

FOURTH FIVE-YEAR REVIEW REPORT FOR

JANESVILLE DISPOSAL FACILITY SUPERFUND SITE

ROCK COUNTY, WISCONSIN



Prepared by

U.S. Environmental Protection Agency Region 5 CHICAGO, ILLINOIS

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2016

Date

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List of Acronyms

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Difference
FYR	Five Year Review
ICs	Institutional Controls
JDF	Janesville Disposal Facility
MCL	Maximum Contaminant Level
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
PAL	Preventative Action Limit
PCE	Perchloroethene
PCOR	Preliminary Close-Out Report
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
TCE	Trichloroethene
UCL	Upper Confidence Level
UU/UE	Unlimited Use/Unrestricted Exposure
VOC	Volatile Organic Compound
WAC	Wisconsin Administrative Code
WDNR	Wisconsin Department of Natural Resources

Executive Summary

The Janesville Disposal Facility (JDF) consists of two Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) sites: the Janesville Ash Beds (WID 000712950) and the Janesville Old (1978) Landfill (WID 980614044). The Superfund Sites also adjoin two Resource Conservation and Recovery Act (RCRA) sites: the Old (1963) Janesville Dump and the New (1985) Janesville Landfill. Impacts from all four sites are commingled and have been addressed together in the CERCLA actions. This review will examine significant site developments since the last (third) Five-Year Review (FYR), completed in August 2011.

The Janesville Old Landfill and the Janesville Ash Beds were added to the National Priorities List (NPL) on September 21, 1984. The Remedial Investigation and Feasibility Study (RI/FS) conducted at the site in 1987-88 determined that groundwater at the site was contaminated with chlorinated compounds. A Record of Decision (ROD) was signed on December 29, 1989. The selected remedy included a groundwater pump and treat system, capping requirements for the landfills and institutional controls.

An Explanation of Significant Differences (ESD) was signed on September 17, 1997, noting that improvements in groundwater quality from 1987 to 1997 negated the need from an active groundwater remedy. By 1997 groundwater contaminant concentrations exceeding applicable rules and regulations were limited to two volatile organic compounds (VOCs) at two downgradient sampling points. In September 1997 EPA signed a Preliminary Close-Out Report (PCOR) for the Janesville Old Landfill, concluding that all construction activities at the site had been completed and that no further response action is anticipated.

The first FYR, completed in September 2001, concluded that the site remedies were protective of human health and the environment. Groundwater data collected from 1997 to 2015 support the conclusion that the source control measures combined with natural attenuation are protective of human health and the environment.

In 2012, EPA approved the transition from compliance groundwater monitoring to three years of confirmatory sampling, per the consent decree. After three years of confirmatory sampling, the Potentially Responsible Party (PRP) group requested, and EPA approved, the elimination of several groundwater monitoring wells from future monitoring. Groundwater data collected since 2012 indicates that the groundwater remediation goals have been met.

During the site inspection for the fourth FYR, all of the physical components of the remedy were found to be in good condition. It was noted that the cover over the Janesville Ash Beds has been impacted by tree growth and paved encroachment by an adjacent facility. Follow-up actions are recommended to address these impacts to assure consistency with the selected remedy. These impacts have not affected the integrity of the JDF cover. Based upon a review of all of the available data and upon the results of the site inspection, the remedy remains protective of human health and the environment.

I. INTRODUCTION

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

The United States Environmental Protection Agency (EPA) is preparing this FYR pursuant to CERCLA Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii), and considering EPA policy.

This is the fourth FYR for the Janesville Ash Beds and the Janesville Old Landfill Superfund Sites which, together, compose the JDF, located in Janesville, Wisconsin. The triggering action for this statutory review is the previous FYR. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE). This review examines the current condition of the Site and significant Site developments over the past five years, and evaluates the continued protectiveness of the monitored natural attenuation approach to groundwater remediation.

Site Background

Physical Characteristics

The JDF is underlain by sand and gravel outwash deposits and groundwater is present under water table conditions. The thickness of the sand and gravel varies from approximately 80-350 feet in the immediate vicinity of the site. The depth to groundwater varies with topographic elevation but is generally 80-100 feet below ground surface in the upland areas and within 10 feet in low lying areas near the Rock River. Groundwater flow is to the southwest discharging to the Rock River about 1800 feet from the site. The Rock River is a regional discharge point. Bedrock at the site was not encountered during the investigation but is expected to be Ordovician aged dolomites and sandstones and Cambrian aged sandstones at depths of 80-350 feet.

There are no municipal wells in the immediate vicinity of the site. There are also no private wells in the direction of contaminant plume migration to the southwest of the site. The Parker Pen facility formerly used a private well but has since been connected to the Janesville public water supply system. All other known private wells in the area are either upgradient or sidegradient of the site.

Land and Resource Use

The JDF is located on approximately 65 acres of land in section 24, Town of Janesville, Township 3 North, Range 12 East in Rock County, Wisconsin (Figures 1 and 2). The JDF consists of a number of disposal sites including:

<u>Janesville Old Dump (1963 Landfill)</u> – The 1963 Landfill, approximately 15 acres in size, operated from 1950 until 1963. This site is an abandoned sand and gravel pit that was operated as a general refuse dump and accepted wastes of unknown character. The 1963 site is not on the NPL, but was included in the investigation and remediation of the area because of its proximity and because the Janesville Ash beds lie over the northwest portion of the fill.

<u>Janesville Old Landfill (1978 Landfill)</u> – The 1978 Landfill, 18 acres in size and operational from 1963-1978, is on the NPL. The site accepted municipal and industrial wastes. This site was also an abandoned sand and gravel pit and does not have a liner.

<u>Janesville New Landfill (1985 Landfill)</u> – The 1985 Landfill is 16 acres in size and operated from 1978 to 1985. The site is located on the east side of the property and accepted municipal and industrial wastes. This landfill is not on the NPL but is included because it is adjacent to the 1978 Landfill. The 1985 Landfill has a clay liner, a clay cap and a leachate collection system.

<u>Janesville Ash Beds (Ash Beds)</u> – The Ash Beds operated from 1974 to 1985 and accepted industrial liquids and sludges. The sludges were allowed to evaporate and dry and were then disposed in either the 1978 or 1985 Landfills.

During the years of the disposal sites' operation, the surrounding area has changed from rural to more urban in character.

Contamination History

The general disposal history of each disposal site is summarized above. Field studies during the RI showed groundwater contamination to be the primary concern at the JDF. Known disposal sites history and subsequent RI field studies support the following conclusions:

- The Ash Bed site contributed to groundwater contamination exceeding both state and federal health based groundwater standards.
- The 1963 Landfill is believed to have contributed little to the groundwater contamination.
- The 1978 Landfill site contributed to both organic and inorganic groundwater contamination.
- The 1985 Landfill contributed to groundwater contamination.

FIVE-YEAR REVIEW SUMMARY FORM

	SITE IDENTIFICATION
Site Name:	Janesville Old Landfill/Janesville Ash Beds
EPA ID:	WID980614044 / WID000712950

Region: 5	State: WI	City/County: City of Janesville Rock County
		SITE STATUS
NPL Status: Final		and the second
Multiple OUs? No	Has t Yes	he site achieved construction completion?
	R	EVIEW STATUS
Lead agency: EPA		
Author name (Fed	leral or State Project N	fanager): Tom Barounis
Author affiliation:	EPA	a final for the part of the second
Review period: 10	/6/2015 - 8/19/2016	
Date of site inspec	tion: 4/20/2016	
Type of review: St	atutory	
Review number: 4		
Triggering action	date: 8/19/2011	and the second second second second second
Due date (five year	rs after triggering action	n date): 8/19/2016

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In response to contaminant releases certain PRPs from 1986 to 1989 completed a RI and FS for the disposal area. The results of the RI defined a contaminated groundwater plume at the JDF. The greatest concentrations of VOCs were detected beneath and downgradient of the Ash Beds. Based on these groundwater concentrations, risks associated with the site exceeded upper boundaries as established in the NCP.

The following risk pathways were identified:

- Inhalation of volatiles in the ambient air
- Consumption of contaminated groundwater
- Dermal absorption and incidental ingestion of landfill pond water

Response Actions

Remedy Selection

Groundwater contaminants of concern (COCs) for which the ROD established cleanup standards included VOCs (vinyl chloride, methylene chloride, 1,1,-dichloroethane, trichloroethene, 1,1,1-trichloroethane, benzene, tetrachloroethene, 1,2-dichloroethene) and arsenic. The remedial action objectives (RAOs) for the groundwater COCs specify that groundwater downgradient of the JDF are not to exceed Maximum Contaminant Levels (MCLs) or the enforcement standards and preventive action limits (PALs) established in the Wisconsin Administrative Code (WAC NR140 standards).

The FS was completed on August 4, 1989. Pursuant to Section 117 of CERCLA, EPA published a notice of FS completion on August 15, 1989, and also released to the public a remedial action proposed plan. After evaluation of public comment, EPA selected a remedy for the JDF, as documented in the ROD signed on December 29, 1989.

The remedy consisted of both source control and groundwater control components as described below. The groundwater control component consisted of collection and treatment of contaminated groundwater as proposed in the August 1989 FS, and groundwater monitoring, and was amended by the ESD as outlined below.

"1963 Landfill"

- Access restrictions which will promote the use of deed and land use restrictions to assure use of the site does not increase the release or potential release of hazardous substances to the environment or become dangerous to the life and health of the people
- Continued ground water monitoring

"1978 Landfill"

- Access restrictions which will promote the use of deed and land use restrictions to assure use of the site does not increase the release or potential release of hazardous substances to the environment or become dangerous to the life and health of the people; a fence will need to be installed around the machinery used to gather the landfill gas. A fence may need to be installed around the landfill gas collection wells, but this cannot be determined until after design
- A landfill gas extraction and flaring system
- Containment of wastes and subsurface soils by upgrading the landfill cover to comply with WAC NR 506.08
- Continued ground water and air monitoring

"1985 Landfill"

• Access restrictions which will promote the use of deed and land use restrictions to assure use of the site does not increase the release or potential release of hazardous substances to the environment or become dangerous to the life and health of the people; a fence will

need to be installed around the machinery used to gather the landfill gas. A fence may need to be installed around the landfill gas collection wells, but this cannot be determined until after design

- A landfill gas extraction and flaring system
- Containment of wastes and subsurface soils by upgrading the landfill cover to comply with WAC NR 506.08
- Continued ground water and air monitoring
- The repairing and/or improving of leachate collection system

Ash Beds

- Access restrictions which will promote the use of deed and land use restrictions to assure use of the site does not increase the release or potential release of hazardous substances to the environment or become dangerous to the life and health of the people
- Containment of wastes and subsurface soils by maintaining the current cap
- Continue ground water monitoring
- Remove and properly dispose of remaining ash pile located to the south of the ash pile area

The remedial action objectives for the JDF were to:

Establish a landfill gas control system in compliance with the requirements of Chapter NR 506.08 of the WAC which regulates discharge of landfill gas.

Establish institutional controls, including deed restrictions, which limit future use of the landfill property and nearby groundwater.

Establish a landfill cap to control direct contact with waste materials and minimize water infiltration into the waste mass. The clay cap cover materials must comply with Chapter NR 504.07 WAC, which is analogous to the federal RCRA Subtitle D cover for non-hazardous waste landfills.

Construct a groundwater extraction and treatment system consistent with the 1989 FS.

Establish a groundwater monitoring well network and conduct periodic sampling to evaluate improvement in groundwater quality.

Explanation of Significant Difference

On September 1997, EPA, with WDNR concurrence, signed an ESD for a change in the groundwater component of the remedy. Specifically, the ESD stated that: "After reviewing groundwater monitoring data collected over several years, U.S. EPA has determined that natural attenuation has significantly reduced contaminant levels in the groundwater. Based on improvements in the levels of groundwater contamination downgradient of the site, U.S. EPA and WDNR have determined (i) that groundwater extraction and treatment are not necessary to

achieve regulatory requirements and to protect public health and the environment, and (ii) that these goals can be achieved by natural attenuation of groundwater contaminants. Contaminant concentrations in the groundwater will continue to be monitored and U.S. EPA will periodically review monitoring data to assess whether natural attenuation is reducing contaminant levels in a satisfactory manner."

Status of Implementation

The remedial systems for the JDF were implemented as described below.

Source Control Measures

Following the April 1996 design report, construction work started in June 1996. Construction work, including landfill capping and gas recovery and treatment systems, was completed in December 1996 and documented to the agencies in April 1997.

The primary source control measures include maintaining the clay cap over the landfill area, operating the gas extraction and leachate collection systems, monitoring for gas migration away from the waste fill, cleaning leachate lines and checking for waste settlement issues. The 1985 landfill has an active gas and leachate collection system. Based on a 2003 request from EPA the 1978 system was modified in 2005 to address concerns with gas migration. In addition, fifteen active gas extraction wells were installed at the 1978 site. These wells supplanted the existing passive gas control system. Ongoing gas migration monitoring confirms that these system changes have addressed the problem.

Institutional Controls

Institutional controls (ICs) are non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land or resource use. ICs in the form of deed and land use restrictions are required by the ROD to restrict property use, maintain the integrity of the remedy, and assure the long-term protectiveness for areas which do not allow for UU/UE. A summary of the implemented ICs for the Site is listed in Table 1 and further discussed below.

Figure 2 shows the area in which the ICs apply. A detailed map of the area is included in the Declaration of Restriction of Use of Real Property recorded by the City of Janesville.

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impact ed Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Groundwater	Yes	Yes	JDF	Prohibition of use of contaminated groundwater	Declaration of Restriction of Use of Real Property, April 26, 2006
Soil/Landfill covers	Yes	Yes	JDF	Prohibit interference with remedy	Declaration of Restriction of Use of Real Property, April 26, 2006
On-site structures	Yes	Yes	JDF	Remedy maintenance: No removal or construction without EPA approval	Declaration of Restriction of Use of Real Property, April 26, 2006
Entire site	Yes	Yes	JDF	Remedy maintenance and human health protection: No residential use of property	Declaration of Restriction of Use of Real Property, April 26, 2006

Table 1: Summary of Implemented ICs

To ensure that these land use control measures have been put into place the PRP group conducted, at EPA's request, an IC audit of the JDF. The resulting May 2006 audit report documented that:

- i) The properties containing the NPL sites as well as the adjoining waste disposal sites are owned by the City of Janesville (A copy of the title insurance was provided);
- ii) The city has filed a deed restriction on the properties. The deed restriction runs with the land and provides the following use limits:

There shall be no consumptive or other use of the groundwater underlying the property.

There shall be no use of, or activity at, the property that may interfere with the Work performed or to be performed under the Consent decree at the property, or any activity which may damage any remedial action component contracted for or installed pursuant to the Consent Decree or otherwise impair the effectiveness of any Work to be performed pursuant to the Consent Decree.

There shall be no installation, construction, removal or any use of any building, wells, pipes, roads, ditches or any other structures at the property except as approved by the U.S. EPA as consistent with the Consent Decree.

There shall be no residential use of the property.

In addition to the site-specific controls, Janesville City Code Section 15.02.040 – State Code To Govern and Janesville City Ordinance 13.04.110 – Private Well Abandonment, control the installation of private wells within the city limits. The City of Janesville surrounds the landfill property including all the land southwest (downgradient) between the disposal facility and the Rock River. This control on well installation prevents any water supply wells from being drilled in the area contaminated or potentially contaminated by the disposal facility. The May 2006 report concluded that the ICs and city ordinances have been successfully implemented and are working to protect the public health and the environment.

<u>Current Compliance</u>: Based on inspections and discussions with City of Janesville oversight staff, EPA is not aware of Site or media uses which are inconsistent with the stated objectives to be achieved by the ICs. The remedy appears to be functioning as intended. No Site uses which are inconsistent with the implemented ICs or remedy IC objectives have been noted during the Site inspection.

Long-Term Stewardship: Since compliance with ICs is necessary to assure the protectiveness of the remedy, planning for long-term stewardship is required to ensure that the ICs are maintained, monitored and enforced so that the remedy continues to function as intended. Long-term stewardship involves assuring effective procedures are in place to properly maintain and monitor the Site. Long-term stewardship will ensure effective ICs are maintained and monitored and the remedy continues to function as intended with regard to ICs. The final Operation and Maintenance (O&M) Plan for the JDF includes procedures to ensure long-term IC stewardship including regular inspections of the engineering controls and access controls at the JDF, reviews of the ICs, and annual ICs reports with results of the inspection and review and certification to EPA that ICs remain in-place and are effective. The most recent annual certification is dated March 28, 2016.

<u>Systems Operations/Maintenance</u>: Monthly inspection and maintenance of the landfills includes evaluation of the integrity of the landfill cover and monitoring and maintenance of the landfill gas and leachate collection systems. These activities include: measuring methane, oxygen, carbon

dioxide, balance gas and vacuum/pressure. Monthly gas probe monitoring includes measuring methane, oxygen and static pressure at each monitoring point and calculating the LEL from the methane percentage reported.

III. PROGRESS SINCE THE LAST FIVE YEAR REVIEW

This section includes the protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the current status of those recommendations.

• • OU #	Protectiveness Determination	Protectiveness Statement
Sitewide	Protective	The remedy implemented at the Janesville Disposal Site is protective of human health and the environment. All immediate human health threats have been addressed, and there are no contaminant exposures of concern. The landfill cap and gas collection and treatment systems continue to prevent exposure to waste materials and minimize the flow of water through the waste mass. Natural attenuation processes appear to be controlling and reducing groundwater contaminant concentrations. All necessary institutional controls are in place and functioning as designed and are appropriately monitored and enforced. These conditions allow the remedy at the site to be considered protective of the public health and the environment.

Table 2: Protectiveness Determinations/Statements from the 2011 FYR

Status of Recommendations from the 2011 FYR

EPA identified no issues, recommendations or follow-up actions for the JDF in the 2011 FYR Report.

However, the following recommendations were made which do not affect the current nor future protectiveness of the remedy:

- Continue the same level of effort as has been historically put forth at the site.
- Evaluate the current compliance monitoring program to determine if it should be replaced
- with a three-year confirmation monitoring program, as described in Section VI, 12(a)(4)(E)(page25) of the Consent Decree.

In June 2015 the JDF PRP Group completed an evaluation of the groundwater at the site to determine whether the concentrations of the primary COCs have attained the cleanup levels necessary to discontinue groundwater monitoring at the site. The evaluation was conducted in accordance with the EPA guidance (*Recommended Approach for Evaluating Completion of*

During the site inspection for the fourth FYR, all of the physical components of the remedy were found to be in good condition. It was noted that the cover over the Ash Beds has been impacted by tree growth and paved encroachment by an adjacent facility. Per the requirements of the ROD, the cover over the area of the Ash Beds must comply with RCRA post-closure requirements. Those requirements will need to be reviewed as part of O&M of the cover to determine whether they are being impacted by the trees and the paved encroachment.

V. TECHNICAL ASSESSMENT

Question A: Is the remedy functioning as intended by the decision documents?

Yes, the combination of source control measures and natural attenuation are reducing contaminant concentrations. The rate of improvement in groundwater quality continues at a rate similar to that which was predicted for the site.

Statistical analysis of the PCE results from the December 2015 monitoring event indicate that the PCE concentrations at both monitoring wells are below the remediation goal for PCE and that the monitoring wells continue to exhibit decreasing trends. Groundwater monitoring will continue at Wells W23, W5 and W10 and sufficient data will be collected and evaluated to ensure achievement of the RAOs and to support the termination of groundwater monitoring.

Ongoing O&M is ensuring that the landfill covers remain in place and protective. Evaluation of potential impacts to the Ash Beds covers by tree growth and paved encroachment by an adjacent facility will be conducted as part of regular O&M.

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

Yes, these items remain the same. There have been no changes in the toxicity data used to derive the most important groundwater quality standards for this site. Since there has not been in a change in groundwater quality standards, there have been no changes in the cleanup levels or remedial action objectives for this site. In addition there have been no changes in state or federal policy regarding where the groundwater quality standards should be applied.

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

No information has come to light that could call into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

There are no major issues or concerns related to the long-term cleanup of these landfills. The most important tasks to continue are the proper operation and maintenance of the source control measures, continued monitoring and evaluation of the natural attenuation of contaminants in the groundwater and continued implementation and monitoring of the ICs.

Other Findings

During the site inspection for the fourth FYR, all of the physical components of the remedy were found to be in good condition. It was noted that the cover over the Ash Beds has been impacted by tree growth and paved encroachment by an adjacent facility. Per the requirements of the ROD, the cover over the area of the Ash Beds must comply with RCRA post-closure requirements. Those requirements will need to be reviewed to determine whether they are being impacted by the trees and the paved encroachment. These impacts have not affected the integrity of the JDF cover. This issue does not affect the current nor future protectiveness of the remedy.

VII. PROTECTIVENESS STATEMENT

OU1 & Sitewide Protectiveness Statement

Protectiveness Determination: Protective

Protectiveness Statement:

The remedy implemented at the JDF Site is protective of human health and the environment. All immediate human health threats have been addressed, and there are no contaminant exposures of concern. The landfill cap and gas collection and treatment systems continue to prevent exposure to waste materials and minimize the flow of water through the waste mass. Natural attenuation processes appear to be controlling and reducing groundwater contaminant concentrations. All necessary ICs are in place and functioning as designed and are appropriately monitored and enforced. These conditions allow the remedy at the site to be considered protective of the public health and the environment.

VIII. Next Review

The next review will be completed within five years of the signature date of this report in 2021.

REFERENCE LIST

- 1. 2015 Annual Groundwater Monitoring Event, Janesville Disposal Facility, Janesville, Wisconsin, March 23, 2016.
- 2. Annual Certification Form, Institutional Controls at Janesville Disposal Facility Superfund Site, Janesville, Wisconsin, Civil Action No. 91-C-999-S, Karissa Chapman and Larry Buetzer, March 28, 2016.
- 3. Annual Report No. 24, Janesville Disposal Facility, Janesville, Wisconsin, March 28, 2016.
- 4. Explanation of Significant Difference, Janesville Disposal Facility, Janesville, Wisconsin, September 17, 1997.
- 5. Five Year Groundwater Assessment Report, Janesville Disposal Facility, Janesville, Wisconsin, Prepared for the Janesville Disposal Facility PRP Group by Conestoga-Rovers and Associates, April 2011.
- 6. Five Year Review Report, Janesville Ash Beds and Janesville Landfill National Priority Listing Sites and Adjoining sites or Janesville Disposal Facility, Janesville, Rock County, Wisconsin, United States Environmental Protection Agency, Region V, September 2006.
- 7. Groundwater Monitoring Program Evaluation, Janesville Disposal Facility, Janesville, Wisconsin, Conestoga-Rovers & Associates, June 17, 2015.
- Groundwater Monitoring Report, September 2014, Janesville Disposal Facility, Janesville, Wisconsin, Prepared for the Janesville Disposal Facility PRP Group by CRA, March 25, 2015.
- 9. Janesville Disposal Facility 2014 Annual Report, CB&I, January 8, 2015.
- 10. Janesville Disposal Facility As-Built Documentation Landfill Gas Migration Project, City of Janesville Engineering Department, May 2005.
- 11. Landfill Gas Management Plan Janesville Disposal Facility City of Janesville, Wisconsin, Earth Tech, Inc., February 2005.
- 12. Record of Decision: Janesville Ash Beds, United States Environmental Protection Agency Region V, December 29, 1989.
- 13. Third Five-Year Review for the Janesville Ash Beds and Janesville Old Landfill Superfund Sites, Janesville Wisconsin, USEPA, August 19, 2011.

INTERVIEW RECORD

Site Name: Janesville Disposal Facility (Janesville Old Landfill and Janesville Ash Beds)

EPA ID No.: WID000712950 / WID980614044

Subject: Five-Year Review Report/Site Visit

Date: April 20, 2016

Type: Telephone **X** Visit Other

Location of Visit: Janesville Disposal Facility, City of Janesville

Contact Made By:

Name: Tom Barounis

Title: Remedial Project Manager

Organization: U.S. EPA

Individuals Contacted:

Name: Karissa Chapman, P.E., Civil Engineer, City of Janesville Larry Buetzer, P.E., City of Janesville

Summary of Conversation

I arranged to meet with Karissa Chapman and Larry Buetzer of the City of Janesville at 10:00 a.m. on Wednesday, April 20 at their office. We drove out to the JDF together and proceeded to perform a visual inspection of the site.

Groundwater Restoration Remedial actions at a Groundwater Monitoring Well, OSWER 9283.1-44, August 2014).

Based upon the results of the evaluation EPA agreed to transition from compliance monitoring to confirmatory sampling, as provided for in the JDF Consent Decree. Current groundwater monitoring consists of routine sampling of three monitoring wells (W23, W5 and upgradient well W10. Groundwater monitoring at these three locations will continue until a statistical evaluation of the groundwater data indicates that the perchloroethene (PCE) MCL of 5 ug/L has been attained at wells W23 and W5 and that the groundwater will continue to meet the PCE MCL in the future.

Statistical analysis of the PCE results from the December 2015 monitoring event indicate that the PCE concentrations at both monitoring wells are below the remediation goal for PCE and that the monitoring wells continue to exhibit decreasing trends. Sufficient data have not yet been collected and evaluated to support the termination of groundwater monitoring. Therefore, annual groundwater monitoring will continue at Wells W23, W5 and W10.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice announcing the Fourth FYR and soliciting information from interested parties was placed in the Janesville Gazette on March 15, 2016, stating that there was a FYR and inviting the public to submit any comments to EPA. The results of the review will be made available at the site information repository located at the Hedberg Public Library, 316 S. Main Street, Janesville, WI and at the following websites: <u>www.epa.gov/superfund/janesville-landfill</u>.

Data Review

The following sources of information were reviewed for this FYR:

- 2011 2015 Annual Reports
- 2011 2015 Groundwater Monitoring Reports
- 2011 2015 City of Janesville Landfill Inspection Logs
- 2011 2015 City of Janesville Landfill Gas Monitoring Reports
- Annual Certification of Institutional Controls at Janesville Disposal Facility
- 2015 Annual Groundwater Monitoring Event, Letter Report, March 23, 2016

Evaluation of Groundwater Remediation Trends

The ESD provided time estimates for the organic COCs, PCE and TCE, to achieve MCLs and PALs. The estimated times were 2006 and 2021, for PCE and trichloroethene (TCE), respectively.

The PCE results from the December 29, 2015 monitoring event were evaluated using the procedures described in the EPA guidance document "Recommended Approach for Evaluating Completion of Groundwater Restoration Remedial Actions at a Groundwater Monitoring Well (OSWER 9283.1-44, August 2014). The results of the statistical analysis indicate that the PCE concentrations at both monitoring wells exhibit decreasing trends, but the value of the 95% Upper Confidence Level (UCL) is greater than MCL of 5 ug/L.

Regression analyses of the PCE and TCE compliance monitoring data for monitoring wells exhibiting downward trends were performed to compare the time estimates in the ESD to current time estimates. Trend lines extrapolating forward to determine the estimated dates when the MCLs and PALs for PCE and TCE would be met indicated that current time estimates for the COCs to achieve the MCLs and PALs (2010 and 2024, respectively), were consistent with the time estimates in the ESD. The most recent groundwater monitoring data, as documented in the 2015 Annual Groundwater Monitoring Report, show that the groundwater remediation goals have been met. Sufficient additional rounds of groundwater sampling will be conducted at the three confirmatory sampling wells (W23, W5 and background well W10) to provide a statistically valid confirmation that the remediation goals have been achieved and are not expected to rebound.

The most recent groundwater data, summarized in Attachment B, showed PCE concentrations as follows: W10 = non-detect; W23 = 1.9 ug/L; W5 = 3.5 ug/L.

Remediation Results to Date

The groundwater monitoring data from the past five years of compliance monitoring and confirmation sampling at the JDF show that the groundwater quality has improved to the point where COC concentrations are below the remediation goals established in the ROD The decreasing contaminant concentrations at the downgradient monitoring locations indicate that the source control remedial actions and natural attenuation processes have been and continue to be effective in improving groundwater quality at the JDF. The time estimates for natural attenuation processes to remediate groundwater at the JDF are consistent with the time estimates in the ESD. The use of groundwater as a potable source downgradient of the JDF continues to be prohibited by city ordinances.

The groundwater monitoring data from the past five years, as illustrated by the trend line analyses of Attachment B, continue to support the conclusions in EPA's ESD.

Site Inspection

EPA performed an inspection of the JDF Site on April 20, 2016. In attendance were Tom Barounis, EPA; Karissa Chapman, City of Janesville; Larry Buetzer, City of Janesville. The purpose of the inspection was to assess the protectiveness of the remedy. The site inspection report is attached.

Site Inspection Checklist

I. SITE INFO	RMATION	
Site name: Janesville Disposal Facility (Janesville Old Landfill and Janesville Ash Beds)	Date of inspection: April 20, 2016	
Location and Region: Town of Rock, Wisconsin	EPA ID: WID980614044 WID000712950	
Agency, office, or company leading the five-year review: U.S. EPA Region 5	Weather/temperature: Fair/Cloudy/70°F	
X Access controls □ Groundwater co X Institutional controls □ Vertical barrier □ Groundwater pump and treatment □ Surface water collection and treatment	ntainment walls	
Attachments: X Inspection team roster attached	X Site map attached	
II. INTERVIEWS (C	Check all that apply)	
Name Interviewed: X at site \Box at office \Box by phone No. 608-7	Title Date 55-3163	
andfill and Janesville Ash Beds) Location and Region: Town of Rock, Wisconsin EPA ID: WID980614044 WID000712950 Agency, office, or company leading the five-year review: Weather/temperature: Fair/Cloudy/70°F JS. EPA Region 5 Weather/temperature: Fair/Cloudy/70°F Semedy Includes: (Check all that apply) X Landfill cover/containment X Monitored natural attenuation X Access controls □ Groundwater containment □ Striate water collection and treatment Surface water collection and treatment □ Striate water collection treatment □ Striate water collection treatment X Other Leachate collection treatment X Site map attached II. INTERVIEWS (Check all that apply) O&M site manager Karissa Chapman Civil Engineer April 20, 2016 Name Title Date Date Interviewed: X at site □ at office □ by phone No. 608-755-3163 Problems, suggestions: X Report attached : See Interview Summary. 2. O&M staff Larry Buetzer Senior Engineer (ret.) April 20, 2016 Name Title Date Date Interviewed: X at site □ at office □ by phone No. 608-724-8194 Problems, suggestions; □ Report attached Staff Lar		
department, office of public health or environmental health offices, etc.) Fill in all that apply. Agency Contact Name	n, zoning office, recorder of deeds, or other city and county	
	21	

	Contact Name Problems; suggestions; Report attached	Title	Date	Phone no.	
4.	Other interviews (optional) Report attache	ed.			١
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					· · · · · ·
	III. ON-SITE DOCUMENT	rs & records verif	FIED (Check a	all that apply)	
1.	O&M Documents X O&M manual X As-built drawings X Maintenance logs Remarks	X Readily available X Readily available X Readily available	X Up to dat X Up to dat X Up to dat	e 🗆 N/A	
2.	Site-Specific Health and Safety Plan Contingency plan/emergency response Remarks		ble 🛛 Up to c		
3.	O&M and OSHA Training Records Remarks	Readily available	□ Up to dat	te X N/A	
4.	Permits and Service Agreements Air discharge permit Effluent discharge Waste disposal, POTW Other permits	 Readily available Readily available Readily available Readily available Readily available 	□ Up to da □ Up to da □ Up to da □ Up to da	te X N/A te X N/A	
5.	Gas Generation Records X Rea Remarks	adily available X Up	to date	N/A	
6.	Settlement Monument Records X Rea	adily available X Up 1	to date	N/A	

	Groundwater Monitoring Record Remarks			□ N/A	
	Remarks			N/A	
	Discharge Compliance Records Air Water (effluent) Remarks 	 Readily available Readily available 	 Up to date Up to date 	X N/A X N/A	
0.	Daily Access/Security Logs	X Readily available	X Up to date	□ N/A	
	Remarks: All site visits are docun	nented by the City of Janesville	Site Manager.		
		IV. O&M COSTS			
	O&M Organization	□ Contractor for State			
	FRP in-house Federal Facility in-house Other	X Contractor for PRP Contractor for Federal Fac	ility		
	□ Other O&M Cost Records X Readily available X Up □ Funding mechanism/agreement	to date [/]			
	□ Other O&M Cost Records X Readily available X Up □ Funding mechanism/agreement Original O&M cost estimate	to date / in place	Breakdown attached		
	□ Other O&M Cost Records X Readily available X Up □ Funding mechanism/agreement Original O&M cost estimate Total an	to date / in place	Breakdown attached iod if available		
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	V. ACCESS AND INSTITUTIONAL CONTROLS X Applicable	N/Å		
A For	•••			
A. Fen		· · ·		
1.	Fencing damaged □ Location shown on site map □ Gates securedRemarks:Fencing, where located, is properly maintained and in good condition.		□ N/A	
B. Oth	er Access Restrictions			
1.	Signs and other security measures□Location shown on site map□N/ARemarks:Signs are in place and in good condition.	· · · · · · · · · · · · · · · · · · ·		
C. Inst	itutional Controls (ICs)	•		
1.	Implementation and enforcement			
	Site conditions imply ICs not properly implemented Site conditions imply ICs not being fully enforced	□ Yes □ Yes		□ N/A □ N/A
	Type of monitoring (<i>e.g.</i> , self-reporting, drive by): Self-reporting. Frequency: Annual.			
	Responsible party/agency: City of Janesville.	(00 755		
	Contact:Karissa ChapmanCivil EngineerApril 20, 2016NameTitleDate	<u>608-755</u> Phone		
`	Reporting is up-to-date	X Yes	m No	□ N/A
	Reports are verified by the lead agency	X Yes		
· · ·	Specific requirements in deed or decision documents have been metViolations have been reportedOther problems or suggestions:□Report attached	X Yes		□ N/A X N/A
				×
	· · ·			
		•	<u> </u>	
2.	Adequacy X ICs are adequate □ ICs are inadequate Remarks		□ N/A	
D. Gen	eral			`
1.	Vandalism/trespassing Location shown on site map X No vandalism evident Remarks			
2.	Land use changes on site \Box N/A Remarks: Land use has not changed.			
		• .		24

3.	Land use changes off site X N/A Remarks
	VI. GENERAL SITE CONDITIONS
A. R	oads 🗆 Applicable 🗆 N/A
1.	□ Roads damaged □ Location shown on site map X Roads adequate □ N/A Remarks
B. O	ther Site Conditions
	Remarks: The general condition of the site is good. Cover side slopes are steep in places, but the vegetative cover is adequate and in good condition.
	VII. LANDFILL COVERS X Applicable X N/A
Land	fill covers are in good condition.
	VIII. VERTICAL BARRIER WALLS Applicable X N/A
	IX. GROUNDWATER/SURFACE WATER REMEDIES Applicable N/A
A. G	roundwater Extraction Wells, Pumps, and Pipelines 🛛 Applicable X 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
B. S	urface Water Collection Structures, Pumps, and Pipelines
С. Т	reatment System
1.	Treatment Train (Check components that apply) Image: Metals removal Image: Oil/water separation Image: Metals removal Image: Oil/water separation

	□ Air stripping □ Carbon adsorbers □ Filters	
	□ Filters □ Additive (e.g., chelation agent, flocculent)	
1	□ Additive (e.g., enclation agent, needlent)	
	□ 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)	
	X N/A Good condition Needs Maintenance	
	Remarks	
· ·	Remarks	
3.	Tanks, Vaults, Storage Vessels	•
	□ N/A □ Good condition □ Proper secondary containment □ Needs Maintenance	
	Remarks	
÷		
4.	Discharge Structure and Appurtenances	
	□ N/A X Good condition □ Needs Maintenance	
	Remarks	
5.	Treatment Building(s)	
	X N/A \Box Good condition (esp. roof and doorways) \Box Needs repair	
	X Chemicals and equipment properly stored	
-	Remarks	
6.	Monitoring Wells (pump and treatment remedy)	
	X Properly secured/locked X Functioning X Routinely sampled X Good condition X All required wells located	
	Remarks	
D. Mo	onitoring Data	
8.	Monitoring Data	
0.	\mathbf{X} Is routinely submitted on time \mathbf{X} Is of acceptable quality	
	A is fournery submitted on time A is of acceptable quanty	
9.	Monitoring data indicates: Continued remedial progress.	
	X Groundwater plume is effectively contained X Contaminant concentrations are declining	
В М	onitored Natural Attenuation: Monitoring data from the confirmatory sampling wells shows that the groundwat	er
	ninant concentrations declined to below the ROD-required levels (MCLs). The rate of improvement is consistent	
with th	hat expected at the time that the ESD was approved. Regression analysis indicates that the calculated UCL for PC	Е
in the s	groundwater is greater than the MCL for PCE. Therefore, the confirmatory sampling will continue for several mo	re

rounds.	
	X. OTHER REMEDIES (N/A)
	XI. OVERALL OBSERVATIONS
А.	Implementation of the Remedy
	The Janesville Disposal Facility remedy includes the proper maintenance of the covers that were placed over the Old Landfill and the Ash Beds, monitoring, collection and flaring of landfill gas, monitoring of groundwater to verify that the contaminant plume is contained and that natural attenuation is occurring at the predicted rate and verification that institutional controls are effective. Based upon a review of the provided documentation, interviews with the City of Janesville staff and the site inspection the remedy is effective and functioning as designed.
В.	Adequacy of O&M
	Based upon a review of the documentation provided by the City of Janesville staff, O&M activities performed at the JDF are effective and effectively contributing to the long-term protectiveness of the remedy.
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.
	During the site visit, several trees were noted to be growing on the cover over the Ash Beds. A paved encroachment at the northeast end of the cover from an adjacent recycling facility was noted. While the disposed materials in the Ash Beds were removed during the remedial action, the cover over the Ash Beds is required to be maintained per RCRA requirements. Those requirements need to be reviewed to determine whether the trees and the paved encroachment are or are not consistent with RCRA requirements.
D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.
	None.

Site Chronology

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Table 1: Chronology of Site Events		
Event	Date	
Old 1978 Landfill opened /Ash beds opened	1963/1974	
Old 1978 Landfill closure/Ash Bes closure	January 1985/1985	
Operational history: The 1978 site was a municipal landfill with no liner or leachate collection. The Ash Beds accepted industrial liquids and sludges during it operational life.	During primary operating history 1963-1985	
: NPL inclusion proposal	September 8, 1983	
NPL finalization	September 21, 1984	
RI/FS field investigation	Field work during 1987-88	
Proposed Plan	Issued to public to begin comment period August 1989	
Record of Decision	Signed December 29, 1989	
Explanation of Significant Difference (ESD)	Signed September 17, 1997	
Remedial Action Construction - Source Control	Completed Spring 1997	
PCOR	Signed September 18, 1997	
First Five Year Review Report	September 2001	
Second Five Year Review Report	September 30, 2006	
Third Five Year Review Report	August 19, 2011	
Notice of Fourth Five-Year Review Report	March 15, 2016 (Janesville Gazette)	
Fourth Five Year Review Site Inspection	April 20, 2016	

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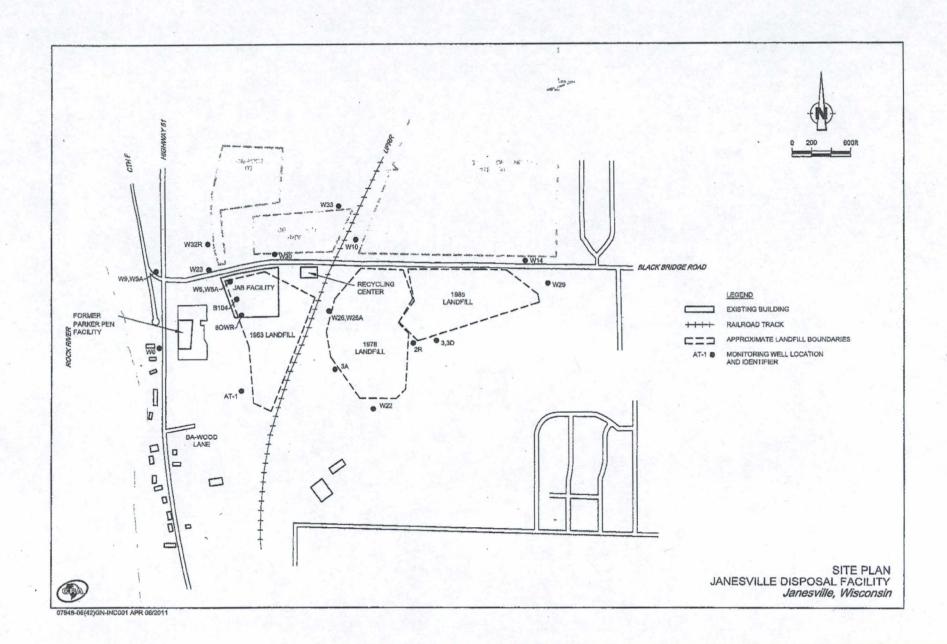
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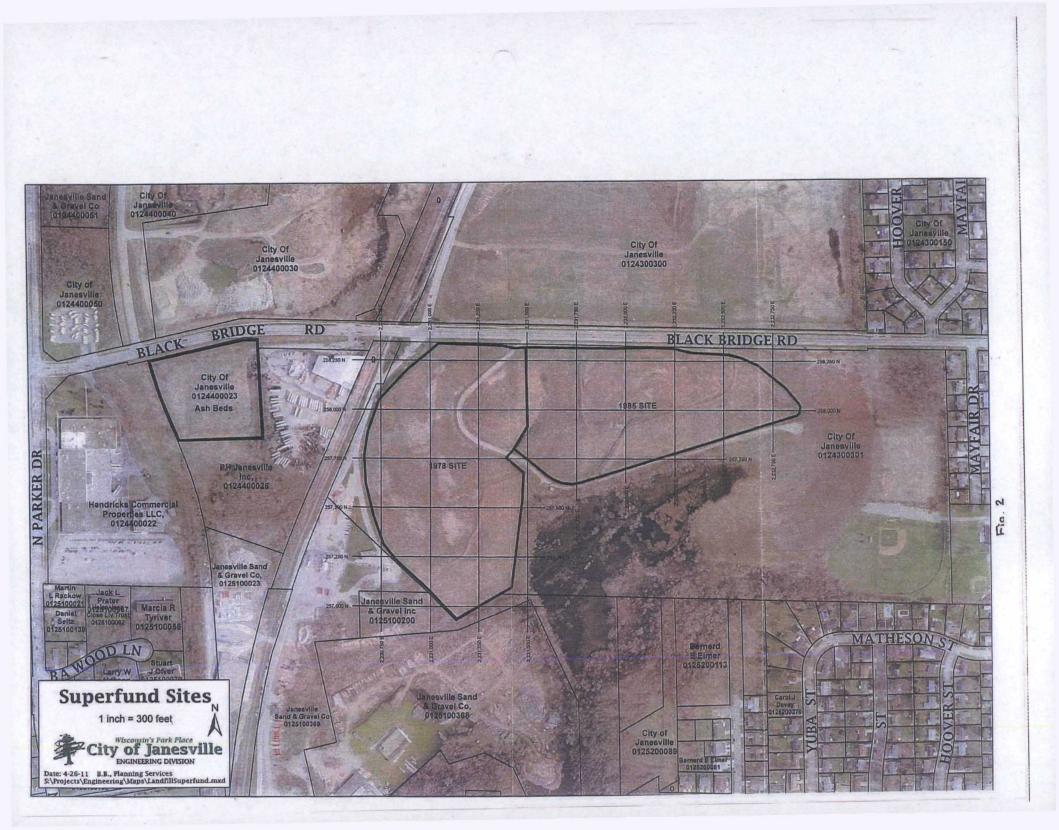
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ATTACHMENT A

STATE

Senate won't consider contentious bills

Accordated Press

Proposals could be dead as session ends today mentia, are all probably dead. So, too, are ahandful of other contentious pro-posals, including barning research using fetal tissue and forcing students to use bathrooms assigned to their bi-

ological sex. The "sanctuary cities" bill would ADDISON The Wisconsin Senate likely word take up bills that would outdaw so called sanctuary cities for immi-grants, iocrease compensation for this to deduct debt from their income tas to deduct debt from their income tas expected to be the last floor period for what's expected to be the last floor period for what's expected to be the last floor period for the two-year legislative session. Republicans who control the day. The Assembly finished its work for the session last monti; if Senate for the session last monti; if Senate for the session last monti; if Senate immigration, wrongful conviction and student, debt bills, as well as a number of measures to combat de-

insisting he has the votes and that the decision to not consider the bill "is a prime example of the adherence to po-litical correctness practiced by some Republicans" Fitzgerald spokes-woman Myranda Tanck didn't imme-

diately respond to a request for com-ment on Nass' remarks.

diately respond to a request for com-ment on Nass' remarks. The Assembly also passed a bill that would dramatically increase compensation for the wrongfully con-victed from a maximum of \$25,000 to \$50,000 per year spent in prison with an overall \$1 million limit. Wrongful convictions have gained more attention following the release of the Nettlix series "Making a Mur-derer," which tells the tale of Mani-towoc County native Steven Avery, who was convicted of Killing a pho-tographer after he was released from prison for a sexual assault he didn't commit. The bill's supporters said the meas-ure has nothing to do with Avery. But

Senate Republicans' concerns about the bill have been "exacerbated by the recent increase in public attention."

the buil have been 'exacerbated by the recent increase in public attention." The Assembly also passed Gov, Scott Walker's college affordability package in February. The package in-cludes bills that lift the cap on tax-de-ductible student loan interest, boost grants for technical college and two-year students at University of Wiscon-sin Colleges to help them deal with emergencies, create internahlp coor-dinators and require colleges to up-date students annually on their debt. The Senate calendar doesn't in-clude the income tax deduction bill; Thack cited fiscal estimates that show the measure would cost the state more than 85 million in revenue annually. The Senate also plans to take up-only three of 10 Assembly bills de-signed to help people deal with de-mentia. The bills that didn't make the scale.

endar include measures to fund vir-tual dementia tours, provide more funding for Alzheimer's research at University of Wisconsin-Madison, re-quire informed consent before admin-istering psychotropic medications in nursing homes and require reviews of Silver Alert subjects' driver's licenses.

Silver Alert subjects' driver's licenses. Silver Alerts are public bulletins about missing senior citizens. Tanck said those bills are too expensive. The tiree bills up for a Senate vote would create training grants for mo-bile dementia crisis response teams, provide about \$1 million more for the state's Alzheimer's family and caregiv-er support program and require reer support program and require re-ports on where dementia sufferers are

placed in crisis situations. The bills that would ban research using tissues from aborted fetuses and require public school students to use bathrooms and locker room assigned to their biological sex didn't get out of the Assembly.

Johnson: Nephew died from overdose

gan when he became addicted office of National Drug Con-top analdiers after a sport in the Policy to expand disposal jury and that he later turned to beroin. He made the remarks about his nephew while tour-ing the proposed Comprehan-ing the proposed Comprehan-ing the proposed Comprehan-ing the proposed Comprehan-ing the proposed Comprehan-addiction and Recovery Act, which would create more federal grants to fight option abuse, expand treatment pro-grams and provide training the Sena ta passed the bill abuse, expand treatment pro-grams and provide training the Sena ta passed the bill affirst-responders on how to ad-tor insister heroid overdose and tots such as Narcan. Johnson said his nepher

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U.S. Enviro

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Condinates 312-353-1325

ADISON U.S. Sen. Roin Johnson said Monday he reacently lost a nephew to a heroin overdose. Johnson told reportess a conference call that his maphery argues problem and the sense a conference call that his maphery and that he later turned to be pair life to the sense to pairklife safter a sport beroin. He made the remute about his nephery while tout-ing the proposed Comprehe-tive Addients

dotes such as Narcan. Johnson said his nephew died of an overdoee within the last two months. The Oshkosh Republican declined to offer any further details. A spokesman in Johnson's gled with a heroin addiction Washington, D.C., office also for several years.

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EPA Begins Review of Janesville Disposal Facilities Janesville. Wisconsin

of the Janeswille Disposal Facilities Superfund sites on Bisek Bridge Road, Janusville, The Superfund has requires regular database of sites that have been cleaned up – with waste managed on site – to make sure

EPA's grounds are releasing at the facilities, also known as lanosville Old Landfill and Janesville Ash Buds, consisted of several actions indialing a fundfill cover, gas collection system, and groundstater means and several s

More information is available at the Hedrerg Public Library, 316-5. Main Su, kanesville, and at www.spa.speciesperfinal/jazesville-askibed and www.epia.gio-inspectinglignesville-baulifil. The review should be complete its August 2016.

mus continues to preser people and the environment. This is the

mult Predoction Agency is conducting a five-year review

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Distracted driving crashes

Jason Weber, community liaison officer, town of

Traffic Safety Commission es-timates that distrated driving is a factor in at least 3,000 deaths per year. Weber acknowledges that it won't be easy to address the problem of distrated driving, but he believes the solution will come down to drivers es-tablishing better habits rather than simply passing laws. He hoges the public will be able to adopt safer driving habits like it did when the seathelt law took effect years ago.

BRIEFS Compiled from Gazette wire service **Gun report closes UW-Platteville**

PLATTEVILLE-Police

PLATTEVILLE—Police said a report of a man with a military-style rife on campus prompted UW-Piatteville to bet down on Monday. A student said he came out of a bathroom stall at Ullsvik Hall and saw another man with whathe believed to be an AK-47 pointed down. The stu-dent said he saw a gun barrel and heard a clicking sound, so he pulled the fire alarm. Police said no weapon or gunman has been found. Classes were canceled at 130 pm. Monday due to these-party threat, and campus of-fices and services were closed.

The same services were closed. Students who live on eampus were told to return to their res-icence halls. Authorities will continue searching buildings, but classes will resume as scheduled today.

Jail installs tablets for inmate use

CHIPPEWA FALLS— Sixteen tablets have been in-stalled in different rooms and cells at the Chippewa County, jail at no cost to local govern-

ment. WQOW-TV reported that the tablets were installed last week in an effort to cut down on the paper trail that follows many of the services needed by the inmates.

inmates. The tablets can be used by The tablets can be used by any inmate for up to 45 min-utesatatime. Inmates won't be able to go onto the Internet, but they'lleventually be able to pay for email access. The startup costs were cov-ered by an outside company, CBM, which provided the tablets.

Thompson heading state Kasich effort

Statte Kasichi etitori MADISON-Former Gov. Tommy Thompson will be leading Ohio Gov. John Ka-sichs efforts in Wisconsin. Kasich's campaign an-nounced Thompson's leader-ship role on Monday. Thompson announced his backing of Kasich last week. Thompson saws in a statement

Thompson says in a statement that Kasich is "the dedicated, responsible and compassion-ate executive leader our coun-try needs."

Gazette

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You may also call EPA toll-free at 800-621-8431, 8530 a.m. to 4.30 p.m., weekdays:

Tom Barnanis

312 353 5577



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Menasha Police Department

mentia. The bills that didn't make the cal-

The Gazette

placed in crisis situations.

ATTACHMENT B



March 23, 2016

Reference No. 11114776

Karissa Chapman City of Janesville Engineering Department 18 North Jackson Street Janesville, WI 53545

Dear Ms. Chapman:

Re: 2015 Annual Groundwater Monitoring Event Janesville Disposal Facility, Janesville Wisconsin

1. Introduction

GHD Services Inc.(GHD), formerly known as Conestoga-Rovers & Associates (CRA), on behalf of the JDF PRP Group (Group), submits this letter report summarizing the results of the December 2015 groundwater monitoring event conducted at the Janesville Disposal Facility (JDF) in Janesville, Wisconsin (Site). Groundwater compliance monitoring was undertaken in April 1993 by the JDF PRP Group pursuant to the 1991 Consent Decree for the JDF Remedial Design/Remedial Action. In July 2012, U.S. Environmental Protection Agency (U.S. EPA) concurred with the Group's recommendation to transition the monitoring program from compliance groundwater monitoring to confirmatory sampling, which is referred to as "detection monitoring" in the Consent Decree, until monitoring data demonstrate the Cleanup Standards and Alternate Cleanup Standards established in the Consent Decree have been satisfied for at least three years (U.S. EPA 2012). At the end of the first three time periods, the concentrations of the primary constituents of concern (COCs) at two monitoring locations had not attained the cleanup levels necessary to discontinue groundwater monitoring at the Site, and in correspondence dated June 17, 2015, GHD, on behalf of the Group, proposed a reduced groundwater monitoring program based on a statistical evaluation of the COCs in groundwater underlying the Site. U.S. EPA concurred with the Group's recommendation and approved the reduced monitoring program in a letter dated July 9, 2015.

2. Groundwater Monitoring

The annual groundwater monitoring event was conducted on December 29, 2015, and consisted of sampling of three monitoring wells associated with the Janesville Ashbed (JAB) well group; namely, monitoring well W23, monitoring well W5, and upgradient, background monitoring well W10. The wells were purged and field measurements of pH, conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were recorded prior to sample collection. Samples were

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maintained on ice prior to being shipped via overnight courier to TestAmerica Laboratories, Inc. of North Canton, Ohio (TestAmerica) for analysis. Groundwater samples were analyzed for tetrachloroethene (also known as perchloroethylene or "PCE").

3. Results

3.1 General Observations

3.1.1 Groundwater Observations

In general, the groundwater elevations were less than one-half foot lower than those calculated for the same wells during the September 2014 monitoring event. In addition, horizontal and vertical gradients and groundwater flow direction were consistent with previous monitoring events at the JDF.

3.1.2 Groundwater Quality Observations

Sample analysis was conducted by TestAmerica in accordance with the QAPP. TestAmerica's data were reviewed and validated by GHD in accordance with the requirements of the QAPP. The sample data were determined to be acceptable, and the results are summarized in the following table.

Well ID	PCE Conc. (µg/L)
W10 (Background)	ND (1.0)
W23	1.9
W5	3.5

Note: ND () - not detected at the value in parentheses.

3.2 Statistical Analyses

The PCE results from the December 29, 2015 monitoring event were evaluated using the same procedures as those used to evaluate the data in June 2015. Specifically, the evaluation was conducted using the procedures in the U.S. EPA guidance document *Recommended Approach for Evaluating Completion of Groundwater Restoration Remedial Actions at a Groundwater Monitoring Well* (OSWER 9283.1-44, August 2014). The results of the statistical analyses indicate that the PCE concentrations at both monitoring wells exhibit decreasing trends, but the value of the 95% Upper Confidence Level (UCL) is greater than the federal Safe Drinking Water Act maximum contaminant level (MCL) of 5 µg/L.

As noted in U.S. EPA's guidance, "if the data analysis demonstrates that the UCL value is above the COC cleanup level, it is appropriate to conclude that the COC cleanup level has not been met". When this occurs, additional monitoring is generally warranted. The statistical evaluations conducted on the December 2015 data are provided in Attachment A.

4. Conclusions and Recommendations

Based on the groundwater data evaluated, which is discussed above and detailed in Attachment A, future groundwater monitoring should be conducted at the three monitoring wells; namely, monitoring well W23, monitoring well W5, and upgradient, background monitoring well W10.

We appreciate the opportunity to complete this work for you, and please contact me should you have any questions.

3

Sincerely,

GHD

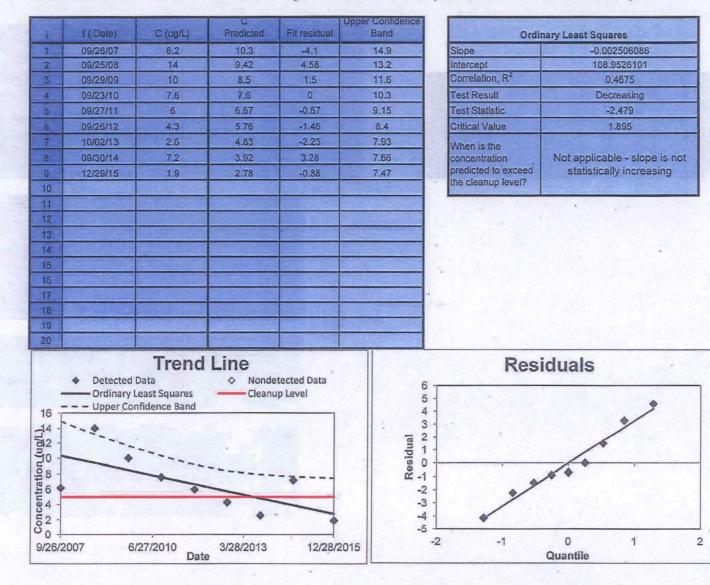
Steven Day SCD/sd/2 Encl.

cc: Larry Buetzer - JDF PRP Group Coordinator

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Attachment A Statistical Evaluations

Trend test results for datasets with normally distributed residuals (with our without transformation)



GW_Stats_Tool_08112014_final W23 PCE 03/17/16

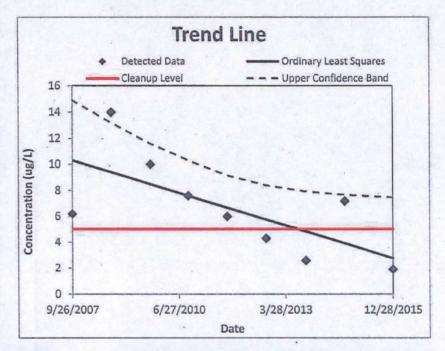
UCL calculations and summary statistics for data sets that are normally distributed

Site Name	JDF
Operating Unit (OU)	JAB
Type of Evaluation	Attainment
Date of Evaluation	03/17/16
Person performing analysis	GHD - S. Day

Chemical of Concern	PCE
Well Name/Number	W23
Date Units	Date
Concentration Units	ug/L

Confidence Level	95%
Number of results	9
Number < cleanup level	3
Are any potential outliers present?	No
Mean of concentration	6.64
Standard deviation of concentration	3.73
t-value for UCL calculation	1.860

95% Upper Confidence Limit (UCL)	8.95
Method for calculating UCL	Student's t UCL
Value of 95% Upper Confidence Band value at final sampling event	7.47
Trend calculation method	Ordinary Least Squares
Cleanup level	5
Source of cleanup level	MCL
Is the trend decreasing or statistically insignificant?	Yes



When is the concentration predicted to exceed the MCL?	Not applicable - slope is not statistically increasing
Vessage: None.	

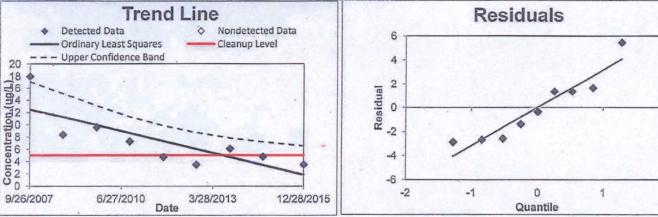
Trend test results for datasets with normally distributed residuals (with our without transformation)

1	t (Date)	C (ug/L)	C Predicted	Fit residual	Upper Conlidence Band
1	09/26/07	18	12.5	5.5	17.1
2	09/25/08	8.4	11.3	-2.9	15.1
3	09/29/09	9.6	9.94	-0.34	13.1
4	09/24/10	7.3	8.67	-1.37	11.3
5	09/28/11	4.7	7.36	-2.66	9.85
6	09/26/12	3.5	6.07	-2.57	8.72
7	.10/02/13	6.1	4.75	1.35	7.87
8	09/30/14	4.8	3.46	1.34	7.22
9	12/29/15	3.5	1.85	1.65	6.56
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Slope	-0.003547269
Intercept	152.1363092
Correlation, R ²	0.6358
Test Result	Decreasing
Test Statistic	-3.496
Critical Value	1.895
When is the concentration predicted to exceed the cleanup level?	Not applicable - slope is not statistically increasing

2

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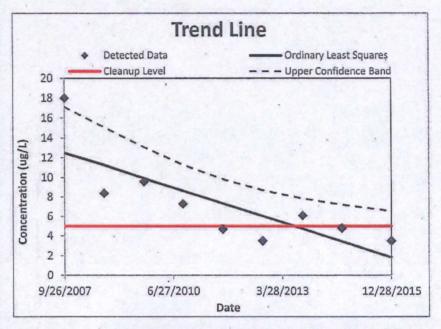
GW_Stats_Tool_08112014_final W5 PCE 03/17/16

UCL calculations and summary statistics for nonparametric data sets

Site Name	JDF .
Operating Unit (OU)	JAB
Type of Evaluation	Attainment
Date of Evaluation	03/17/16
Person performing analysis	GHD - S. Day

Chemical of Concern	PCE
Well Name/Number	W5
Date Units	Date
Concentration Units	ug/L

Confidence Level	95%
Number of results	9
Number < cleanup level	4
Are any potential outliers present?	No
Mean of concentration	7.3
Standard deviation of concentration	4.5



95% Upper Confidence Limit (UCL)	14
Method for calculating UCL	Chebyshev UCL
Value of 95% Upper Confidence Band value at final sampling event	6.56
Trend calculation method	Ordinary Least Squares
Cleanup level	5
Source of cleanup level	MCL
Is the trend decreasing or statistically insignificant?	Yes

When is the concentration predicted to exceed the MCL?	Not applicable - slope is not statistically increasing
Random Seed Used .	0
Message: None.	