophenol (35-130%)	*79 %*									
VOC Preservation Check										
pH	<2.00		units		2.00	1	12/03/07 15:32	mmk	7120037	SW

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-04 (Trip Blank - Ground Water)						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Sampled By:	**Robert B. Thomson**				**Phone**	**262-798-8600**				
Volatile Organic Compounds										
Acetone	<4.62		ug/L	4.62	10.0	1	11/30/07 19:17	MMK	7120024	SW 8260B
Acrylonitrile	<1.28		ug/L	1.28	10.0	1	11/30/07 19:17	MMK	7120024	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	11/30/07 19:17	MMK	7120024	SW 8260B
Bromobenzene	<0.360		ug/L	0.360	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Bromochloromethane	<0.760		ug/L	0.760	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Bromodichloromethane	<0.200		ug/L	0.200	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Bromoform	<0.430		ug/L	0.430	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	11/30/07 19:17	MMK	7120024	SW 8260B
n-Butylbenzene	<0.310		ug/L	0.310	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
sec-Butylbenzene	<0.190		ug/L	0.190	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
tert-Butylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Carbon disulfide	<0.180		ug/L	0.180	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Carbon Tetrachloride	<0.310		ug/L	0.310	2.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Chlorobenzene	<0.170		ug/L	0.170	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Chlorodibromomethane	<0.260		ug/L	0.260	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Chloroethane	<0.500		ug/L	0.500	4.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Chloroform	<0.170		ug/L	0.170	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
2-Chlorotoluene	<0.350		ug/L	0.350	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
4-Chlorotoluene	<0.210		ug/L	0.210	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2-Dibromo-3-chloropropane	<0.860		ug/L	0.860	10.0	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2-Dibromoethane (EDB)	<0.250		ug/L	0.250	10.0	1	11/30/07 19:17	MMK	7120024	SW 8260B
Dibromomethane	<0.300		ug/L	0.300	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2-Dichlorobenzene	<0.210		ug/L	0.210	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,3-Dichlorobenzene	<0.220		ug/L	0.220	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,4-Dichlorobenzene	<0.160		ug/L	0.160	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Dichlorodifluoromethane	<0.390		ug/L	0.390	3.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,1-Dichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2-Dichloroethane	<0.200		ug/L	0.200	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,1-Dichloroethene	<0.370		ug/L	0.370	2.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
cis-1,2-Dichloroethene	<0.370		ug/L	0.370	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
trans-1,2-Dichloroethene	<0.310		ug/L	0.310	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
2,2-Dichloropropane	<0.480		ug/L	0.480	4.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,1-Dichloropropene	<0.240		ug/L	0.240	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
cis-1,3-Dichloropropene	<0.230		ug/L	0.230	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
trans-1,3-Dichloropropene	<0.170		ug/L	0.170	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Ethylbenzene	<0.250		ug/L	0.250	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Hexachlorobutadiene	<0.530		ug/L	0.530	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Hexane	<0.470		ug/L	0.470	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Isopropylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
p-Isopropyltoluene	<0.300		ug/L	0.300	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Methylene Chloride	**0.820**	J	ug/L	0.450	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Methyl tert-Butyl Ether	<0.240		ug/L	0.240	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
n-Propylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Styrene	<0.190		ug/L	0.190	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,1,1,2-Tetrachloroethane	<0.330		ug/L	0.330	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-04 (Trip Blank - Ground Water) - cont.						**Sampled: 11/27/07 14:15**			**Recvd: 11/29/07 11:30**	
Volatile Organic Compounds - cont.										
1,1,2,2-Tetrachloroethane	<0.230		ug/L	0.230	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Tetrachloroethene	<0.380		ug/L	0.380	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Toluene	<0.140		ug/L	0.140	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,1,1-Trichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,1,2-Trichloroethane	<0.370		ug/L	0.370	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Trichloroethene	<0.240		ug/L	0.240	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Trichlorofluoromethane	<0.260		ug/L	0.260	4.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2,3-Trichloropropane	<0.700		ug/L	0.700	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,2,4-Trimethylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
1,3,5-Trimethylbenzene	<0.240		ug/L	0.240	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Vinyl chloride	<0.260		ug/L	0.260	1.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Xylenes, total	<0.300		ug/L	0.300	3.00	1	11/30/07 19:17	MMK	7120024	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*104 %*									
Surr: Toluene-d8 (80-110%)	*99 %*									
Surr: 4-Bromofluorobenzene (65-115%)	*96 %*									
VOC Preservation Check										
pH	<2.00		units		2.00	1	12/03/07 15:32	mmk	7120037	SW

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-05 (MW-6 - Ground Water)						**Sampled: 11/27/07 15:50**			**Recvd: 11/29/07 11:30**	
Sampled By: Robert B. Thomson					**Phone**	**262-798-8600**				
Total Metals by SW 846 Series Methods										
Arsenic	**0.00162**		mg/L		0.00100	1	12/04/07 14:33	llw	7111199	SW 7060A
Lead	<0.00400		mg/L		0.00400	1	12/03/07 11:57	llw	7111199	SW 7421
Volatile Organic Compounds										
Acetone	<4.62		ug/L	4.62	10.0	1	11/30/07 23:13	MMK	7120024	SW 8260B
Acrylonitrile	<1.28		ug/L	1.28	10.0	1	11/30/07 23:13	MMK	7120024	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	11/30/07 23:13	MMK	7120024	SW 8260B
Bromobenzene	<0.360		ug/L	0.360	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Bromochloromethane	<0.760		ug/L	0.760	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Bromodichloromethane	<0.200		ug/L	0.200	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Bromoform	<0.430		ug/L	0.430	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	11/30/07 23:13	MMK	7120024	SW 8260B
n-Butylbenzene	<0.310		ug/L	0.310	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
sec-Butylbenzene	**0.670**	J	ug/L	0.190	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
tert-Butylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Carbon disulfide	<0.180		ug/L	0.180	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Carbon Tetrachloride	<0.310		ug/L	0.310	2.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Chlorobenzene	<0.170		ug/L	0.170	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Chlorodibromomethane	<0.260		ug/L	0.260	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Chloroethane	<0.500		ug/L	0.500	4.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Chloroform	<0.170		ug/L	0.170	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
2-Chlorotoluene	<0.350		ug/L	0.350	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
4-Chlorotoluene	<0.210		ug/L	0.210	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2-Dibromo-3-chloropropane	<0.860		ug/L	0.860	10.0	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2-Dibromoethane (EDB)	<0.250		ug/L	0.250	10.0	1	11/30/07 23:13	MMK	7120024	SW 8260B
Dibromomethane	<0.300		ug/L	0.300	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2-Dichlorobenzene	<0.210		ug/L	0.210	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,3-Dichlorobenzene	<0.220		ug/L	0.220	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,4-Dichlorobenzene	<0.160		ug/L	0.160	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Dichlorodifluoromethane	<0.390		ug/L	0.390	3.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,1-Dichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2-Dichloroethane	<0.200		ug/L	0.200	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,1-Dichloroethene	<0.370		ug/L	0.370	2.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
cis-1,2-Dichloroethene	<0.370		ug/L	0.370	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
trans-1,2-Dichloroethene	<0.310		ug/L	0.310	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
2,2-Dichloropropane	<0.480		ug/L	0.480	4.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,1-Dichloropropene	<0.240		ug/L	0.240	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
cis-1,3-Dichloropropene	<0.230		ug/L	0.230	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
trans-1,3-Dichloropropene	<0.170		ug/L	0.170	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Ethylbenzene	<0.250		ug/L	0.250	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Hexachlorobutadiene	<0.530		ug/L	0.530	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Hexane	<0.470		ug/L	0.470	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Isopropylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
p-Isopropyltoluene	<0.300		ug/L	0.300	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Methylene Chloride	**0.460**	J	ug/L	0.450	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Sample ID: CQK1394-05 (MW-6 - Ground Water) - cont. **Sampled: 11/27/07 15:50** **Recvd: 11/29/07 11:30**

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<0.240		ug/L	0.240	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
n-Propylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Styrene	<0.190		ug/L	0.190	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,1,1,2-Tetrachloroethane	<0.330		ug/L	0.330	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,1,2,2-Tetrachloroethane	<0.230		ug/L	0.230	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Tetrachloroethene	<0.380		ug/L	0.380	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Toluene	<0.140		ug/L	0.140	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,1,1-Trichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,1,2-Trichloroethane	<0.370		ug/L	0.370	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Trichloroethene	<0.240		ug/L	0.240	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Trichlorofluoromethane	<0.260		ug/L	0.260	4.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2,3-Trichloropropane	<0.700		ug/L	0.700	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,2,4-Trimethylbenzene	**0.730**	J	ug/L	0.270	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
1,3,5-Trimethylbenzene	<0.240		ug/L	0.240	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Vinyl chloride	<0.260		ug/L	0.260	1.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Xylenes, total	**1.01**	J	ug/L	0.300	3.00	1	11/30/07 23:13	MMK	7120024	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*106 %*									
Surr: Toluene-d8 (80-110%)	*100 %*									
Surr: 4-Bromofluorobenzene (65-115%)	*96 %*									
Semivolatile Organics by GC/MS										
Acenaphthene	<1.89		ug/L	1.89	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Acenaphthylene	<1.41		ug/L	1.41	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Anthracene	<1.15		ug/L	1.15	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Benzidine	<33.0	ICV2, L1	ug/L	33.0	100	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Benzo (a) anthracene	<1.10		ug/L	1.10	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Benzo (b) fluoranthene	<1.90		ug/L	1.90	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Benzo (k) fluoranthene	<2.12		ug/L	2.12	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Benzo (a) pyrene	<1.93		ug/L	1.93	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Benzo (g,h,i) perylene	<2.03		ug/L	2.03	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Benzyl alcohol	<1.26		ug/L	1.26	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Butyl benzyl phthalate	<1.54		ug/L	1.54	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Bis(2-chloroethyl)ether	<1.50		ug/L	1.50	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Bis(2-chloroethoxy)methane	<1.52		ug/L	1.52	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Bis(2-ethylhexyl)phthalate	<1.60		ug/L	1.60	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Bis(2-chloroisopropyl) ether	<1.33		ug/L	1.33	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4-Bromophenyl phenyl ether	<1.96		ug/L	1.96	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Carbazole	<1.42		ug/L	1.42	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4-Chloroaniline	<1.23		ug/L	1.23	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2-Chloronaphthalene	<1.79		ug/L	1.79	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4-Chlorophenyl phenyl ether	<2.08		ug/L	2.08	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Chrysene	<1.33		ug/L	1.33	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Dibenzo (a,h) anthracene	<2.20		ug/L	2.20	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Dibenzofuran	<1.64		ug/L	1.64	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Di-n-butyl phthalate	<1.55		ug/L	1.55	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
1,2-Dichlorobenzene	<1.40		ug/L	1.40	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
1,3-Dichlorobenzene	<1.50		ug/L	1.50	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
1,4-Dichlorobenzene	<1.59		ug/L	1.59	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
3,3'-Dichlorobenzidine	<1.74		ug/L	1.74	50.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-05 (MW-6 - Ground Water) - cont.						**Sampled: 11/27/07 15:50**			**Recvd: 11/29/07 11:30**	
Semivolatile Organics by GC/MS - cont.										
Diethyl phthalate	<1.34		ug/L	1.34	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Dimethyl phthalate	<1.55		ug/L	1.55	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2,4-Dinitrotoluene	<1.32		ug/L	1.32	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2,6-Dinitrotoluene	<1.93		ug/L	1.93	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Di-n-octyl phthalate	<1.78		ug/L	1.78	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Fluoranthene	<1.27		ug/L	1.27	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Fluorene	<1.56		ug/L	1.56	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Hexachlorobenzene	<2.01		ug/L	2.01	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Hexachlorobutadiene	<1.94		ug/L	1.94	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Hexachlorocyclopentadiene	<1.09		ug/L	1.09	20.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Hexachloroethane	<1.38		ug/L	1.38	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Indeno (1,2,3-cd) pyrene	<1.62		ug/L	1.62	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Isophorone	<1.49		ug/L	1.49	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2-Methylnaphthalene	<1.50		ug/L	1.50	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Naphthalene	<1.49		ug/L	1.49	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2-Nitroaniline	<1.54		ug/L	1.54	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
3-Nitroaniline	<1.68		ug/L	1.68	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4-Nitroaniline	<1.86		ug/L	1.86	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Nitrobenzene	<1.52		ug/L	1.52	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
N-Nitrosodimethylamine	<0.892		ug/L	0.892	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
N-Nitrosodiphenylamine	<1.82	ICV2	ug/L	1.82	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
N-Nitrosodi-n-propylamine	<1.95		ug/L	1.95	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Phenanthrene	<1.37		ug/L	1.37	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Pyrene	<1.28		ug/L	1.28	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Pyridine	<0.670		ug/L	0.670	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
1,2,4-Trichlorobenzene	<1.65		ug/L	1.65	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4-Chloro-3-methylphenol	<1.45		ug/L	1.45	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2-Chlorophenol	<1.38		ug/L	1.38	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Cresol(s)	<1.22		ug/L	1.22	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2,4-Dichlorophenol	<1.72		ug/L	1.72	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2,4-Dimethylphenol	<0.899		ug/L	0.899	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2,4-Dinitrophenol	<1.25		ug/L	1.25	20.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4,6-Dinitro-2-methylphenol	<1.64		ug/L	1.64	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2-Methylphenol (o-Cresol)	<1.22		ug/L	1.22	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4-Methylphenol (p-Cresol)	<1.05		ug/L	1.05	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2-Nitrophenol	<1.65		ug/L	1.65	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
4-Nitrophenol	<0.834		ug/L	0.834	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Pentachlorophenol	<1.22		ug/L	1.22	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Phenol	<0.730		ug/L	0.730	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2,4,5-Trichlorophenol	<1.78		ug/L	1.78	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
2,4,6-Trichlorophenol	<1.84		ug/L	1.84	10.0	1.1	12/06/07 15:02	AKE	7111234	SW 8270C
Surr: Nitrobenzene-d5 (15-110%)	*61 %*									
Surr: 2-Fluorobiphenyl (15-110%)	*61 %*									
Surr: Terphenyl-d14 (20-115%)	*80 %*									
Surr: Phenol-d6 (10-75%)	*25 %*									
Surr: 2-Fluorophenol (10-85%)	*39 %*									
Surr: 2,4,6-Tribromophenol (35-130%)	*80 %*									
VOC Preservation Check										
pH	<2.00		units		2.00	1	12/03/07 15:32	mmk	7120037	SW

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-06 (MW-12 - Ground Water)						**Sampled: 11/27/07 17:15**			**Recvd: 11/29/07 11:30**	
Sampled By:	**Robert B. Thomson**				**Phone**	**262-798-8600**				
Total Metals by SW 846 Series Methods										
Arsenic	<0.00100		mg/L		0.00100	1	12/04/07 14:37	llw	7111199	SW 7060A
Lead	<0.00400		mg/L		0.00400	1	12/03/07 12:00	llw	7111199	SW 7421
Volatile Organic Compounds										
Acetone	<4.62		ug/L	4.62	10.0	1	11/30/07 23:42	MMK	7120024	SW 8260B
Acrylonitrile	<1.28		ug/L	1.28	10.0	1	11/30/07 23:42	MMK	7120024	SW 8260B
Benzene	<0.160		ug/L	0.160	0.500	1	11/30/07 23:42	MMK	7120024	SW 8260B
Bromobenzene	<0.360		ug/L	0.360	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Bromochloromethane	<0.760		ug/L	0.760	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Bromodichloromethane	<0.200		ug/L	0.200	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Bromoform	<0.430		ug/L	0.430	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Bromomethane	<0.480		ug/L	0.480	4.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
2-Butanone (MEK)	<0.910		ug/L	0.910	10.0	1	11/30/07 23:42	MMK	7120024	SW 8260B
n-Butylbenzene	<0.310		ug/L	0.310	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
sec-Butylbenzene	<0.190		ug/L	0.190	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
tert-Butylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Carbon disulfide	<0.180		ug/L	0.180	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Carbon Tetrachloride	<0.310		ug/L	0.310	2.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Chlorobenzene	<0.170		ug/L	0.170	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Chlorodibromomethane	<0.260		ug/L	0.260	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Chloroethane	<0.500		ug/L	0.500	4.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Chloroform	<0.170		ug/L	0.170	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Chloromethane	<0.200		ug/L	0.200	3.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
2-Chlorotoluene	<0.350		ug/L	0.350	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
4-Chlorotoluene	<0.210		ug/L	0.210	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2-Dibromo-3-chloropropane	<0.860		ug/L	0.860	10.0	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2-Dibromoethane (EDB)	<0.250		ug/L	0.250	10.0	1	11/30/07 23:42	MMK	7120024	SW 8260B
Dibromomethane	<0.300		ug/L	0.300	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2-Dichlorobenzene	<0.210		ug/L	0.210	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,3-Dichlorobenzene	<0.220		ug/L	0.220	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,4-Dichlorobenzene	<0.160		ug/L	0.160	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Dichlorodifluoromethane	<0.390		ug/L	0.390	3.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,1-Dichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2-Dichloroethane	<0.200		ug/L	0.200	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,1-Dichloroethene	<0.370		ug/L	0.370	2.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
cis-1,2-Dichloroethene	<0.370		ug/L	0.370	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
trans-1,2-Dichloroethene	<0.310		ug/L	0.310	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2-Dichloropropane	<0.400		ug/L	0.400	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,3-Dichloropropane	<0.190		ug/L	0.190	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
2,2-Dichloropropane	<0.480		ug/L	0.480	4.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,1-Dichloropropene	<0.240		ug/L	0.240	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
cis-1,3-Dichloropropene	<0.230		ug/L	0.230	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
trans-1,3-Dichloropropene	<0.170		ug/L	0.170	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Ethylbenzene	<0.250		ug/L	0.250	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Hexachlorobutadiene	<0.530		ug/L	0.530	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Hexane	<0.470		ug/L	0.470	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Isopropylbenzene	<0.200		ug/L	0.200	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
p-Isopropyltoluene	<0.300		ug/L	0.300	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Methylene Chloride	<0.450		ug/L	0.450	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-06 (MW-12 - Ground Water) - cont.						**Sampled: 11/27/07 17:15**			**Recvd: 11/29/07 11:30**	
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<0.240		ug/L	0.240	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
n-Propylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Styrene	<0.190		ug/L	0.190	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,1,1,2-Tetrachloroethane	<0.330		ug/L	0.330	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,1,2,2-Tetrachloroethane	<0.230		ug/L	0.230	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Tetrachloroethene	<0.380		ug/L	0.380	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Toluene	<0.140		ug/L	0.140	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2,3-Trichlorobenzene	<2.15		ug/L	2.15	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2,4-Trichlorobenzene	<0.490		ug/L	0.490	5.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,1,1-Trichloroethane	<0.190		ug/L	0.190	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,1,2-Trichloroethane	<0.370		ug/L	0.370	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Trichloroethene	<0.240		ug/L	0.240	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Trichlorofluoromethane	<0.260		ug/L	0.260	4.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2,3-Trichloropropane	<0.700		ug/L	0.700	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,2,4-Trimethylbenzene	<0.270		ug/L	0.270	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
1,3,5-Trimethylbenzene	<0.240		ug/L	0.240	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Vinyl chloride	<0.260		ug/L	0.260	1.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Xylenes, total	<0.300		ug/L	0.300	3.00	1	11/30/07 23:42	MMK	7120024	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*105 %*									
Surr: Toluene-d8 (80-110%)	*99 %*									
Surr: 4-Bromofluorobenzene (65-115%)	*96 %*									
Semivolatile Organics by GC/MS										
Acenaphthene	<1.89		ug/L	1.89	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Acenaphthylene	<1.41		ug/L	1.41	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Anthracene	<1.15		ug/L	1.15	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Benzidine	<33.0	ICV2, L1	ug/L	33.0	100	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Benzo (a) anthracene	<1.10		ug/L	1.10	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Benzo (b) fluoranthene	<1.90		ug/L	1.90	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Benzo (k) fluoranthene	<2.12		ug/L	2.12	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Benzo (a) pyrene	<1.93		ug/L	1.93	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Benzo (g,h,i) perylene	<2.03		ug/L	2.03	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Benzyl alcohol	<1.26		ug/L	1.26	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Butyl benzyl phthalate	<1.54		ug/L	1.54	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Bis(2-chloroethyl)ether	<1.50		ug/L	1.50	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Bis(2-chloroethoxy)methane	<1.52		ug/L	1.52	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Bis(2-ethylhexyl)phthalate	<1.60		ug/L	1.60	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Bis(2-chloroisopropyl) ether	<1.33		ug/L	1.33	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4-Bromophenyl phenyl ether	<1.96		ug/L	1.96	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Carbazole	<1.42		ug/L	1.42	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4-Chloroaniline	<1.23		ug/L	1.23	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2-Chloronaphthalene	<1.79		ug/L	1.79	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4-Chlorophenyl phenyl ether	<2.08		ug/L	2.08	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Chrysene	<1.33		ug/L	1.33	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Dibenzo (a,h) anthracene	<2.20		ug/L	2.20	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Dibenzofuran	<1.64		ug/L	1.64	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Di-n-butyl phthalate	<1.55		ug/L	1.55	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
1,2-Dichlorobenzene	<1.40		ug/L	1.40	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
1,3-Dichlorobenzene	<1.50		ug/L	1.50	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
1,4-Dichlorobenzene	<1.59		ug/L	1.59	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
3,3'-Dichlorobenzidine	<1.74		ug/L	1.74	50.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQK1394-06 (MW-12 - Ground Water) - cont.						**Sampled: 11/27/07 17:15**			**Recvd: 11/29/07 11:30**	
Semivolatile Organics by GC/MS - cont.										
Diethyl phthalate	<1.34		ug/L	1.34	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Dimethyl phthalate	<1.55		ug/L	1.55	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2,4-Dinitrotoluene	<1.32		ug/L	1.32	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2,6-Dinitrotoluene	<1.93		ug/L	1.93	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Di-n-octyl phthalate	<1.78		ug/L	1.78	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Fluoranthene	<1.27		ug/L	1.27	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Fluorene	<1.56		ug/L	1.56	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Hexachlorobenzene	<2.01		ug/L	2.01	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Hexachlorobutadiene	<1.94		ug/L	1.94	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Hexachlorocyclopentadiene	<1.09		ug/L	1.09	20.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Hexachloroethane	<1.38		ug/L	1.38	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Indeno (1,2,3-cd) pyrene	<1.62		ug/L	1.62	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Isophorone	<1.49		ug/L	1.49	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2-Methylnaphthalene	<1.50		ug/L	1.50	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Naphthalene	<1.49		ug/L	1.49	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2-Nitroaniline	<1.54		ug/L	1.54	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
3-Nitroaniline	<1.68		ug/L	1.68	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4-Nitroaniline	<1.86		ug/L	1.86	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Nitrobenzene	<1.52		ug/L	1.52	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
N-Nitrosodimethylamine	<0.892		ug/L	0.892	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
N-Nitrosodiphenylamine	<1.82	ICV2	ug/L	1.82	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
N-Nitrosodi-n-propylamine	<1.95		ug/L	1.95	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Phenanthrene	<1.37		ug/L	1.37	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Pyrene	<1.28		ug/L	1.28	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Pyridine	<0.670		ug/L	0.670	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
1,2,4-Trichlorobenzene	<1.65		ug/L	1.65	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4-Chloro-3-methylphenol	<1.45		ug/L	1.45	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2-Chlorophenol	<1.38		ug/L	1.38	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Cresol(s)	<1.22		ug/L	1.22	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2,4-Dichlorophenol	<1.72		ug/L	1.72	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2,4-Dimethylphenol	<0.899		ug/L	0.899	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2,4-Dinitrophenol	<1.25		ug/L	1.25	20.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4,6-Dinitro-2-methylphenol	<1.64		ug/L	1.64	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2-Methylphenol (o-Cresol)	<1.22		ug/L	1.22	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4-Methylphenol (p-Cresol)	<1.05		ug/L	1.05	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2-Nitrophenol	<1.65		ug/L	1.65	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
4-Nitrophenol	<0.834		ug/L	0.834	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Pentachlorophenol	<1.22		ug/L	1.22	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Phenol	<0.730		ug/L	0.730	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2,4,5-Trichlorophenol	<1.78		ug/L	1.78	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
2,4,6-Trichlorophenol	<1.84		ug/L	1.84	10.0	1.03	12/06/07 15:34	AKE	7111234	SW 8270C
Surr: Nitrobenzene-d5 (15-110%)	*59 %*									
Surr: 2-Fluorobiphenyl (15-110%)	*57 %*									
Surr: Terphenyl-d14 (20-115%)	*74 %*									
Surr: Phenol-d6 (10-75%)	*24 %*									
Surr: 2-Fluorophenol (10-85%)	*38 %*									
Surr: 2,4,6-Tribromophenol (35-130%)	*74 %*									
VOC Preservation Check										
pH	<2.00		units		2.00	1	12/03/07 15:32	mmk	7120037	SW

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Semivolatile Organics by GC/MS							
SW 8270C	7111234	CQK1394-01	970	1	11/30/07 14:06	TJT	SW 3510C_MS
SW 8270C	7111234	CQK1394-02	920	1	11/30/07 14:06	TJT	SW 3510C_MS
SW 8270C	7111234	CQK1394-03	980	1	11/30/07 14:06	TJT	SW 3510C_MS
SW 8270C	7111234	CQK1394-05	910	1	11/30/07 14:06	TJT	SW 3510C_MS
SW 8270C	7111234	CQK1394-06	970	1	11/30/07 14:06	AKE	SW 3510C_MS
Total Metals by SW 846 Series Methods							
SW 7060A	7111199	CQK1394-01	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7060A	7111199	CQK1394-02	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7060A	7111199	CQK1394-03	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7060A	7111199	CQK1394-05	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7060A	7111199	CQK1394-06	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7421	7111199	CQK1394-01	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7421	7111199	CQK1394-02	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7421	7111199	CQK1394-03	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7421	7111199	CQK1394-05	50	50	11/30/07 09:07	PTH	SW 3020A
SW 7421	7111199	CQK1394-06	50	50	11/30/07 09:07	PTH	SW 3020A

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Received: 11/29/07
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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Total Metals by SW 846 Series Methods														
Arsenic	7111199			mg/L	N/A	0.00100	<0.00100							
Lead	7111199			mg/L	N/A	0.00400	<0.00400							
Volatile Organic Compounds														
Acetone	7120024			ug/L	4.62	10.0	<4.62							
Acrylonitrile	7120024			ug/L	1.28	10.0	<1.28							
Benzene	7120024			ug/L	0.160	0.500	<0.160							
Bromobenzene	7120024			ug/L	0.360	1.00	<0.360							
Bromochloromethane	7120024			ug/L	0.760	5.00	<0.760							
Bromodichloromethane	7120024			ug/L	0.200	1.00	<0.200							
Bromoform	7120024			ug/L	0.430	5.00	<0.430							
Bromomethane	7120024			ug/L	0.480	4.00	<0.480							
2-Butanone (MEK)	7120024			ug/L	0.910	10.0	<0.910							
n-Butylbenzene	7120024			ug/L	0.310	1.00	<0.310							
sec-Butylbenzene	7120024			ug/L	0.190	1.00	<0.190							
tert-Butylbenzene	7120024			ug/L	0.200	1.00	<0.200							
Carbon disulfide	7120024			ug/L	0.180	1.00	<0.180							
Carbon Tetrachloride	7120024			ug/L	0.310	2.00	<0.310							
Chlorobenzene	7120024			ug/L	0.170	1.00	<0.170							
Chlorodibromomethane	7120024			ug/L	0.260	5.00	<0.260							
Chloroethane	7120024			ug/L	0.500	4.00	<0.500							
Chloroform	7120024			ug/L	0.170	1.00	<0.170							
Chloromethane	7120024			ug/L	0.200	3.00	<0.200							
2-Chlorotoluene	7120024			ug/L	0.350	1.00	<0.350							
4-Chlorotoluene	7120024			ug/L	0.210	1.00	<0.210							
1,2-Dibromo-3-chloropropane	7120024			ug/L	0.860	10.0	<0.860							
1,2-Dibromoethane (EDB)	7120024			ug/L	0.250	10.0	<0.250							
Dibromomethane	7120024			ug/L	0.300	1.00	<0.300							
1,2-Dichlorobenzene	7120024			ug/L	0.210	1.00	<0.210							
1,3-Dichlorobenzene	7120024			ug/L	0.220	1.00	<0.220							
1,4-Dichlorobenzene	7120024			ug/L	0.160	1.00	<0.160							
Dichlorodifluoromethane	7120024			ug/L	0.390	3.00	<0.390							
1,1-Dichloroethane	7120024			ug/L	0.190	1.00	<0.190							
1,2-Dichloroethane	7120024			ug/L	0.200	1.00	<0.200							
1,1-Dichloroethene	7120024			ug/L	0.370	2.00	<0.370							
cis-1,2-Dichloroethene	7120024			ug/L	0.370	1.00	<0.370							
trans-1,2-Dichloroethene	7120024			ug/L	0.310	1.00	<0.310							
1,2-Dichloropropane	7120024			ug/L	0.400	1.00	<0.400							
1,3-Dichloropropane	7120024			ug/L	0.190	1.00	<0.190							
2,2-Dichloropropane	7120024			ug/L	0.480	4.00	<0.480							
1,1-Dichloropropene	7120024			ug/L	0.240	1.00	<0.240							
cis-1,3-Dichloropropene	7120024			ug/L	0.230	5.00	<0.230							
trans-1,3-Dichloropropene	7120024			ug/L	0.170	5.00	<0.170							
Ethylbenzene	7120024			ug/L	0.250	1.00	<0.250							
Hexachlorobutadiene	7120024			ug/L	0.530	5.00	<0.530							
Hexane	7120024			ug/L	0.470	1.00	<0.470							

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
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Robert B. Thomson

Work Order: CQK1394
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Received: 11/29/07
Reported: 12/11/07 13:14

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds														
Isopropylbenzene	7120024			ug/L	0.200	1.00	<0.200							
p-Isopropyltoluene	7120024			ug/L	0.300	1.00	<0.300							
Methylene Chloride	7120024			ug/L	0.450	5.00	0.750							J
Methyl tert-Butyl Ether	7120024			ug/L	0.240	1.00	<0.240							
n-Propylbenzene	7120024			ug/L	0.270	1.00	<0.270							
Styrene	7120024			ug/L	0.190	1.00	<0.190							
1,1,1,2-Tetrachloroethane	7120024			ug/L	0.330	1.00	<0.330							
1,1,2,2-Tetrachloroethane	7120024			ug/L	0.230	1.00	<0.230							
Tetrachloroethene	7120024			ug/L	0.380	1.00	<0.380							
Toluene	7120024			ug/L	0.140	1.00	<0.140							
1,2,3-Trichlorobenzene	7120024			ug/L	2.15	5.00	<2.15							
1,2,4-Trichlorobenzene	7120024			ug/L	0.490	5.00	<0.490							
1,1,1-Trichloroethane	7120024			ug/L	0.190	1.00	<0.190							
1,1,2-Trichloroethane	7120024			ug/L	0.370	1.00	<0.370							
Trichloroethene	7120024			ug/L	0.240	1.00	<0.240							
Trichlorofluoromethane	7120024			ug/L	0.260	4.00	<0.260							
1,2,3-Trichloropropane	7120024			ug/L	0.700	1.00	<0.700							
1,2,4-Trimethylbenzene	7120024			ug/L	0.270	1.00	<0.270							
1,3,5-Trimethylbenzene	7120024			ug/L	0.240	1.00	<0.240							
Vinyl chloride	7120024			ug/L	0.260	1.00	<0.260							
Xylenes, total	7120024			ug/L	0.300	3.00	<0.300							
Surrogate: Dibromofluoromethane	*7120024*			ug/L					*105*		*80-120*			
Surrogate: Toluene-d8	*7120024*			ug/L					*98*		*80-110*			
Surrogate: 4-Bromofluorobenzene	*7120024*			ug/L					*99*		*65-115*			
Semivolatile Organics by GC/MS														
Acenaphthene	7111234			ug/L	3.78	20.0	<3.78							
Acenaphthylene	7111234			ug/L	2.82	20.0	<2.82							
Anthracene	7111234			ug/L	2.30	20.0	<2.30							
Benzidine	7111234			ug/L	66.0	200	<66.0							ICV2
Benzo (a) anthracene	7111234			ug/L	2.20	20.0	<2.20							
Benzo (b) fluoranthene	7111234			ug/L	3.80	20.0	<3.80							
Benzo (k) fluoranthene	7111234			ug/L	4.24	20.0	<4.24							
Benzo (a) pyrene	7111234			ug/L	3.86	20.0	<3.86							
Benzo (g,h,i) perylene	7111234			ug/L	4.06	20.0	<4.06							
Benzyl alcohol	7111234			ug/L	2.52	20.0	<2.52							
Butyl benzyl phthalate	7111234			ug/L	3.08	20.0	<3.08							
Bis(2-chloroethyl)ether	7111234			ug/L	3.00	20.0	<3.00							
Bis(2-chloroethoxy)methane	7111234			ug/L	3.04	20.0	<3.04							
Bis(2-ethylhexyl)phthalate	7111234			ug/L	3.20	20.0	<3.20							
Bis(2-chloroisopropyl) ether	7111234			ug/L	2.66	20.0	<2.66							
4-Bromophenyl phenyl ether	7111234			ug/L	3.92	20.0	<3.92							
Carbazole	7111234			ug/L	2.84	20.0	<2.84							
4-Chloroaniline	7111234			ug/L	2.46	20.0	<2.46							
2-Chloronaphthalene	7111234			ug/L	3.58	20.0	<3.58							

HYDE ENVIRONMENTAL, INC.
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Robert B. Thomson

Work Order: CQK1394
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Received: 11/29/07
Reported: 12/11/07 13:14

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Semivolatile Organics by GC/MS														
4-Chlorophenyl phenyl ether	7111234			ug/L	4.16	20.0	<4.16							
Chrysene	7111234			ug/L	2.66	20.0	<2.66							
Dibenzo (a,h) anthracene	7111234			ug/L	4.40	20.0	<4.40							
Dibenzofuran	7111234			ug/L	3.28	20.0	<3.28							
Di-n-butyl phthalate	7111234			ug/L	3.10	20.0	<3.10							
1,2-Dichlorobenzene	7111234			ug/L	2.80	20.0	<2.80							
1,3-Dichlorobenzene	7111234			ug/L	3.00	20.0	<3.00							
1,4-Dichlorobenzene	7111234			ug/L	3.18	20.0	<3.18							
3,3'-Dichlorobenzidine	7111234			ug/L	3.48	100	<3.48							
Diethyl phthalate	7111234			ug/L	2.68	20.0	5.21							J
Dimethyl phthalate	7111234			ug/L	3.10	20.0	<3.10							
2,4-Dinitrotoluene	7111234			ug/L	2.64	20.0	<2.64							
2,6-Dinitrotoluene	7111234			ug/L	3.86	20.0	<3.86							
Di-n-octyl phthalate	7111234			ug/L	3.56	20.0	<3.56							
Fluoranthene	7111234			ug/L	2.54	20.0	<2.54							
Fluorene	7111234			ug/L	3.12	20.0	<3.12							
Hexachlorobenzene	7111234			ug/L	4.02	20.0	<4.02							
Hexachlorobutadiene	7111234			ug/L	3.88	20.0	<3.88							
Hexachlorocyclopentadiene	7111234			ug/L	2.18	40.0	<2.18							
Hexachloroethane	7111234			ug/L	2.76	20.0	<2.76							
Indeno (1,2,3-cd) pyrene	7111234			ug/L	3.24	20.0	<3.24							
Isophorone	7111234			ug/L	2.98	20.0	<2.98							
2-Methylnaphthalene	7111234			ug/L	3.00	20.0	<3.00							
Naphthalene	7111234			ug/L	2.98	20.0	<2.98							
2-Nitroaniline	7111234			ug/L	3.08	20.0	<3.08							
3-Nitroaniline	7111234			ug/L	3.36	20.0	<3.36							
4-Nitroaniline	7111234			ug/L	3.72	20.0	<3.72							
Nitrobenzene	7111234			ug/L	3.04	20.0	<3.04							
N-Nitrosodimethylamine	7111234			ug/L	1.78	20.0	<1.78							
N-Nitrosodiphenylamine	7111234			ug/L	3.64	20.0	<3.64							ICV2
N-Nitrosodi-n-propylamine	7111234			ug/L	3.90	20.0	<3.90							
Phenanthrene	7111234			ug/L	2.74	20.0	<2.74							
Pyrene	7111234			ug/L	2.56	20.0	<2.56							
Pyridine	7111234			ug/L	1.34	20.0	<1.34							
1,2,4-Trichlorobenzene	7111234			ug/L	3.30	20.0	<3.30							
4-Chloro-3-methylphenol	7111234			ug/L	2.90	20.0	<2.90							
2-Chlorophenol	7111234			ug/L	2.76	20.0	<2.76							
Cresol(s)	7111234			ug/L	2.44	20.0	<2.44							
2,4-Dichlorophenol	7111234			ug/L	3.44	20.0	<3.44							
2,4-Dimethylphenol	7111234			ug/L	1.80	20.0	<1.80							
2,4-Dinitrophenol	7111234			ug/L	2.50	40.0	<2.50							
4,6-Dinitro-2-methylphenol	7111234			ug/L	3.28	20.0	<3.28							
2-Methylphenol (o-Cresol)	7111234			ug/L	2.44	20.0	<2.44							
4-Methylphenol (p-Cresol)	7111234			ug/L	2.10	20.0	<2.10							
2-Nitrophenol	7111234			ug/L	3.30	20.0	<3.30							

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Semivolatile Organics by GC/MS														
4-Nitrophenol	7111234			ug/L	1.67	20.0	<1.67							
Pentachlorophenol	7111234			ug/L	2.44	20.0	<2.44							
Phenol	7111234			ug/L	1.46	20.0	<1.46							
2,4,5-Trichlorophenol	7111234			ug/L	3.56	20.0	<3.56							
2,4,6-Trichlorophenol	7111234			ug/L	3.68	20.0	<3.68							
Surrogate: Nitrobenzene-d5	*7111234*			ug/L					*91*		*15-110*			
Surrogate: 2-Fluorobiphenyl	*7111234*			ug/L					*103*		*15-110*			
Surrogate: Terphenyl-d14	*7111234*			ug/L					*97*		*20-115*			
Surrogate: Phenol-d6	*7111234*			ug/L					*32*		*10-75*			
Surrogate: 2-Fluorophenol	*7111234*			ug/L					*57*		*10-85*			
Surrogate: 2,4,6-Tribromophenol	*7111234*			ug/L					*107*		*35-130*			

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Total Metals by SW 846 Series Methods														
Arsenic	7111199		0.0400	mg/L	N/A	0.00200	0.0397		99		80-120			
Lead	7111199		0.0400	mg/L	N/A	0.00400	0.0392		98		85-115			
Volatile Organic Compounds														
Acetone	7120024		20.0	ug/L	N/A	N/A	17.7		89		50-145			
Acrylonitrile	7120024		20.0	ug/L	N/A	N/A	19.7		99		50-145			
Benzene	7120024		20.0	ug/L	N/A	N/A	19.6		98		75-125			
Bromobenzene	7120024		20.0	ug/L	N/A	N/A	20.5		102		75-120			
Bromochloromethane	7120024		20.0	ug/L	N/A	N/A	20.9		105		70-140			
Bromodichloromethane	7120024		20.0	ug/L	N/A	N/A	20.6		103		75-115			
Bromoform	7120024		20.0	ug/L	N/A	N/A	20.4		102		55-115			
Bromomethane	7120024		20.0	ug/L	N/A	N/A	10.9		55		40-130			
2-Butanone (MEK)	7120024		20.0	ug/L	N/A	N/A	20.5		103		50-140			
n-Butylbenzene	7120024		20.0	ug/L	N/A	N/A	18.9		95		65-130			
sec-Butylbenzene	7120024		20.0	ug/L	N/A	N/A	18.7		94		70-125			
tert-Butylbenzene	7120024		20.0	ug/L	N/A	N/A	18.3		91		70-125			
Carbon disulfide	7120024		20.0	ug/L	N/A	N/A	19.6		98		55-130			
Carbon Tetrachloride	7120024		20.0	ug/L	N/A	N/A	22.3		111		65-120			
Chlorobenzene	7120024		20.0	ug/L	N/A	N/A	20.1		101		75-115			
Chlorodibromomethane	7120024		20.0	ug/L	N/A	N/A	20.8		104		65-110			
Chloroethane	7120024		20.0	ug/L	N/A	N/A	20.3		102		60-145			
Chloroform	7120024		20.0	ug/L	N/A	N/A	21.7		109		70-125			
Chloromethane	7120024		20.0	ug/L	N/A	N/A	17.1		86		35-130			
2-Chlorotoluene	7120024		20.0	ug/L	N/A	N/A	19.9		99		75-125			
4-Chlorotoluene	7120024		20.0	ug/L	N/A	N/A	19.8		99		70-125			
1,2-Dibromo-3-chloropropane	7120024		20.0	ug/L	N/A	N/A	19.2		96		35-120			
1,2-Dibromoethane (EDB)	7120024		20.0	ug/L	N/A	N/A	20.1		101		75-120			
Dibromomethane	7120024		20.0	ug/L	N/A	N/A	21.5		107		75-125			
1,2-Dichlorobenzene	7120024		20.0	ug/L	N/A	N/A	19.6		98		70-115			
1,3-Dichlorobenzene	7120024		20.0	ug/L	N/A	N/A	20.0		100		70-120			
1,4-Dichlorobenzene	7120024		20.0	ug/L	N/A	N/A	20.1		100		70-120			
Dichlorodifluoromethane	7120024		20.0	ug/L	N/A	N/A	21.6		108		50-140			
1,1-Dichloroethane	7120024		20.0	ug/L	N/A	N/A	20.8		104		50-145			
1,2-Dichloroethane	7120024		20.0	ug/L	N/A	N/A	20.6		103		70-130			
1,1-Dichloroethene	7120024		20.0	ug/L	N/A	N/A	21.4		107		65-135			
cis-1,2-Dichloroethene	7120024		20.0	ug/L	N/A	N/A	20.3		102		75-130			
trans-1,2-Dichloroethene	7120024		20.0	ug/L	N/A	N/A	20.6		103		65-130			
1,2-Dichloropropane	7120024		20.0	ug/L	N/A	N/A	19.4		97		70-125			
1,3-Dichloropropane	7120024		20.0	ug/L	N/A	N/A	19.8		99		75-125			
2,2-Dichloropropane	7120024		20.0	ug/L	N/A	N/A	21.5		108		35-130			
1,1-Dichloropropene	7120024		20.0	ug/L	N/A	N/A	18.6		93		65-130			
cis-1,3-Dichloropropene	7120024		20.0	ug/L	N/A	N/A	18.7		94		55-115			
trans-1,3-Dichloropropene	7120024		20.0	ug/L	N/A	N/A	18.6		93		45-120			
Ethylbenzene	7120024		20.0	ug/L	N/A	N/A	19.3		96		75-125			
Hexachlorobutadiene	7120024		20.0	ug/L	N/A	N/A	20.6		103		65-110			
Hexane	7120024		20.0	ug/L	N/A	N/A	18.5		92		50-135			

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Received: 11/29/07
Reported: 12/11/07 13:14

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds														
Isopropylbenzene	7120024		20.0	ug/L	N/A	N/A	18.9		94		75-120			
p-Isopropyltoluene	7120024		20.0	ug/L	N/A	N/A	19.4		97		70-125			
Methylene Chloride	7120024		20.0	ug/L	N/A	N/A	23.5		118		65-135			
Methyl tert-Butyl Ether	7120024		20.0	ug/L	N/A	N/A	19.7		99		60-135			
n-Propylbenzene	7120024		20.0	ug/L	N/A	N/A	19.3		97		65-125			
Styrene	7120024		20.0	ug/L	N/A	N/A	19.6		98		70-120			
1,1,1,2-Tetrachloroethane	7120024		20.0	ug/L	N/A	N/A	20.6		103		75-115			
1,1,2,2-Tetrachloroethane	7120024		20.0	ug/L	N/A	N/A	20.5		102		70-120			
Tetrachloroethene	7120024		20.0	ug/L	N/A	N/A	20.8		104		70-120			
Toluene	7120024		20.0	ug/L	N/A	N/A	20.0		100		75-120			
1,2,3-Trichlorobenzene	7120024		20.0	ug/L	N/A	N/A	19.5		98		30-125			
1,2,4-Trichlorobenzene	7120024		20.0	ug/L	N/A	N/A	18.2		91		50-110			
1,1,1-Trichloroethane	7120024		20.0	ug/L	N/A	N/A	22.2		111		70-120			
1,1,2-Trichloroethane	7120024		20.0	ug/L	N/A	N/A	21.5		108		75-120			
Trichloroethene	7120024		20.0	ug/L	N/A	N/A	20.6		103		75-120			
Trichlorofluoromethane	7120024		20.0	ug/L	N/A	N/A	22.8		114		65-130			
1,2,3-Trichloropropane	7120024		20.0	ug/L	N/A	N/A	20.1		101		75-120			
1,2,4-Trimethylbenzene	7120024		20.0	ug/L	N/A	N/A	19.8		99		70-120			
1,3,5-Trimethylbenzene	7120024		20.0	ug/L	N/A	N/A	19.9		100		75-125			
Vinyl chloride	7120024		20.0	ug/L	N/A	N/A	20.3		102		60-135			
Xylenes, total	7120024		60.0	ug/L	N/A	N/A	56.5		94		75-125			
Surrogate: Dibromofluoromethane	*7120024*			ug/L					*107*		*80-115*			
Surrogate: Toluene-d8	*7120024*			ug/L					*100*		*85-110*			
Surrogate: 4-Bromofluorobenzene	*7120024*			ug/L					*102*		*80-115*			
Semivolatile Organics by GC/MS														
Acenaphthene	7111234		100	ug/L	1.89	10.0	77.3	78.7	77	79	45-120	2	35	
Acenaphthylene	7111234		100	ug/L	1.41	10.0	76.3	78.5	76	79	45-115	3	35	
Anthracene	7111234		100	ug/L	1.15	10.0	84.3	88.3	84	88	50-125	5	35	
Benzidine	7111234		100	ug/L	33.0	100	<33.0	<33.0			5-95		35	ICV2,L1
Benzo (a) anthracene	7111234		100	ug/L	1.10	10.0	85.0	88.9	85	89	50-130	4	35	
Benzo (b) fluoranthene	7111234		100	ug/L	1.90	10.0	86.0	88.1	86	88	50-130	2	35	
Benzo (k) fluoranthene	7111234		100	ug/L	2.12	10.0	82.8	86.1	83	86	50-130	4	35	
Benzo (a) pyrene	7111234		100	ug/L	1.93	10.0	72.7	82.5	73	82	45-125	13	35	
Benzo (g,h,i) perylene	7111234		100	ug/L	2.03	10.0	91.0	94.3	91	94	55-125	4	35	
Benzyl alcohol	7111234		100	ug/L	1.26	10.0	62.9	66.8	63	67	35-100	6	35	
Butyl benzyl phthalate	7111234		100	ug/L	1.54	10.0	86.6	87.9	87	88	45-140	1	35	
Bis(2-chloroethyl)ether	7111234		100	ug/L	1.50	10.0	70.6	73.3	71	73	40-110	4	30	
Bis(2-chloroethoxy)methane	7111234		100	ug/L	1.52	10.0	75.9	74.9	76	75	40-110	1	30	
Bis(2-ethylhexyl)phthalate	7111234		100	ug/L	1.60	10.0	86.5	87.2	86	87	45-140	1	35	
Bis(2-chloroisopropyl) ether	7111234		100	ug/L	1.33	10.0	69.2	73.0	69	73	40-110	5	30	
4-Bromophenyl phenyl ether	7111234		100	ug/L	1.96	10.0	83.4	84.2	83	84	55-130	1	35	
Carbazole	7111234		100	ug/L	1.42	10.0	87.6	89.3	88	89	40-135	2	35	
4-Chloroaniline	7111234		100	ug/L	1.23	10.0	35.2	40.9	35	41	15-110	15	35	
2-Chloronaphthalene	7111234		100	ug/L	1.79	10.0	77.5	76.8	77	77	40-120	1	35	

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Semivolatile Organics by GC/MS														
4-Chlorophenyl phenyl ether	7111234		100	ug/L	2.08	10.0	81.0	80.2	81	80	50-125	1	35	
Chrysene	7111234		100	ug/L	1.33	10.0	85.7	90.0	86	90	50-130	5	35	
Dibenzo (a,h) anthracene	7111234		100	ug/L	2.20	10.0	89.2	91.6	89	92	55-130	3	30	
Dibenzofuran	7111234		100	ug/L	1.64	10.0	81.7	80.7	82	81	45-130	1	30	
Di-n-butyl phthalate	7111234		100	ug/L	1.55	10.0	90.5	90.9	91	91	50-135	0	35	
1,2-Dichlorobenzene	7111234		100	ug/L	1.40	10.0	68.5	70.4	69	70	35-105	3	30	
1,3-Dichlorobenzene	7111234		100	ug/L	1.50	10.0	67.6	68.7	68	69	35-105	2	35	
1,4-Dichlorobenzene	7111234		100	ug/L	1.59	10.0	67.1	70.4	67	70	35-105	5	35	
3,3'-Dichlorobenzidine	7111234		100	ug/L	1.74	50.0	65.4	72.0	65	72	25-120	10	35	
Diethyl phthalate	7111234		100	ug/L	1.34	10.0	84.2	83.9	84	84	45-135	0	35	
Dimethyl phthalate	7111234		100	ug/L	1.55	10.0	81.9	80.9	82	81	50-130	1	35	
2,4-Dinitrotoluene	7111234		100	ug/L	1.32	10.0	85.8	86.7	86	87	55-135	1	35	
2,6-Dinitrotoluene	7111234		100	ug/L	1.93	10.0	85.2	85.0	85	85	55-135	0	35	
Di-n-octyl phthalate	7111234		100	ug/L	1.78	10.0	85.9	87.0	86	87	45-140	1	35	
Fluoranthene	7111234		100	ug/L	1.27	10.0	86.1	90.0	86	90	50-130	4	35	
Fluorene	7111234		100	ug/L	1.56	10.0	80.8	81.6	81	82	50-125	1	35	
Hexachlorobenzene	7111234		100	ug/L	2.01	10.0	85.6	87.1	86	87	55-135	2	35	
Hexachlorobutadiene	7111234		100	ug/L	1.94	10.0	72.1	72.5	72	72	35-100	1	35	
Hexachlorocyclopentadiene	7111234		100	ug/L	1.09	20.0	49.0	53.5	49	54	25-110	9	35	
Hexachloroethane	7111234		100	ug/L	1.38	10.0	65.9	70.0	66	70	30-110	6	35	
Indeno (1,2,3-cd) pyrene	7111234		100	ug/L	1.62	10.0	89.2	91.6	89	92	50-130	3	30	
Isophorone	7111234		100	ug/L	1.49	10.0	75.0	76.4	75	76	40-115	2	30	
2-Methylnaphthalene	7111234		100	ug/L	1.50	10.0	74.3	74.9	74	75	40-110	1	35	
Naphthalene	7111234		100	ug/L	1.49	10.0	75.0	78.2	75	78	40-105	4	35	
2-Nitroaniline	7111234		100	ug/L	1.54	10.0	85.2	86.1	85	86	45-135	1	30	
3-Nitroaniline	7111234		100	ug/L	1.68	10.0	76.6	77.7	77	78	40-135	1	35	
4-Nitroaniline	7111234		100	ug/L	1.86	10.0	84.9	85.4	85	85	40-135	1	35	
Nitrobenzene	7111234		100	ug/L	1.52	10.0	77.1	78.6	77	79	40-110	2	30	
N-Nitrosodimethylamine	7111234		100	ug/L	0.892	10.0	48.7	49.7	49	50	25-75	2	35	
N-Nitrosodiphenylamine	7111234		100	ug/L	1.82	10.0	70.1	76.4	70	76	35-130	9	35	ICV2
N-Nitrosodi-n-propylamine	7111234		100	ug/L	1.95	10.0	69.4	72.4	69	72	40-115	4	30	
Phenanthrene	7111234		100	ug/L	1.37	10.0	86.4	90.8	86	91	50-125	5	35	
Pyrene	7111234		100	ug/L	1.28	10.0	85.7	90.4	86	90	50-130	5	35	
Pyridine	7111234		100	ug/L	0.670	10.0	43.9	48.2	44	48	20-70	9	35	
1,2,4-Trichlorobenzene	7111234		100	ug/L	1.65	10.0	74.3	74.2	74	74	35-110	0	35	
4-Chloro-3-methylphenol	7111234		100	ug/L	1.45	10.0	76.5	78.8	76	79	40-115	3	35	
2-Chlorophenol	7111234		100	ug/L	1.38	10.0	68.1	73.6	68	74	40-105	8	35	
Cresol(s)	7111234		200	ug/L	1.22	10.0	109	118	54	59	30-85	8	35	
2,4-Dichlorophenol	7111234		100	ug/L	1.72	10.0	74.2	77.9	74	78	40-110	5	35	
2,4-Dimethylphenol	7111234		100	ug/L	0.899	10.0	42.8	42.1	43	42	20-95	1	35	
2,4-Dinitrophenol	7111234		100	ug/L	1.25	20.0	24.9	31.7	25	32	25-120	24	35	
4,6-Dinitro-2-methylphenol	7111234		100	ug/L	1.64	10.0	43.8	54.0	44	54	40-135	21	35	
2-Methylphenol (o-Cresol)	7111234		100	ug/L	1.22	10.0	56.4	61.7	56	62	30-95	9	35	
4-Methylphenol (p-Cresol)	7111234		100	ug/L	1.05	10.0	52.6	56.5	53	56	30-90	7	35	
2-Nitrophenol	7111234		100	ug/L	1.65	10.0	75.2	78.3	75	78	45-110	4	35	

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Semivolatile Organics by GC/MS														
4-Nitrophenol	7111234		100	ug/L	0.834	10.0	36.1	37.2	36	37	15-65	3	35	
Pentachlorophenol	7111234		100	ug/L	1.22	10.0	56.1	64.9	56	65	35-130	14	35	
Phenol	7111234		100	ug/L	0.730	10.0	30.3	32.5	30	33	15-50	7	35	
2,4,5-Trichlorophenol	7111234		100	ug/L	1.78	10.0	81.6	82.5	82	83	50-125	1	35	
2,4,6-Trichlorophenol	7111234		100	ug/L	1.84	10.0	78.9	78.7	79	79	45-125	0	35	
Surrogate: Nitrobenzene-d5	*7111234*			ug/L					*77*	*79*	*40-110*			
Surrogate: 2-Fluorobiphenyl	*7111234*			ug/L					*75*	*76*	*40-115*			
Surrogate: Terphenyl-d14	*7111234*			ug/L					*91*	*88*	*45-130*			
Surrogate: Phenol-d6	*7111234*			ug/L					*30*	*32*	*10-90*			
Surrogate: 2-Fluorophenol	*7111234*			ug/L					*47*	*49*	*20-65*			
Surrogate: 2,4,6-Tribromophenol	*7111234*			ug/L					*89*	*89*	*45-140*			

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Total Metals by SW 846 Series Methods														
QC Source Sample: CQK1394-01														
Arsenic	7111199	0.0358	0.0400	mg/L	N/A	0.0100	0.0767	0.0793	102	109	75-125	3	20	
Lead	7111199	0.00585	0.0400	mg/L	N/A	0.00400	0.0429	0.0454	93	99	75-125	6	20	
Volatile Organic Compounds														
QC Source Sample: CQK1394-01														
Acetone	7120024	0.570	20.0	ug/L	N/A	N/A	16.3	15.7	78	76	50-145	4	35	
Acrylonitrile	7120024	<1.28	20.0	ug/L	N/A	N/A	17.6	16.9	88	85	50-145	4	35	
Benzene	7120024	<0.16	20.0	ug/L	N/A	N/A	17.1	16.9	86	84	70-125	2	15	
Bromobenzene	7120024	<0.36	20.0	ug/L	N/A	N/A	18.6	17.7	93	88	75-120	5	15	
Bromochloromethane	7120024	<0.76	20.0	ug/L	N/A	N/A	17.9	18.5	90	93	70-140	3	20	
Bromodichloromethane	7120024	<0.20	20.0	ug/L	N/A	N/A	19.1	18.4	96	92	70-120	4	20	
Bromoform	7120024	<0.43	20.0	ug/L	N/A	N/A	18.4	18.3	92	92	50-120	0	20	
Bromomethane	7120024	<0.48	20.0	ug/L	N/A	N/A	9.64	9.55	48	48	40-135	1	30	
2-Butanone (MEK)	7120024	0.140	20.0	ug/L	N/A	N/A	18.9	18.4	94	91	50-145	3	35	
n-Butylbenzene	7120024	0.110	20.0	ug/L	N/A	N/A	15.9	15.8	79	78	55-130	1	20	
sec-Butylbenzene	7120024	0.0700	20.0	ug/L	N/A	N/A	16.3	16.1	81	80	65-125	1	20	
tert-Butylbenzene	7120024	0.0400	20.0	ug/L	N/A	N/A	16.0	15.5	80	77	55-135	3	20	
Carbon disulfide	7120024	0.0800	20.0	ug/L	N/A	N/A	17.1	16.6	85	82	45-125	3	25	
Carbon Tetrachloride	7120024	<0.31	20.0	ug/L	N/A	N/A	19.2	18.5	96	92	60-115	4	20	
Chlorobenzene	7120024	0.0400	20.0	ug/L	N/A	N/A	18.2	17.8	91	89	70-115	3	15	
Chlorodibromomethane	7120024	<0.26	20.0	ug/L	N/A	N/A	19.3	18.1	96	90	55-125	6	20	
Chloroethane	7120024	<0.50	20.0	ug/L	N/A	N/A	17.7	17.3	88	86	60-140	2	20	
Chloroform	7120024	<0.17	20.0	ug/L	N/A	N/A	19.0	19.0	95	95	65-125	0	20	
Chloromethane	7120024	<0.20	20.0	ug/L	N/A	N/A	15.8	15.2	79	76	30-125	4	35	
2-Chlorotoluene	7120024	<0.35	20.0	ug/L	N/A	N/A	17.2	16.7	86	83	65-125	3	25	
4-Chlorotoluene	7120024	<0.21	20.0	ug/L	N/A	N/A	17.4	16.7	87	84	65-130	4	20	
1,2-Dibromo-3-chloropropane	7120024	<0.86	20.0	ug/L	N/A	N/A	18.1	18.0	90	90	45-140	1	35	
1,2-Dibromoethane (EDB)	7120024	<0.25	20.0	ug/L	N/A	N/A	18.9	18.3	94	91	70-130	3	15	
Dibromomethane	7120024	<0.30	20.0	ug/L	N/A	N/A	19.2	19.0	96	95	75-130	1	25	
1,2-Dichlorobenzene	7120024	0.0200	20.0	ug/L	N/A	N/A	17.6	17.2	88	86	75-120	2	20	
1,3-Dichlorobenzene	7120024	0.0300	20.0	ug/L	N/A	N/A	17.8	17.7	89	88	70-120	1	20	
1,4-Dichlorobenzene	7120024	0.0600	20.0	ug/L	N/A	N/A	17.8	17.7	89	88	65-125	1	20	
Dichlorodifluoromethane	7120024	0.0500	20.0	ug/L	N/A	N/A	18.9	17.9	94	89	40-130	5	20	
1,1-Dichloroethane	7120024	<0.19	20.0	ug/L	N/A	N/A	18.5	18.3	92	92	55-135	1	20	
1,2-Dichloroethane	7120024	<0.20	20.0	ug/L	N/A	N/A	18.8	19.1	94	95	60-140	1	30	
1,1-Dichloroethene	7120024	<0.37	20.0	ug/L	N/A	N/A	18.5	17.6	92	88	55-130	5	20	
cis-1,2-Dichloroethene	7120024	<0.37	20.0	ug/L	N/A	N/A	17.8	17.8	89	89	65-135	0	20	
trans-1,2-Dichloroethene	7120024	<0.31	20.0	ug/L	N/A	N/A	17.5	17.7	87	88	60-125	1	20	
1,2-Dichloropropane	7120024	<0.40	20.0	ug/L	N/A	N/A	16.8	17.1	84	86	65-125	2	20	
1,3-Dichloropropane	7120024	<0.19	20.0	ug/L	N/A	N/A	17.8	17.4	89	87	70-125	2	15	
2,2-Dichloropropane	7120024	<0.48	20.0	ug/L	N/A	N/A	18.2	17.5	91	88	30-125	4	35	
1,1-Dichloropropene	7120024	<0.24	20.0	ug/L	N/A	N/A	16.3	16.2	81	81	55-130	1	20	
cis-1,3-Dichloropropene	7120024	<0.23	20.0	ug/L	N/A	N/A	16.5	16.2	82	81	55-115	2	20	
trans-1,3-Dichloropropene	7120024	<0.17	20.0	ug/L	N/A	N/A	17.1	16.5	85	82	40-120	4	20	
Ethylbenzene	7120024	0.0300	20.0	ug/L	N/A	N/A	16.6	16.3	83	82	65-125	2	15	
Hexachlorobutadiene	7120024	0.500	20.0	ug/L	N/A	N/A	18.1	17.6	88	86	50-130	3	25	
Hexane	7120024	<0.47	20.0	ug/L	N/A	N/A	15.0	14.2	75	71	35-125	5	20	

HYDE ENVIRONMENTAL, INC.
20700 Watertown Rd.
Waukesha, WI 53186
Robert B. Thomson

Work Order: CQK1394
Project: John Deere Ottumwa Works
Project Number: [none]

Received: 11/29/07
Reported: 12/11/07 13:14

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds														
QC Source Sample: CQK1394-01														
Isopropylbenzene	7120024	0.0200	20.0	ug/L	N/A	N/A	16.5	16.0	82	80	60-130	3	20	
p-Isopropyltoluene	7120024	0.0800	20.0	ug/L	N/A	N/A	16.6	16.2	83	81	65-125	2	20	
Methylene Chloride	7120024	0.390	20.0	ug/L	N/A	N/A	23.2	22.4	114	110	60-135	3	20	
Methyl tert-Butyl Ether	7120024	0.310	20.0	ug/L	N/A	N/A	18.4	18.1	90	89	50-145	2	25	
n-Propylbenzene	7120024	0.0300	20.0	ug/L	N/A	N/A	17.2	16.0	86	80	50-130	7	30	
Styrene	7120024	<0.19	20.0	ug/L	N/A	N/A	17.0	16.5	85	83	30-125	3	30	
1,1,1,2-Tetrachloroethane	7120024	<0.33	20.0	ug/L	N/A	N/A	19.0	18.2	95	91	70-120	4	15	
1,1,2,2-Tetrachloroethane	7120024	<0.23	20.0	ug/L	N/A	N/A	19.4	18.6	97	93	65-135	4	20	
Tetrachloroethene	7120024	<0.38	20.0	ug/L	N/A	N/A	17.1	17.0	86	85	60-125	1	20	
Toluene	7120024	0.0500	20.0	ug/L	N/A	N/A	17.4	17.0	87	85	60-130	2	15	
1,2,3-Trichlorobenzene	7120024	0.180	20.0	ug/L	N/A	N/A	17.1	17.4	84	86	55-150	2	35	
1,2,4-Trichlorobenzene	7120024	0.130	20.0	ug/L	N/A	N/A	16.2	15.9	80	79	60-130	2	30	
1,1,1-Trichloroethane	7120024	<0.19	20.0	ug/L	N/A	N/A	19.2	18.4	96	92	60-120	4	20	
1,1,2-Trichloroethane	7120024	<0.37	20.0	ug/L	N/A	N/A	18.6	18.3	93	92	70-125	1	20	
Trichloroethene	7120024	<0.24	20.0	ug/L	N/A	N/A	17.5	17.2	87	86	60-120	2	30	
Trichlorofluoromethane	7120024	<0.26	20.0	ug/L	N/A	N/A	18.8	18.7	94	93	60-125	0	20	
1,2,3-Trichloropropane	7120024	0.0500	20.0	ug/L	N/A	N/A	18.2	17.6	91	88	70-125	3	20	
1,2,4-Trimethylbenzene	7120024	0.0300	20.0	ug/L	N/A	N/A	17.5	16.5	87	82	35-130	6	35	
1,3,5-Trimethylbenzene	7120024	0.0300	20.0	ug/L	N/A	N/A	17.6	16.8	88	84	40-135	5	30	
Vinyl chloride	7120024	<0.26	20.0	ug/L	N/A	N/A	17.1	17.4	86	87	55-130	2	20	
Xylenes, total	7120024	0.0700	60.0	ug/L	N/A	N/A	50.0	49.4	83	82	50-135	1	35	
Surrogate: Dibromofluoromethane	*7120024*			ug/L					*103*	*106*	*85-120*			
Surrogate: Toluene-d8	*7120024*			ug/L					*100*	*99*	*85-110*			
Surrogate: 4-Bromofluorobenzene	*7120024*			ug/L					*103*	*101*	*75-115*			

HYDE ENVIRONMENTAL, INC.	Work Order:	CQK1394	Received: 11/29/07
20700 Watertown Rd.			Reported: 12/11/07 13:14
Waukesha, WI 53186	Project:	John Deere Ottumwa Works	
Robert B. Thomson	Project Number:	[none]	

CERTIFICATION SUMMARY

TestAmerica Cedar Falls

Method	Matrix	Nelac	Iowa
SW 7060A	Water - NonPotable	X	X
SW 7421	Water - NonPotable	X	X
SW 8260B	Water - NonPotable	X	X
SW 8270C	Water - NonPotable	X	X
SW	Water - NonPotable		

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Termperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.

DATA QUALIFIERS AND DEFINITIONS

ICV2	ICV recovery was outside control limits.
J	Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
L1	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was outside control limits.

ADDITIONAL COMMENTS

TestAmerica ANALYTICAL TESTING CORPORATION

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613

Phone 319-277-2401 or 800-750-2401
Fax 319-277-2425

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring — CLP level 4 like

Client Name: Hyde ENVIRONMENTAL, INC Client #:
Address: 20700 WATERTOWN RD
City/State/Zip Code: WAUKESHA, WI 53186
Project Manager: BOB BROD
Telephone Number: 262 798-8600 Fax: 262 798-8606
Sampler Name: (Print Name) Bob Thomson
Sampler Signature: Robert B. Thomson
Email Address: rthomson@hyde-env.com

Project Name: John Deere - OHUMWA
Project #:
Site/Location ID: OHUMWA State: IOWA
Report To: Bob Thomson
Invoice To: TBD
Quote #: PO#:

TAT: X Standard; ___ Rush (surcharges may apply); Date Needed: ___
Fax Results: Y N
Email Results: (Y) N

Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other
Preservation & # of Containers: HNO_3, HCl, NaOH, H_2SO_4, Methanol, None, Other (Specify)
Analyze For: VOCs (8260B), Arsenic (7060A), Lead (7421), SVOCs (8270C)

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ✓ Level 4; Other: ___

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	VOCs (8260B)	Arsenic (7060A)	Lead (7421)	SVOCs (8270C)	REMARKS
PZ-2	11/27/07	1135	G		GW		3						✓				
" "	" "	" "	G		GW	1								✓	✓		
" "	" "	" "	G		GW						1					✓	
MW-1	11/27/07	1415	G		GW		3						✓				
" "	" "	" "	G		GW	1								✓	✓		
" "	" "	" "	G		GW						1					✓	
Duplicate	11/27/07	1415	G		GW		3						✓				
" "	" "	" "	G		GW	1								✓	✓		
" "	" "	" "	G		GW						1					✓	
TRIP BLANK	11/27/07	—	—	—	GW		3						✓				LAB Provided

Special Instructions: Please provide hard copy, CD, & email of results
CLP-4 like package

LABORATORY COMMENTS:

Relinquished By: Bob Thomson	Date: 11.28.07	Time: 1412	Received By:	Date: 11/28/07	Time: 2:12
Relinquished By:	Date:	Time:	Received By:	Date: 11/29/07	Time: 11:30
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TestAmerica ANALYTICAL TESTING CORPORATION

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613

Phone 319-277-2401 or 800-750-2401
Fax 319-277-2425

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: CLP-4 like

Client Name: Hyde Environmental, INC Client #:
Address: 20700 WATERTOWN RD
City/State/Zip Code: WAUKESHA, WI 53186
Project Manager: BOB BROD
Telephone Number: 262-798-8600 Fax:
Sampler Name: (Print Name) Bob Thomson
Sampler Signature: Robert B. Thomson
Email Address: rthomson@hyde-env.com

Project Name: John Deere - OTUMWA
Project #:
Site/Location ID: OTUMWA State: IOWA
Report To: Bob Thomson
Invoice To: T.B.D
Quote #: PO#:

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed:
Fax Results: Y N
Email Results: Y N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: VOCs (8260B)	Arsenic (7060A)	Lead (7421)	SVOCs (8270C)	Temp Blank	QC Deliverables: None / Level 2 (Batch QC) / Level 3 / Level 4 ✓ / Other:	REMARKS
MW-6	11/27/07	1550	G		GW		3						✓						
" "	11/27/07	" "	G		GW	1								✓	✓				
" "	11/27/07	" "	G		GW						1					✓			
MW-12	11/27/07	1715	G		GW		3						✓						
" "	" "	" "	G		GW	1								✓	✓				
" "	" "	" "	G		GW						1					✓			
TEMP BLANK	11/27/07	—	—	—	—												✓		Lab QA/QC

Special Instructions: Please Provide hardcopy, CD, & email results
CLP-4 like package

LABORATORY COMMENTS:

	Date:	Time:		Date:	Time:
Relinquished By: Bob Thomson	11.28.07	1412	Received By:	11/28/07	2:12
Relinquished By:	Date:	Time:	Received By: Debra Mueller	11/29/07	Time: 11:30
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TestAmerica
ANALYTICAL TESTING CORPORATION
704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613 • 800-750-2401 • 319-277-2425 FAX

Sample Receipt and Temperature Log Form

Client: Hyde Environment Project: John Deere Ottumwa

City: _____

Date: 11/29/07 Receiver's Initials: KB Time (Delivered): 1130

Temperature Record:

Cooler ID# (If Applicable)
LLC 75

0.7 **°C / On Ice**

☑ Temp Blank

☐ Temperature out of compliance

Thermometer:

☑ IR - 61997670 'A'
☐ IR - 61997671 'B'
☐ IR - 61854108
☐ 22126775

Courier:

☐ UPS ☑ TA Courier
☐ FedEx ☐ TA Field Services
☐ DHL ☐ Client
☐ US Postal Service ☐ Other
☐ Spee-Dee

Custody seals present?
☐ Yes
Custody seals intact?
☐ Yes ☐ No

☐ Non-Conformance report started

Exceptions Noted

☐ Sample(s) not received in a cooler.
☐ Samples(s) received same day of sampling.
☐ Evidence of a chilling process
☐ Temperature not taken:

_____

***Refer to SOP CF01-01 for Temperature Criteria**

Five-Year Review Interviews

Information gathered from interviews during the site inspection may be key to understanding site status. Interviews should be conducted with various individuals or groups, including the operation and maintenance (O&M) site manager, O&M staff, local regulatory authorities and response agencies, community action groups or associations, site neighbors, and other stakeholders.

When conducting an interview, the interviewer should note the date of the interview, and the name, title, and affiliation of the person interviewed. The interviewer should also indicate whether the interview was conducted at the site, the office, or by phone. Written documentation of the interview should briefly summarize the discussion, address any problems or successes with the implementation of the remedy, and provide suggestions for future reference. Forms to use during interviews are provided at the end of this appendix.

The following tables provide lists of potential individuals to interview and the type of information which may be obtained during the interviews. The potential individuals to be interviewed are categorized by their ability to provide the following types of information:

- Background information;
- State and local considerations;
- Construction considerations; and
- Performance, Operation and maintenance problems.

All of these individuals may be contacted during the five-year review. In most cases interviewing only a few key individuals will provide sufficient information for the review.

Background Information

The individuals listed below may provide information concerning previous and current concerns about the site, influences that affected the remedy decision, and further clarification on decisions made during remedy selection.

Interview	Information Sought
Previous EPA Staff/Management	– staff members may offer insight and clarification on decisions made during remedy selection and implementation
Nearest Neighbors	– neighbors may provide insight into the enforcement of institutional controls, changes in land use, trespassing, and unusual or unexpected activity at the site

Interview	Information Sought
Community Representatives*	– members of the community may provide a broader view of site activities and issues than can be obtained during the site inspection

* Several types of individuals may be interviewed: residents/businesses adjacent to or on the site; residents/businesses within the path of migration; local civic leaders, local officials, Community Advisory Group (CAG), Technical Assistance Grant (TAG) group, and local environmental groups; and other audiences listed in the community profile in the Community Involvement Plan.

Some example interview questions are given below.

1. What is your overall impression of the project? (general sentiment)

2. What effects have site operations had on the surrounding community?

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

5. Do you feel well informed about the site's activities and progress?

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

State and Local Considerations

State and local authorities may provide you with information about changes in State laws and regulations and present and prospective land uses and restrictions.

Interview	Information Sought
State Contacts (including those responsible for State water quality, hazardous waste, and environmental health issues)	– changes in State laws and regulations that may impact protectiveness – whether the site has been in compliance with permitting or reporting requirements – information on site activities, status, and issues
Local Authorities (such as police, emergency response or fire departments, and local environmental or planning offices)	– status of institutional controls, site access controls, new ordinances in place, changes in actual or projected land use, complaints being filed, and unusual activities at the site

Some example interview questions are given below.

1. What is your overall impression of the project? (general sentiment)

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

3. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

4. Do you feel well informed about the site's activities and progress?

5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

Construction Considerations

It is important for you to determine the status of construction at the site and to ensure that health and safety concerns are addressed.

Interview	Information Sought
Construction Contractor	– progress of project and changes in design due to field conditions – revisions to the O&M Manual, implementation of the Health and Safety Plan/Contingency Plan – insight into potential O&M problems
Construction Manager	– overview of all contractor construction activities at the site, health and safety issues, site protectiveness during construction, and the quality of the construction
Local Emergency Response Officials	– adequacy of contractor's Health and Safety Plan and the contractor's implementation of the Plan – adequacy of contractor's emergency response duties as outlined in the Contingency Plan or Emergency Response Plan of the Health and Safety Plan

Some example interview questions for remedial actions still under construction are given below.

1. What is your overall impression of the project? (general sentiment)

2. What is the current status of construction (*e.g.*, budget and schedule)?

3. Have any problems been encountered which required, or will require, changes to this remedial design or this ROD?

4. Have any problems or difficulties been encountered which have impacted construction progress or implementability?

5. Do you have any comments, suggestions, or recommendations regarding the project (i.e., design, construction documents, constructability, management, regulatory agencies, etc.)?

Performance, Operation And Maintenance Problems

The following individuals may provide information to you regarding the performance of the remedy and status of O&M at the site so that the team can assess the progress of the implementation and effectiveness of the remedy, and any O&M problems.

Interview	Information Sought
O&M Manager/Operating Contractor	– O&M status of the remedy, compliance with permit and reporting requirements, and complaints filed – effectiveness of the O&M Plan – information about any potential causes for concern about the remedy – progress and performance of the remedy
O&M Staff	– effectiveness of the O&M Manual – information about any potential causes for concern about the remedy – Recommendations for adjusting the mode of operation or optimizing the operations protocol
Remedial Design/Remedial Action Consultant	– original concepts behind the O&M of the remedy – questions about remedial design parameters, expected performance and cost, and changes that have occurred during implementation

Some example interview questions are given below.

1. What is your overall impression of the project? (general sentiment)

2. Is the remedy functioning as expected? How well is the remedy performing?

3. What does the monitoring data show? Are there any trends that show contaminant levels are decreasing?

4. Is there a continuous on-site O&M presence? If so, please describe staff and activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities.

5. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since start-up or in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

6. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.

7. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

8. Do you have any comments, suggestions, or recommendations regarding the project?

INTERVIEW DOCUMENTATION FORM

The following is a list of individual interviewed for this five-year review. See the attached contact record(s) for a detailed summary of the interviews.

Name	Title/Position	Organization	Date
Iris Caldwell	Environmental Analyst	John Deere-Ottumwa	11/27/07
Kevin McAllister	Security Supervisor	Wackenhut	11/27/07
Paul Graham	Former Director, Environment & Safety	John Deere-Ottumwa	11/27/07
Michael Perry	Safety Director	John Deere-Ottumwa	11/27/07
Bob Drustrup	Environmental Engineer	IDNR	11/21/07

INTERVIEW RECORD

Site Name: John Deere - Ottumwa Works	**EPA ID No.:** IAD005291182	
Subject: Third Five Year Review	**Time:** –	**Date:** 11/21/07
Type: ☒ Telephone ☐ Visit ☐ Other **Location of Visit:**	☐ Incoming ☐ Outgoing	

Contact Made By:

Name: ~~Bob Drustrup~~ Bill Gresham	**Title:** ~~Environmental Engineer~~ RPM	**Organization:** ~~IDNR~~ EPA

Individual Contacted:

Name: Bob Drustrup	**Title:** Environmental Engineer	**Organization:** IDNR

Telephone No: 515-281-8900 **Fax No:** 515-281-8895 **E-Mail Address:** Bob.Drustrup@dnr.state.ia.us	**Street Address:** 900 East Grand Ave. **City, State, Zip:** Des Moines, IA 50319

Summary Of Conversation

Mr. Drustrup did not indicate any concerns regarding the site.

Page 1 of ____

INTERVIEW RECORD

Site Name: John Deere - Ottumwa Works		**EPA ID No.:** IAD005291182
Subject: Third Five Year Review		**Time:** 8:40 **Date:** 11/27/07
Type: ☐ Telephone ☒ Visit ☐ Other **Location of Visit:** John Deere Ottumwa Works Site		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bill Gresham	**Title:** RPM	**Organization:** EPA

Individual Contacted:

Name: Iris Caldwell	**Title:** Environmental Analyst	**Organization:** John Deere - Ottumwa
Telephone No: 641-683-2466 **Fax No:** **E-Mail Address:** caldwelliris g@johndeere.com	**Street Address:** 928 E Vine Street **City, State, Zip:** Ottumwa, IA 52501	

Summary Of Conversation

Ms. Caldwell showed me Deere's EMS Manual (waste reduction, recycling), Emergency Response & Contingency Plan (procedures, contingency plan, spills, etc.), and Environmental Management Program (including pollution control/management, spill prevention, PCBs, refrigerants, emergency response, water and wastewater, asbestos, etc). Ms. Caldwell indicated that the O&M status of the remedy was stable, that the remedy remains effective and protective, and that there are no major concerns regarding the remedy.

INTERVIEW RECORD

Site Name: John Deere - Ottumwa Works		**EPA ID No.:** IAD005291182
Subject: Third Five Year Review		**Time:** 9:00 **Date:** 11/27/07
Type: ☐ Telephone ☒ Visit ☐ Other **Location of Visit:** John Deere Ottumwa Works Site		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bill Gresham	**Title:** RPM	**Organization:** EPA

Individual Contacted:

Name: Kevin McAllister	**Title:** Security Supervisor	**Organization:** Wackenhut
Telephone No: 641-226-0613 **Fax No:** **E-Mail Address:**	**Street Address:** 928 E. Vine Street **City, State, Zip:** Ottumwa, IA 52501	

Summary Of Conversation

Mr. McAllister described to me how the facility perimeter is inspected weekly, and showed me the Perimeter Fence Report. The site is surrounded by a 6-foot chain-link fence topped by barbed wire. The fence, and the process by which it is inspected, coincide with the requirements set forth in the ICs described in the Consent Decree. Interpretation would indicate that the O&M status of the remedy is stable, and that the remedy remains effective and protective, and that there are no major concerns regarding the remedy.

INTERVIEW RECORD

Site Name: John Deere - Ottumwa Works		**EPA ID No.:** IAD005291182
Subject: Third Five Year Review		**Time:** 10:00 **Date:** 11/27/07
Type: ☒ Telephone ☒ Visit ☐ Other **Location of Visit:** John Deere Ottumwa Works Site		☐ Incoming ☐ Outgoing
Contact Made By:		
Name: Bill Gresham	**Title:** RPM	**Organization:** EPA
Individual Contacted:		
Name: Paul Graham	**Title:** Former Environmental Director, & Safety	**Organization:** John Deere - Ottumwa
Telephone No: 641-683-2535 **Fax No:** **E-Mail Address:** grahampauli@johndeere.com		**Street Address:** 928 E. Vine Street **City, State, Zip:** Ottumwa, IA 52501

Summary Of Conversation

Mr. Graham was out of the office, but we had a conference call. We discussed ICs, deed restrictions, the 5-Year Review process, discharge permits, and O&M costs. Mr. Graham indicated that the O&M status (including costs) of the remedy is stable, and that the remedy remains effective and protective, and that there are no major concerns regarding the remedy.

Page 1 of ____

INTERVIEW RECORD

Site Name: John Deere - Ottumwa Works		**EPA ID No.:** IAD005291182
Subject: Third Five Year Review		**Time:** 11:00 **Date:** 11/27/07
Type: ☐ Telephone ☒ Visit ☐ Other **Location of Visit:** John Deere Ottumwa Works Site		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bill Gresham	**Title:** RPM	**Organization:** EPA

Individual Contacted:

Name: Michael Perry	**Title:** Safety Director	**Organization:** John Deere - Ottumwa
Telephone No: 641-683-7112 **Fax No:** **E-Mail Address:**	**Street Address:** 928 E. Vine Street **City, State, Zip:** Ottumwa, IA 52501	

Summary Of Conversation

Mr. Perry did not ~~~~ indicate any concerns about the site.

Page 1 of ____

Five-Year Review Site Inspection Checklist

Purpose of the Checklist

The site inspection checklist provides a useful method for collecting important information during the site inspection portion of the five-year review. The checklist serves as a reminder of what information should to be gathered and provides the means of checking off information obtained and reviewed, or information not available or applicable. The checklist is divided into sections as follows:

I. Site Information
II. Interviews
III. On-site Documents & Records Verified
IV. O&M Costs
V. Access and Institutional Controls
VI. General Site Conditions
VII. Landfill Covers
VIII. Vertical Barrier Walls
IX. Groundwater/Surface Water Remedies
X. Other Remedies
XI. Overall Observations

Some data and information identified in the checklist may or may not be available at the site depending on how the site is managed. Sampling results, costs, and maintenance reports may be kept on site or may be kept in the offices of the contractor or at State offices. In cases where the information is not kept at the site, the item should not be checked as "not applicable," but rather it should be obtained from the office or agency where it is maintained. If this is known in advance, it may be possible to obtain the information before the site inspection.

This checklist was developed by EPA and the U.S. Army Corps of Engineers (USACE). It focuses on the two most common types of remedies that are subject to five-year reviews: landfill covers, and groundwater pump and treat remedies. Sections of the checklist are also provided for some other remedies. The sections on general site conditions would be applicable to a wider variety of remedies. The checklist should be modified to suit your needs when inspecting other types of remedies, as appropriate.

The checklist may be completed and attached to the Five-Year Review report to document site status. Please note that the checklist is not meant to be completely definitive or restrictive; additional information may be supplemented if the reviewer deems necessary. Also note that actual site conditions should be documented with photographs whenever possible.

Using the Checklist for Types of Remedies

The checklist has sections designed to capture information concerning the main types of remedies which are found at sites requiring five-year reviews. These remedies are landfill covers (Section VII of the checklist) and groundwater and surface water remedies (Section IX of the checklist). The primary elements and appurtenances for these remedies are listed in sections which can be checked off as the facility is inspected. The opportunity is also provided to note site conditions, write comments on the facilities, and attach any additional pertinent information. If a site includes remedies beyond these, such as soil vapor extraction or soil landfarming, the information should be gathered in a similar manner and attached to the checklist.

Considering Operation and Maintenance Costs

Unexpectedly widely varying or unexpectedly high O&M costs may be early indicators of remedy problems. For this reason, it is important to obtain a record of the original O&M cost estimate and of annual O&M costs during the years for which costs incurred are available. Section IV of the checklist provides a place for documenting annual costs and for commenting on unanticipated or unusually high O&M costs. A more detailed categorization of costs may be attached to the checklist if available. Examples of categories of O&M costs are listed below.

Operating Labor - This includes all wages, salaries, training, overhead, and fringe benefits associated with the labor needed for operation of the facilities and equipment associated with the remedial actions.

Maintenance Equipment and Materials - This includes the costs for equipment, parts, and other materials required to perform routine maintenance of facilities and equipment associated with a remedial action.

Maintenance Labor - This includes the costs for labor required to perform routine maintenance of facilities and for equipment associated with a remedial action.

Auxiliary Materials and Energy - This includes items such as chemicals and utilities which can include electricity, telephone, natural gas, water, and fuel. Auxiliary materials include other expendable materials such as chemicals used during plant operations.

Purchased Services - This includes items such as sampling costs, laboratory fees, and other professional services for which the need can be predicted.

Administrative Costs - This includes all costs associated with administration of O&M not included under other categories, such as labor overhead.

Insurance, Taxes and Licenses - This includes items such as liability and sudden and accidental insurance, real estate taxes on purchased land or right-of-way, licensing fees for certain technologies, and permit renewal and reporting costs.

Other Costs - This includes all other items which do not fit into any of the above categories.

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Please note that "O&M" is referred to throughout this checklist. At sites where Long-Term Response Actions are in progress, O&M activities may be referred to as "system operations" since these sites are not considered to be in the O&M phase while being remediated under the Superfund program.

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION	
Site name: John Deere Ottumwa Works	**Date of inspection:** November 27, 2007
Location and Region: Ottumwa, IA / Region 7	**EPA ID:** IAD005291182
Agency, office, or company leading the five-year review: EPA Region 7	**Weather/temperature:** Partly cloudy, 30°F

Remedy Includes: (Check all that apply)

- (Landfill cover/containment)
- (Access controls)
- (Institutional controls)
- Groundwater pump and treatment
- Surface water collection and treatment
- Other _____

- Monitored natural attenuation
- Groundwater containment
- Vertical barrier walls

Attachments: Inspection team roster attached Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** Iris Caldwell (Name) Environmental Analyst (Title) 11/27/07 (Date)
   Interviewed (at site) at office by phone Phone no. 641-683-2466
   Problems, suggestions; Report attached _____

2. **O&M staff** Kevin McAllister (Name) Security Supervisor (Title) 11/27/07 (Date)
   Interviewed (at site) at office by phone Phone no. 641-226-0613
   Problems, suggestions; Report attached _____

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

Agency Iowa Department of Natural Resources
Contact Bob Drustrup Environmental Engineer 11/2/07 515-281-8900
Name Title Date Phone no.
Problems; suggestions; Report attached _____

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

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

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

4. **Other interviews** (optional) Report attached.

Paul Graham, Former Director of Environment & Safety
Michael Perry, Safety Director 641-683-7112

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

1.	**O&M Documents**			
	O&M manual	Readily available	Up to date	N/A ✓
	As-built drawings ✓	Readily available ✓	Up to date ✓	N/A
	Maintenance logs ✓	Readily available ✓	Up to date ✓	N/A
	Remarks			
2.	**Site-Specific Health and Safety Plan**	Readily available ✓	Up to date ✓	N/A
	Contingency plan/emergency response plan	Readily available ✓	Up to date ✓	N/A
	Remarks			
3.	**O&M and OSHA Training Records**	Readily available ✓	Up to date ✓	N/A
	Remarks			
4.	**Permits and Service Agreements**			
	Air discharge permit	Readily available ✓	Up to date ✓	N/A
	Effluent discharge	Readily available ✓	Up to date ✓	N/A
	Waste disposal, POTW	Readily available ✓	Up to date ✓	N/A
	Other permits _____	Readily available	Up to date	N/A ✓
	Remarks			
5.	**Gas Generation Records**	Readily available	Up to date	N/A ✓
	Remarks			
6.	**Settlement Monument Records**	Readily available	Up to date	N/A ✓
	Remarks			
7.	**Groundwater Monitoring Records**	Readily available ✓	Up to date ✓	N/A
	Remarks			
8.	**Leachate Extraction Records**	Readily available	Up to date	N/A ✓
	Remarks			
9.	**Discharge Compliance Records**			
	Air	Readily available ✓	Up to date ✓	N/A
	Water (effluent)	Readily available ✓	Up to date ✓	N/A
	Remarks			
10.	**Daily Access/Security Logs**	Readily available ✓	Up to date ✓	N/A
	Remarks			

IV. O&M COSTS

1. **O&M Organization**

State in-house — Contractor for State
PRP in-house ✓ — Contractor for PRP ✓
Federal Facility in-house — Contractor for Federal Facility
Other _____

2. **O&M Cost Records**

Readily available ✓ Up to date ✓
Funding mechanism/agreement in place ✓
Original O&M cost estimate _____ Breakdown attached

Total annual cost by year for review period if available

From 11/01/06 (Date) To 08/01/07 (Date)	$ 1,200 (Total cost)	Breakdown attached
From _____ (Date) To _____ (Date)	_____ (Total cost)	Breakdown attached
From _____ (Date) To _____ (Date)	_____ (Total cost)	Breakdown attached
From _____ (Date) To _____ (Date)	_____ (Total cost)	Breakdown attached
From _____ (Date) To _____ (Date)	_____ (Total cost)	Breakdown attached

3. **Unanticipated or Unusually High O&M Costs During Review Period** No.

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS (Applicable) N/A

A. Fencing

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

Remarks Fence intact.

B. Other Access Restrictions

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

Remarks _____

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented — Yes — No ✓ — N/A
Site conditions imply ICs not being fully enforced — Yes — No ✓ — N/A

Type of monitoring (*e.g.*, self-reporting, drive by) inspection
Frequency weekly
Responsible party/agency Wackenhut
Contact Kevin McAllister (Name) Security Supervisor (Title) 11/27/07 (Date) 641-226-0613 (Phone no.)

Reporting is up-to-date — Yes ✓ — No — N/A
Reports are verified by the lead agency — Yes — No — N/A ✓

Specific requirements in deed or decision documents have been met — Yes ✓ — No — N/A
Violations have been reported — Yes — No ✓ — N/A ✓
Other problems or suggestions: Report attached

2. **Adequacy** — ICs are adequate ✓ — ICs are inadequate — N/A
Remarks

D. General

1. **Vandalism/trespassing** — Location shown on site map — No vandalism evident ✓
Remarks

2. **Land use changes on site** (N/A)
Remarks

3. **Land use changes off site** (N/A)
Remarks

VI. GENERAL SITE CONDITIONS

A. Roads (Applicable) — N/A

1. **Roads damaged** — Location shown on site map — Roads adequate ✓ — N/A
Remarks

B. Other Site Conditions

Remarks_____

VII. LANDFILL COVERS Applicable (N/A)

A. Landfill Surface

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

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

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

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

5. **Vegetative Cover** Grass Cover properly established No signs of stress
   Trees/Shrubs (indicate size and locations on a diagram)
   Remarks_____

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

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

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

   Remarks_____

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

B. Benches — Applicable — (N/A)

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

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

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

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

C. Letdown Channels — Applicable — (N/A)

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

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

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

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

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

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

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

D. Cover Penetrations Applicable (N/A)

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

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

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

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

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

E. Gas Collection and Treatment Applicable (N/A)

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

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

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

F. Cover Drainage Layer Applicable (N/A)

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

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

G. Detention/Sedimentation Ponds Applicable (N/A)

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

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

3. **Outlet Works** Functioning N/A
   Remarks_____

4. **Dam** Functioning N/A
   Remarks_____

H. Retaining Walls Applicable (N/A)

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

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

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

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

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

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

4. **Discharge Structure** Functioning N/A
   Remarks_____

VIII. VERTICAL BARRIER WALLS Applicable (N/A)

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

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

IX. GROUNDWATER/SURFACE WATER REMEDIES Applicable (N/A)

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

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

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

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

B. Surface Water Collection Structures, Pumps, and Pipelines Applicable (N/A)

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

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

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

C. Treatment System Applicable (N/A)

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

   Remarks_____

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

   Remarks_____

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

   Remarks_____

4. **Discharge Structure and Appurtenances**
   N/A — Good condition — Needs Maintenance

   Remarks_____

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

   Remarks_____

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

   Remarks_____

D. Monitoring Data

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

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

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)
   Properly secured/locked ✓ Functioning ✓ Routinely sampled ✓ Good condition ✓
   All required wells located ✓ Needs Maintenance ✓ N/A
   Remarks Two well caps were difficult to remove, need replacement.

X. OTHER REMEDIES

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

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

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

The selected remedy (deed restrictions, maintenance of the perimeter fence, groundwater & surface water monitoring) is effective in preventing exposure by restricting access to the ~~soil~~ contaminated soil, isolating that soil, and preventing possible contaminated groundwater from migrating off site.

B. Adequacy of O&M

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

Access to the site is controlled by a perimeter fence/gates. Consistent with the "Perimeter Fence Report", this fence (a 6-foot chain link fence topped with barbed wire) encircling all ~120 acres of the facility) is inspected weekly.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

N/A

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Switching to annual groundwater monitoring would allow access to monitoring wells more frequently, so that they would not be damaged in the process of opening them only every 5 years.