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January 3, 2020

Mr. Bruce J. LeRoy
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Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727

Subject: Vapor Intrusion Assessment
FF/NN Landfill NPL Site - Ripon, Wisconsin

Dear Mr. LeRoy:

This letter presents a summary of the vapor intrusion assessment completed for the FF/NN Landfill NPL Site (Site) in Ripon, Wisconsin (Figure 1). The purpose of this document is to provide an outline of the conclusions of the vapor intrusion assessment completed to rule out the need for invasive vapor intrusion investigation of the surrounding properties. This assessment was completed using the Wisconsin Department of Natural Resources (WDNR) Remediation and Redevelopment Program Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin guidance document (Guidance).

Site Background

The FF/NN Landfill (landfill) is located in Fond du Lac County in the Town of Ripon, Wisconsin and occupies approximately 7.3 acres. The landfill was operated between 1967 and 1983 under multiple leases and accepted municipal, commercial, and industrial waste. In 1985, following landfill operations, the site was capped with clay and used for hay growth between 1985 and 1993. Currently the City of Ripon owns the site and the landfill is managed and maintained by the FF/NN Landfill PRP Group.

An evaluation of the landfill began in 1982 by the WDNR for inclusion on the federal National Priorities List (NPL) and was officially listed on May 31, 1994. Since this date, additional activities have been completed including, feasibility studies, remedial action, landfill gas evaluations, operation and maintenance of the site, and groundwater monitoring. A more detailed summary of site activities can be found in the quarterly reports that are submitted each year.

The footprint of the landfill and the layout of the monitoring well network are shown on Figure 2. The monitoring and evaluations that have been completed to date for the landfill provide a comprehensive understanding of the current site conditions and form the basis for this vapor assessment.

Groundwater Monitoring Well Network

The groundwater monitoring wells associated with the FF/NN Landfill site are grouped into four hydrostratigraphic units (Layer 1, Layer 2, Layer 3, and Layer 4). These layers are based on well screen elevations to better evaluate groundwater quality at discrete depth intervals and different aquifer units. Table 1 notes the grouping of wells in their respective layers and groundwater elevation data from the 2019 Second Quarter (Q2) monitoring event. Well gauging did not occur at all the wells during 2019 Q3 and 2019 Q4.

- Layer 1 contains nine monitoring wells screened across the water table within the unconsolidated sand and gravel. The midpoint elevations of the wells screens range from 817 to 825 feet (ft) Above Mean Sea Level (AMSL). As shown on Figure 2, wells constructed within Layer 1 immediately surround the footprint of the landfill and extend approximately 1,000 feet south of the landfill. The average groundwater elevation at the water table is 821 ft AMSL and is between 15 (MW-102 – east of landfill limits) and 60 (MW-101 – north of landfill limits) feet-below ground surface (ft-bgs), with the groundwater flow direction towards the southwest.

- Layer 2 contains eight monitoring wells screened within the unconsolidated sand and silt. Each well is constructed with a 5-foot screen with the midpoint elevations for the screens ranging from 777 ft to 794 ft AMSL (approximately 27 to 44 ft below the average water table elevation). As shown on Figure 2, wells constructed within Layer 2 immediately surround the footprint of the landfill and extend approximately 1,000 feet south of the landfill. The groundwater flow direction in this layer is toward the south-southwest.

- Layer 3 contains nine monitoring wells screened within sandstone bedrock. Each well is constructed with a 5 or 10-foot screen section with the midpoint elevations for the screens ranging from 637 to 707 ft AMSL (approximately 114 to 184 ft below the average water table elevation). As shown on Figure 2, wells constructed within Layer 3 are located just south of the landfill and extend approximately 2,500 horizontal feet to the south-southwest of the landfill. The groundwater flow is to the southwest and becomes more westerly further downgradient.

- Layer 4 contains three wells screened within sandstone or granitic bedrock. Each well is constructed with a 5 or 10-foot screen section with the midpoint elevations for the screens ranging from 510 ft to 575 ft AMSL (approximately 246 - 311 ft below the average water table elevation). As shown on Figure 2, wells constructed within Layer 4 are located south-south west of the landfill within 2,500 horizontal feet. The City of Ripon occasionally pumps from Municipal Well #9, which influences the groundwater flow direction in Layer 4. When Well #9 is not operational, groundwater flow is toward the west. When Well #9 is operational, groundwater flow is toward the southeast.

Groundwater Quality

Environmental monitoring at the Site began in 1992. Quarterly monitoring at select wells has been ongoing since active system operations began in 2005. Since that time, the monitoring program has been periodically modified based on data observations and field conditions. The current monitoring program is outlined in Table 2 and is performed in accordance with the Revised Groundwater Monitoring Program (GMP) as outlined in the April 18, 2013 conditional GMP (WDNR, 2013; 2017). Site wells are sampled for volatile organic compounds (VOCs) and monitoring natural attenuation (MNA) parameters including: total manganese, total nitrogen (nitrate + nitrite), and sulfate. The MNA parameters are not volatile, and therefore, are not a risk for vapor intrusion. Thus, the focus of this vapor intrusion screening assessment is based on the VOC results in groundwater. For the purpose of this assessment, water quality results have been broken up to assess VOCs[1] within the water table (Layer 1) and below the water table (Layers 2-4). Detections were compared to the Wisconsin Administration Code Natural Resources (NR) 140 Enforcement Standard (ES) and Preventive Action

[1] Note: Methylene Chloride has been detected periodically in select samples and is expected to be a laboratory contaminant.

Limit (PAL). Attachment 1 includes a summary of detections through 2018 and Table 3 includes results for 2019 Quarters 1 through 3.

Water Table Wells

Wells constructed within Layer 1 are screened within the water table. Currently the Site contains one well within the landfill limits (MW-104), three side gradient wells (MW-102, MW-106, and MW-108), one up gradient well (MW-101), and four down gradient wells (MW-103, MW-107, MW-111, and MW-112). Historical groundwater monitoring results have shown:

- Well(s) within the landfill limits (western portion) have shown detections of petroleum and chlorinated VOCs with intermittent exceedances of the NR 140 ES and/or PAL standards for select parameters. Samples are currently collected annually, and recent results (2018 and 2019) have only detected vinyl chloride (VC) greater than the ES.

- Well(s) side and up gradient of the landfill limits have historically detected chloromethane, trichloroethene (TCE), and tetrachloroethene (PCE) greater than their PAL standards and VC above the ES standard. More recent monitoring consistently found no exceedances of the ES or PAL standards at these locations; and these wells were therefore removed from the routine monitoring program in 2012.

- Well(s) down gradient of the landfill have shown detections of chloromethane and petroleum VOCs with intermittent exceedances of the PAL standard and chlorinated VOCs with intermittent exceedances of the ES and/or PAL standards for select parameters. Recent results (2018 and 2019) detected TCE greater than the PAL just south-southwest of the landfill limits (less than 50 feet) and VC greater than the PAL just southwest of the landfill limits (less than 50 feet). Further downgradient (wells greater than 100 feet from the landfill) have been below the PAL for all VOCs since 2010.

Wells Below Water Table

Currently the Site contains one well beneath the landfill limits (P-104), three side gradient wells (P-102, P-106, and P-108), one up gradient well (P-101), and 15 down gradient wells (Layer 2 - P-103, P-107, and P-111) (Layer 3 - MW-3B, P103D, P-111D, P-113B, and P-114 through P-118) (Layer 4 - MW-3A, P-107D, and P-113A) below the water table. Historical groundwater monitoring results have shown:

- Well(s) beneath, side gradient, and up gradient of the landfill limits have historically detected chloromethane and TCE greater than their PAL standards and VC greater than the ES standard. More recent sampling consistently found no exceedances of the ES or PAL at these locations, and these wells were therefore removed from the routine monitoring program in 2012. One side-gradient well continues to be sampled annually, and concentrations for all VOCs have been below their PALs since 2004.

- Well(s) downgradient of the landfill have historically shown detections of chloromethane, TCE and VC. The concentrations of chloromethane have been below the PAL in all downgradient wells since 2014, and TCE concentrations have been below the PAL since 2001. VC concentrations remain greater than the ES and/or PAL in 10 of the 15 down gradient wells.

- Three private wells, located on residential properties to the south-southwest of the landfill (greater than 1,500 feet), were historically sampled for VOCs and one of the three wells reported detections of VC greater than the ES standard. This property and the adjacent property were connected to City water and the third private well is monitored on an annual basis and has not reported detections of VC.

Vapor Intrusion Screening Criteria

Guidance from the WDNR, ITRC, and U.S. EPA notes that groundwater can carry dissolved phase CVOCs over long distances which can volatilize off the groundwater table into the vadose zone. Many CVOCs do not readily degrade and once in the vadose zone soils, CVOCs can migrate along various pathways causing a vapor intrusion risk depending on the source and extent of contamination. The WDNR recommends the following criteria be reviewed for any site containing CVOC impacts. The WDNR expects an invasive investigation of the vapor intrusion pathway at sites that meet one or more of the screening distances listed below:

1. There is a building constructed over or within 100 feet of CVOC impacted soil.
2. Building or undeveloped property overlies groundwater with CVOC concentrations above the Wisconsin Administration Code Natural Resources (NR) 140 Enforcement Standard (ES). Note when groundwater contamination is deep and the water table is clean, the clean water prevents the migration of vapors into the vadose zone and vapor intrusion would not be a risk.
3. Groundwater with CVOC concentrations above the Wisconsin Administration Code Natural Resources 140 Preventative Action Limit (PAL) has entered the building or is contact with the building's foundation.
4. Utility line(s) transects a CVOC source area.

If no screening distances are met and other site-specific conditions are considered, the WDNR requests that data and evaluation be provided as the basis for why vapor intrusion risk can be ruled out and additional vapor sampling efforts are not needed at offsite properties.

FF/NN Landfill Vapor Intrusion Screening

Screening Criteria 1

The FF/NN Landfill fill limitations are considered the source area where soil impacts would exist. The landfill is maintained as a closed landfill and no buildings are constructed on or within 100 feet of the landfill limits. No vapor intrusion risk is present based on these criteria and no further vapor investigation is needed at this time.

Screening Criteria 2 and 3

The groundwater quality can be used to assess the potential for vapor intrusion in overlying buildings. In review of the groundwater quality data the two VOCs of potential concern include VC and TCE. There are currently VC concentrations greater than the NR 140 ES standard at the water table within the limits of the landfill and greater than the NR 140 PAL for TCE and VC less than 50-feet south-southwest of the landfill. The WDNR uses vapor risk screening level (VRSLs) to determine if the

groundwater concentrations at the water table would cause an indoor air risk. The VRSL for TCE is 5 µg/L (equivalent to the ES) and for VC is 2.92 µg/L (approximately one order of magnitude above the ES and two orders above the PAL).

For the wells screened across the water table in the landfill, the concentrations of VC and TCE are less than the VRSLs. For the wells that are screened across the water table, downgradient from the landfill, groundwater concentrations are below the VRSLs for TCE and VC. This includes the property just south-southwest of the landfill that is owned by the City of Ripon and contains a dog park with one building located on site, which is not an inhabited residence. Because the concentrations at the water table are below the VRSLs, the vapor intrusion risk from groundwater pathway can be ruled out and no further vapor investigation is needed based on this screening criteria.

This discussion is expanded further to address the wells downgradient from the landfill that are near residential properties and that have VC concentrations greater than the PAL and/or ES. Only three of these wells (P-107D, P-111D, and P-114) contain concentrations of VC greater than the VRSL. Two of the wells (P-107D and P-111D) are nested with a water table well (nested with MW-107 and MW-111, respectively), and VC has not been detected in samples collected from the water table wells in these locations. No water table well is present in the vicinity of P-114, but this well is further downgradient from the P-107D and P-111D well nests, and the groundwater quality is anticipated to be similar or improved at this location, therefore we can extrapolate that VC is also not present at the water table at this location. Because VC is not detected in the groundwater at the water table, a barrier of clean water is present above the groundwater with VC that exceeds the VRSL. This barrier prevents VC vapor migration into the vadose zone and eliminates the potential for vapor intrusion from groundwater at these locations. Therefore, the vapor intrusion risk from groundwater pathway can be ruled out and no further vapor investigation is needed based on this screening criteria.

Screening Criteria 4

Utilities would have to transect the landfill limits or be installed in close proximity to impacted groundwater at the water table for a preferential pathway to exist. No below grade utilities (with the exception landfill gas extraction system) transect through the landfill fill limits. The impacts to the water table are limited to the western portion of the landfill limits and just south-southwest of the landfill where groundwater is greater than 45 feet below ground surface.

Gas Extraction System

A landfill gas extraction system has been operational at the Site since 2005 with the current system infrastructure being installed in 2007. System installation and extraction operations were completed to eliminate the migration of explosive gases (methane) outside the limits of the landfill area. The system was installed utilizing existing leachate collection wells and passive gas vents. Three extraction piping sections were installed and connected to a common extraction blower to actively extract and vent gases generated from the closed landfill. Initially, gas vents (Figure 2) GV-1, GV-4, GV-6, GV-7, GV-9 and GV-12 and leachate collection wells LC-1, LC-2, and LC-3 were connected to the system. Since start up, gas vents GV-1, GV-4, GV-7, GV-9, and GV-12 were taken offline between June and August 2007 based on observed methane and oxygen concentrations. LC-1 through LC-3 and GV-6 remained online, and in 2019, GV-4 was reattached to the system. Overall the operation of each well/vent is to mitigate offsite migration of methane and other gases from the closed landfill. Gas vents, leachate collection wells, and the blower extraction operating parameters are adjusted periodically to

reduce/prevent migration of methane and other gases. The system is inspected biweekly and methane, carbon dioxide, and oxygen concentrations are monitored by field instrument. In addition, vacuum readings are collected at each extraction point and systems adjustments are made as needed.

There are 11 gas probes constructed around the landfill limitations (Figure 2). One gas probe (GP-8) was lost between the 2018 and 2019 monitoring events and a replacement is being evaluated. The gas probes are monitored using a field instrument for methane, carbon dioxide, and oxygen. The frequency depends on the gas probes and ranges between biweekly and annually depending on historical data and the location of the probe. Multiple repairs and adjustments to the gas extraction system were completed in 2019 and as of December 2019, no methane migration was observed outside of the landfill limitations, indicating that while the extraction system is operational, methane does not migrate off-site.

Vapors are collected from four of the extraction wells (LC-1 through LC-3 and GV-6) within the landfill limitations and at the offsite gas probe GP-3 and analyzed for VOCs using US EPA Method Toxicity Organic (TO)-14A or TO-15. GP-3 is located just southwest of the landfill limitations where groundwater impacts above the PAL for TCE and VC have been reported at the water table (MW-112) in recent years. However, VC has not been detected in vapors at GP-3 since 2007 and TCE has not been detected since 2012. Results from the most recent sampling event are included in Attachment 2 and historical detections are included in Attachment 3.

Recommendations and Conclusion

As discussed, volatile organic compounds have been detected in groundwater above the Wisconsin Administration Code NR 140 ES and PAL at the FF/NN landfill site. The primary constituents of concern present at the water table are TCE and VC. A vapor intrusion screening assessment was completed for the site and concluded that there is not a potential for vapor intrusion outside the footprint of the landfill, and therefore, additional vapor sampling is not recommended for the surrounding properties. In addition, the current landfill gas extraction system continues to control and prevent offsite migration of methane and likely controls migration of other organic vapors including TCE and VC. The gas extraction system will continue to be operated and maintained for the near future until further testing concludes a shutdown can occur.

Please feel free to contact me at 608-826-3677 if you have any comments or questions in regard to this documentation report.

Sincerely,

TRC

Marita Stollenwerk, PG
Project Manager

cc: FF/NN Landfill Group, c/o Jeff Tracy Geosyntec
Lori Rich, City of Ripon

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Reference

WDNR. 2013. Conditional Approval of Revised Groundwater Monitoring Program for the Ripon HWY FF/NN Landfill. Ripon HWY FF/NN Landfill, License #467, Ripon, WI, WDNR BRRTS #02-20-000915. April 18, 2013.

WDNR. 2017. Proposed Second Replacement Sentinel Monitoring Well Work Plan Approval for Ripon HWY FF/NN Landfill. License #467, Ripon, WI, WDNR BRRTS #02-20-000915. June 8, 2017.

WDNR. 2018. Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin. Wis. Stat. ch. 292; Wis. Admin. Code ch. NR 700. January 2018.

TRC. 2019a. First and Second Quarter 2019 Quarterly Progress Report, Ripon HWY FF / NN Landfill NPL Site, License #467, Ripon, Wisconsin, BRRTS No. 02-20-000915. August 19, 2019.

TRC. 2019b. Third Quarter 2019 Quarterly Progress Report, Ripon HWY FF / NN Landfill NPL Site, License #467, Ripon, Wisconsin, BRRTS No. 02-20-000915. December 20, 2019.

Tables

Table 1: Monitoring Well Details and Water Elevations – May 2019
FF/NN Landfill
Ripon, Wisconsin
Second Quarter 2019

Well Name	GW Layer	TOC Elevation (Feet AMSL)	Q2 Depth to Water (Feet) 5/21/2019	Q2 GW Elevation (Feet AMSL) 5/21/2019
MW-101	1	884.73	59.96	824.77
P-101	2	885.39	60.55	824.84
MW-102	1	842.90	15.82	827.08
P-102	2	842.85	17.68	825.17
MW-103	1	872.30	49.67	822.63
P-103	2	872.74	48.17	824.57
P-103D	3	872.91	49.25	823.66
MW-104	1	875.20	49.77	825.43
P-104	2	875.40	50.71	824.69
MW-106	1	878.75	53.69	825.06
P-106	2	878.80	53.76	825.04
MW-107	1	871.69	50.52	821.17
P-107	2	871.33	50.08	821.25
P-107D	4	871.90	51.36	820.54
MW-108	1	845.08	25.68	819.40
P-108	2	845.48	23.41	822.07
MW-111	1	856.09	36.66	819.43
P-111	2	856.28	36.64	819.64
P-111D	3	855.56	34.22	821.34
MW-112	1	874.70	52.99	821.71
P-113A	4	833.16	12.88	820.28
P-113B	3	833.16	12.71	820.45
P-114	3	839.36	18.86	820.50
P-115	3	842.67	22.12	820.55
P-116	3	845.86	26.89	818.97
P-117	3	833.96	14.79	819.17
P-118	3	826.74	7.67	819.07
MW-3A	4	850.60	30.32	820.28
MW-3B	3	850.89	29.08	821.81
LC-1	1	873.15	33.14	840.01
LC-2	1	866.05	33.59	832.46
LC-3	1	877.34	11.73	865.61

Notes:
GW - Groundwater
TOC - Top of Casing
AMSL - Above Mean Sea Level
NM = Well not measured

Table 2: Groundwater Monitoring Plan
FF/NN Landfill
Ripon, Wisconsin

Well Name	Groundwater Layer	Sample Frequency	
		VOCs	MNA
MW-101	1	Not Sampled	Not Sampled
P-101	2	Not Sampled	Not Sampled
MW-102	1	Not Sampled	Not Sampled
P-102	2	Not Sampled	Not Sampled
MW-103	1	Semi-annual	Semi-annual
P-103	2	Semi-annual	Semi-annual
P-103D	3	Quarterly	Quarterly
MW-104	1	Annual	Not Sampled
P-104	2	Not Sampled	Not Sampled
MW-106	1	Not Sampled	Not Sampled
P-106	2	Annual	Not Sampled
MW-107	1	Annual	Not Sampled
P-107	2	Annual	Not Sampled
P-107D	4	Quarterly	Quarterly
MW-108	1	Not Sampled	Not Sampled
P-108	2	Not Sampled	Not Sampled
MW-111	1	Not Sampled	Not Sampled
P-111	2	Not Sampled	Not Sampled
P-111D	3	Quarterly	Quarterly
MW-112	1	Semi-annual	Semi-annual
P-113A	4	Quarterly	Quarterly
P-113B	3	Quarterly	Quarterly
P-114	3	Quarterly	Quarterly
P-115	3	Quarterly	Quarterly
P-116	3	Quarterly	Quarterly
P-117	3	Quarterly	Quarterly
P-118	3	Quarterly	Quarterly
MW-3A	4	Quarterly	Quarterly
MW-3B	3	Quarterly	Quarterly
Baneck	Private Well	Annual	Not Sampled
Gaastra	Private Well	Annual	Not Sampled
Rohde	Private Well	Annual	Not Sampled

Notes:

VOC - Volatile Organic Compounds

MNA - Monitored Natural Attenuation parameters including: total manganese, total nitrogen (nitrate + nitrite), and sulfate

Created By: A. Stehn 12/3/2019

Checked By: B. Wachholz 12/11/2019

Table 3: Parameters That Exceed Current NR140 and/or VRSL Standards
FF/NN Landfill
Ripon, Wisconsin
January 2019 - July 2019

Chemical Parameter	Units	NR140 PAL	NR140 ES	VRSL[(1)(2)]	Well ID	Date	Result	Data Flags	Exceedance[(1)(2)]
1,1,2,2-Tetrachloroethane	µg/L	0.02	0.2	--	LC-1	5/21/2019	**30**	Jj	ES
Benzene	µg/L	0.5	5	--	LC-2	5/21/2019	**18**	j	ES
Chlorobenzene	µg/L	20	100	--	LC-2	5/21/2019	**170**	j	ES
cis-1,2-Dichloroethene	µg/L	7	70	--	LC-3	5/21/2019	**170**	j	ES
Manganese, total	µg/L	25	50	--	LC-1	5/21/2019	**26200**		ES
					LC-2	5/21/2019	**1880**		ES
					LC-3	5/21/2019	**1680**		ES
					MW-003A	5/21/2019	**491**		ES
					MW-003A	7/22/2019	**425**		ES
					MW-003B	5/21/2019	**75.7**		ES
					MW-003B	7/22/2019	**69.9**		ES
					MW-103	5/22/2019	**62.4**		ES
					MW-103	7/22/2019	**73**		ES
					MW-104	5/22/2019	**145**		ES
					MW-107	5/21/2019	*40.8*		PAL
					MW-112	5/22/2019	**368**		ES
					MW-112	7/22/2019	**359**		ES
					P-103	5/22/2019	**93.5**		ES
					P-103	7/23/2019	**113**		ES
					P-103D	5/22/2019	**89.5**		ES
					P-103D	7/23/2019	**96.4**		ES
					P-106	5/22/2019	**66.4**		ES
					P-107	5/21/2019	**148**		ES
					P-107D	5/21/2019	**227**		ES
					P-107D	7/23/2019	**241**		ES
					P-111D	5/22/2019	*33*		PAL
					P-111D	7/23/2019	*33.8*		PAL
					P-111D DUP	5/22/2019	*32.8*		PAL
					P-113B	5/21/2019	*36.6*		PAL
					P-113B	7/22/2019	*33.9*		PAL
					P-114	5/22/2019	**68.5**		ES
					P-114	7/22/2019	**68.1**		ES
					P-114 DUP	5/22/2019	**67.1**		ES
					P-114 DUP	7/22/2019	**67.9**		ES
					P-115 (WIESE)	5/22/2019	**140**		ES
					P-115 (WIESE)	7/22/2019	**115**		ES
					P-116 (HADEL)	5/22/2019	**162**		ES
					P-116 (HADEL)	7/22/2019	**134**		ES
					P-117	5/21/2019	**228**		ES
					P-117	7/22/2019	**224**		ES
					P-118	5/21/2019	**118**		ES
					P-118	7/22/2019	**94.9**		ES
					RHODE	5/22/2019	**63.2**		ES
Methylene chloride	µg/L	0.5	5	--	TRIP BLANK	7/22/2019	*1.3*		PAL
					TRIP BLANK	7/23/2019	*1.1*		PAL
Naphthalene	µg/L	10	100		LC-1	5/21/2019	**100**	j	ES
Nitrogen, nitrate + nitrite, tota	mg/L	2	10	--	MW-103	7/22/2019	**16**	j	ES
					MW-112	7/22/2019	*2.4*	j	PAL
Nitrogen, nitrate, total	mg/L	2	10	--	MW-103	5/22/2019	**21**		ES
					MW-112	5/22/2019	*2.2*		PAL
Sulfate, total	mg/L	125	250	--	LC-3	5/21/2019	**640**		ES
					MW-103	5/22/2019	*150*		PAL

Table 3: Parameters That Exceed Current NR140 and/or VRSL Standards
FF/NN Landfill
Ripon, Wisconsin
January 2019 - July 2019

Chemical Parameter	Units	NR140 PAL	NR140 ES	VRSL[(1)(2)]	Well ID	Date	Result	Data Flags	Exceedance[(1)(2)]
Tetrahydrofuran	µg/L	10	50	--	LC-1	5/21/2019	**130**	Jj	ES
					LC-2	5/21/2019	**110**	j	ES
					LC-3	5/21/2019	**82**	Jj	ES
Trichloroethene	µg/L	0.5	5	5	LC-3	5/21/2019	**14**	j	ES
					MW-103	5/22/2019	*1.4*		PAL
					MW-103	7/22/2019	*1.6*		PAL
					MW-112	5/22/2019	*0.99*		PAL
					MW-112	7/22/2019	*0.74*		PAL
Vinyl chloride	µg/L	0.02	0.2	2.92	MW-003B	2/5/2019	*0.045*	J	PAL
					MW-003B	5/21/2019	*0.058*	J	PAL
					MW-003B	7/22/2019	*0.065*		PAL
					MW-104	5/22/2019	**0.72**		ES
					MW-112	5/22/2019	*0.031*	J	PAL
					MW-112	7/22/2019	*0.04*	J	PAL
					P-103	5/22/2019	*0.036*	J	PAL
					P-103	7/23/2019	*0.038*	J	PAL
					P-103D	2/5/2019	**0.25**		ES
					P-103D	5/22/2019	**0.31**		ES
					P-103D	7/23/2019	*0.17*		PAL
					P-107	5/21/2019	**0.95**		ES
					P-107D	2/5/2019	**3.2**		ES, VRSL
					P-107D	5/21/2019	**5.2**		ES, VRSL
					P-107D	7/23/2019	**4.4**		ES, VRSL
					P-111D	2/5/2019	**3.9**		ES, VRSL
					P-111D	5/22/2019	**4.2**		ES, VRSL
					P-111D	7/23/2019	**4.6**		ES, VRSL
					P-111D DUP	5/22/2019	**3.7**		ES, VRSL
					P-114	2/5/2019	**7.1**		ES, VRSL
					P-114	5/22/2019	**7.3**		ES, VRSL
					P-114	7/22/2019	**6.9**		ES, VRSL
					P-114 DUP	2/5/2019	**7.2**		ES, VRSL
					P-114 DUP	5/22/2019	**6.8**		ES, VRSL
					P-114 DUP	7/22/2019	**6.4**		ES, VRSL
					P-115 (WIESE)	2/5/2019	**0.98**		ES
					P-115 (WIESE)	5/22/2019	**0.94**		ES
					P-115 (WIESE)	7/22/2019	**0.91**		ES
					P-117	2/5/2019	**1.4**		ES
					P-117	5/21/2019	**1.2**		ES
					P-117	7/22/2019	**1.3**		ES
					P-118	5/21/2019	*0.057*	J	PAL
					P-118	7/22/2019	*0.064*		PAL

Notes:

Created by: P. Popp
Checked/Updated by: A. Stehn
Checked by: B. Wachholz

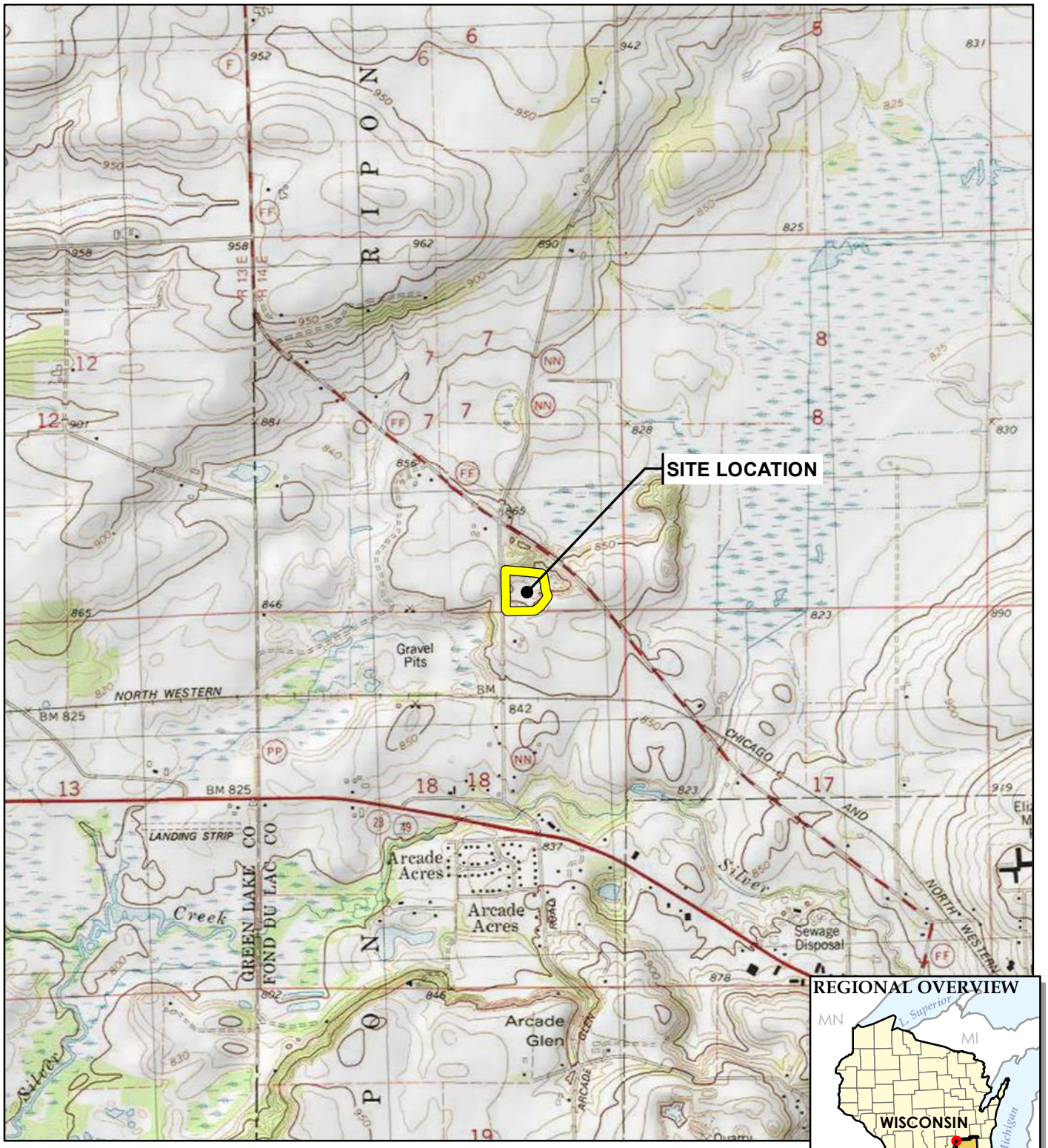
1. µg/l = micrograms per liter (ppb).
2. mg/L = milligrams per liter (ppm).
3. NR 140 ES = Wisconsin Administrative Code Chapter NR 140 Enforcement Standard.
4. NR 140 PAL = Wisconsin Administrative Code Chapter NR 140 Preventive Action Limit.
5. VRSL = Vapor Risk Screening Level.
6. **BOLD** = Exceedence (or potential exceedence if J- or B-flagged) of the NR 140, WAC ES.
7. *Italics* = Exceedence (or potential exceedence if J- or B-flagged) of the NR 140, WAC PAL.
8. **BOLD** = Exceedence (or potential exceedence if J- or B-flagged) of the WDNR Vapor Risk Screening Level (VRSL).
9. J = Reported concentration is estimated, between the Limit of Detection (LOD) and the Limit Of Quantitation (LOQ).
10. j = Estimated Result, As Qualified By Data Validation

Footnotes:

(1) Groundwater VRSL are concentrations in groundwater when present at the water table that could cause an indoor risk to vapor for residential properties.

(2) VRSL are only applied to volatile constituents detected in groundwater monitoring wells outside of the landfill limits.

Figures



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.

N

1 " = 2,000 '
1:24,000

0 2,000 4,000
FEET

TRC
150 North Patrick Blvd.
Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
TRC - GIS

PROJECT:

FF/NN LANDFILL NPL SITE
RIPON, WI
2019 VAPOR INTRUSION ASSESSMENT

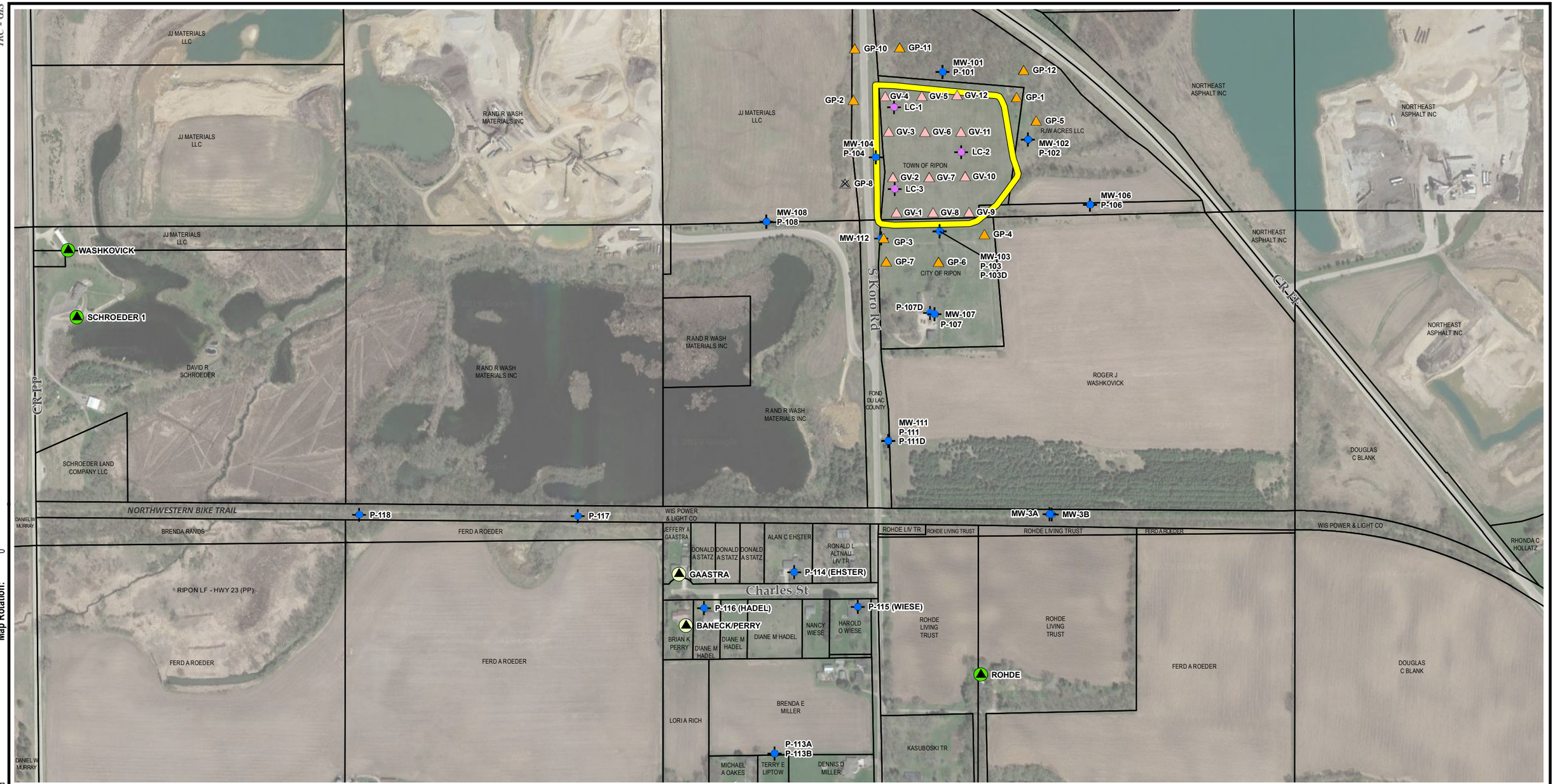
TITLE:

SITE LOCATION MAP

DRAWN BY:	A. ADAIR
CHECKED BY:	M. STOLLENWERK
APPROVED BY:	J. WEDEKIND
DATE:	DECEMBER 2019
PROJ. NO.:	327275
FILE:	Fig1_327275_VI_SLM.mxd

FIGURE 1

S:\1-PROJECTS\Ripon\Fig1_327275_VI_SLM.mxd -- Saved By: RSUEMNICHT on 12/13/2019, 11:47:53 AM



TRC - GIS

Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet (Foot US)
Map Rotation: 0

Plot Date: 12/13/2019, 11:51:33 AM by RSUEMNICHT -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\Ripon\Fig2_327275_VI_SLP.mxd

LEGEND

- GAS PROBE
- GAS PROBE (LOST)
- GAS VENT
- LEACHATE HEAD WELL
- MONTIORING WELL, PIEZOMETER LOCATION
- PRIVATE WELL USED FOR POTABLE PURPOSES
- PRIVATE WELL NOT USED FOR POTABLE PURPOSES
- RIPON FF/NN LANDFILL SITE

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO., (4/21/2017).

0 200 400 Feet

1 " = 400 '

1:4,800

PROJECT:
FF/NN LANDFILL NPL SITE
RIPON, WI
2019 VAPOR INTRUSION ASSESSMENT

TITLE:
SITE LAYOUT MAP

DRAWN BY:	A. ADAIR	PROJ. NO.:	327275
CHECKED BY:	M. STOLLENWERK		
APPROVED BY:	J. WEDEKIND		**FIGURE 2**
DATE:	DECEMBER 2019		

TRC
150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

FILE NO.: Fig2_327275_VI_SLP.mxd

Attachment 1

Historical Groundwater Analytical Detections

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-3A	04/04/2002	NR				NA																														
MW-3A	05/22/2002	NR				NA																														
MW-3A	08/20/02	NR																																		
MW-3A	12/05/02	NR																																		
MW-3A	04/22/03																																			
MW-3A	10/22/03																																			
MW-3A	05/11/04																																			
MW-3A	10/14/04																																			
MW-3A	01/27/05																																			
MW-3A	04/26/2005																																			
MW-3A	08/02/05																																			
MW-3A	10/26/05																																			
MW-3A	01/31/2006																																			
MW-3A	04/24/06																																			
MW-3A	07/27/06											0.35 J																								
MW-3A	10/31/06																																			
MW-3A	01/31/07																																			
MW-3A	5/1/2007																																			
MW-3A	8/8/2007																																			
MW-3A	10/19/2007																																			
MW-3A	5/6/2008																																			
MW-3A	10/1/2008																																			
MW-3A	4/7/2009																								0.56J											
MW-3A	10/28/2009																																			
MW-3A	5/24/2010																																			
MW-3A	10/5/2010																								0.49J											
MW-3A	1/24/2011																																			
MW-3A	4/13/2011																																			
MW-3A	7/12/2011																								0.63J											
MW-3A	10/19/2011											0.66J																								
MW-3A	1/23/2012																																			
MW-3A	4/4/2012																																			
MW-3A	7/25/2012																																			
MW-3A	10/16/2012																																			
MW-3A	1/15/2013																																			
MW-3A	4/26/2013																																			
MW-3A	7/2/2013																																			
MW-3A	10/24/2013																																			
MW-3A	1/9/2014																																			
MW-3A	4/17/2014																																			
MW-3A	7/17/2014																																			
MW-3A	10/24/2014																																			
MW-3A	1/15/2015	3.1 J																																		
MW-3A	4/28/2015																																			
MW-3A	7/1/2015																																			
MW-3A	10/27/2015																																			
MW-3A	1/14/2016																																			
MW-3A	4/13/2016																																			
MW-3A	7/28/2016																																			
MW-3A	10/27/2016																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-3A	1/20/2017																																				
MW-3A	4/6/2017																																				
MW-3A	7/14/2017																																				
MW-3A	10/18/2017																																				
MW-3A	3/21/2018 [5]			NR			NR																NR	NR									NR	NR		NR
MW-3A	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR		NR
MW-3A	6/5/2018 [6]							0.076 J																													
MW-3A	8/2/2018																																				
MW-3A	10/31/2018											0.058 B																									

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-3B	04/04/2002	NR				NA																							0.38						**0.31**	
MW-3B	05/22/2002	NR				NA																						NA								
MW-3B	8/20/2002	NR																										NA								
MW-3B	12/5/2002	NR																																		
MW-3B	4/22/2003																																			
MW-3B	10/22/2003																																			
MW-3B	5/11/2004																																		**0.2 J**	
MW-3B	07/22/2004																																			
MW-3B	10/14/2004																																			
MW-3B	1/27/2005																																			
MW-3B	4/26/2005																																			
MW-3B	8/2/2005																																		**0.30 J**	
MW-3B	10/26/2005																																		**0.39 J**	
MW-3B	01/31/2006																																			
MW-3B	4/24/2006																																			
MW-3B	7/27/2006											0.45 J																								
MW-3B	10/31/2006																																			
MW-3B	1/31/2007																																			
MW-3B	5/1/2007																																			
MW-3B	8/8/2007																																			
MW-3B	10/19/2007																																			
MW-3B	5/6/2008																		1.3																**5.4**	
MW-3B	10/1/2008																																			
MW-3B	4/7/2009																																			
MW-3B	10/28/2009											0.42J																								
MW-3B	5/24/2010																																			
MW-3B	10/5/2010																																			
MW-3B	1/24/2011																																			
MW-3B	4/13/2011																																			
MW-3B	7/12/2011																								0.81J											
MW-3B	10/19/2011																																			
MW-3B	1/23/2012																																			
MW-3B	4/4/2012																																			
MW-3B	7/25/2012																																			
MW-3B	10/16/2012																																			
MW-3B	1/15/2013																																			
MW-3B	4/26/2013																																			
MW-3B	7/2/2013																																			
MW-3B	10/24/2013																																			
MW-3B	1/9/2014																																			
MW-3B	4/17/2014																																			
MW-3B	7/17/2014																																			
MW-3B	10/24/2014																																			
MW-3B	1/15/2015																																			
MW-3B	4/28/2015																																			
MW-3B	7/1/2015																																			
MW-3B	10/27/2015																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-3B	1/14/2016																																			
MW-3B	4/13/2016																																			
MW-3B	7/28/2016																																			
MW-3B	10/27/2016																																			
MW-3B	1/20/2017																																			
MW-3B	4/6/2017																																			
MW-3B	7/14/2017																																			
MW-3B	10/18/2017																																			
MW-3B	3/21/2018 [5]			NR			NR																NR	NR						NR				NR	NR		NR
MW-3B	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR	0.035 J	NR
MW-3B	6/5/2018 [6]							0.17 J																												
MW-3B	8/2/2018																																		0.038	
MW-3B	10/31/2018	0.58										0.17 B																							0.053	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-101	10/1/1993	NR																									0.7 J										
MW-101	04/1/1994	NR																									0.6J										
MW-101	05/01/1996	NR																									0.6J										
MW-101	10/01/1996	NR										0.89 J															0.72 J										
MW-101	05/01/1997	NR																																			
MW-101	10/01/1997	NR																									0.7										
MW-101	04/98*	NR																																			
MW-101	10/01/1998	NR																																			
MW-101	04/01/1999	NR																																			
MW-101	10/01/1999	NR																									0.7										
MW-101	05/01/2000	NR																									0.32										
MW-101	10/01/2000	NR																									0.38										
MW-101	05/01/2002	NR																									0.28										
MW-101	10/11/2001	NR																																			
MW-101	02/05/2002	NR				NA									0.19												0.32	NA				0.16					
MW-101	05/21/02 *		NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-101	8/19/02 *		NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-101	12/5/02 *		NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-101	4/21/03 *		NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-101	10/23/2003																																				
MW-101	4/28/2004																																				
MW-101	10/13/2004	11																																			
MW-101	4/27/2005																																				
MW-101	4/28/2006	18																																			
MW-101	11/1/2006*		NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-101	2/1/2007																																				
MW-101	5/1/2007	2.4																																			
MW-101	5/6/2008																																				
MW-101	4/8/2009																																				
MW-101	10/29/2009																																				
MW-101	5/25/2010																																				
MW-101	10/4/2010																								0.44J												
MW-101	1/26/2011																																				
MW-101	4/11/2011																																				
MW-101	4/3/2012																																				

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-101	10/01/1993	NR																																		
P-101	04/01/94	NR																											0.5J							
P-101	020/5/02	NR				NA																						NA								
P-101	05/22/2002	NR				NA																						NA								
P-101	10/13/2004																																			
P-101	4/27/2005																																			
P-101	10/25/2005																																			
P-101	4/28/2006																																			
P-101	11/1/2006																																			
P-101	5/1/2007																																			
P-101	5/6/2008																																			
P-101	4/8/2009																																			
P-101	11/4/2009											0.75J																								
P-101	5/25/2010																																			
P-101	10/4/2010																								0.44J											
P-101	1/26/2011																																			
P-101	4/11/2011																																			
P-101	4/3/2012																																			
MW-102	10/26/1993	NR																																		
MW-102	04/11/1994	NR																											3							
MW-102	05/08/1996	NR																											0.4J							
MW-102	10/30/1996	NR										0.99 J															0.30 J									
MW-102	05/12/1997	NR																																		
MW-102	10/26/1997	NR																																		
MW-102	04/13/1998	NR																	0.46																	
MW-102	10/11/2001	NR																																		
MW-102	05/21/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-102	08/19/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-102	12/05/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-102	07/23/2004																																			
MW-102	10/14/2004																																			
MW-102	4/27/2005																																			
MW-102	10/25/2005																																			
MW-102	4/25/2006																																			
MW-102	11/1/2006																																			
MW-102	5/2/2007																																			
MW-102	4/30/2008																																			
MW-102	10/2/2008																																			
MW-102	4/8/2009																																			
MW-102	5/20/2010																																			
MW-102	4/11/2011																																			
MW-102	4/3/2012																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																			
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-102	10/26/1993	NR																																			
P-102	04/11/1994	NR																																			
P-102	10/11/2001	NR																																			
P-102	05/21/2002	NR				NA																						NA								**0.33J**	
P-102	08/20/2002	NR																										NA								**0.62**	
P-102	12/04/2002	NR																																		**0.68**	
P-102	04/21/2003																								0.48 J&											**0.83**	
P-102	10/22/2003																																				**0.96**	
P-102	04/27/2004																																				**2.1**	
P-102	10/14/2004											0.5 J																									**0.32**	
P-102	1/27/2005																																					
P-102	4/27/2005																																					
P-102	8/3/2005																																					
P-102	8/3/2005 dup																																					
P-102	10/25/2005																																					
P-102	2/1/2006																																					
P-102	4/27/2006																																					
P-102	4/27/2006 dup																																					
P-102	7/27/2006											0.66 J																										
P-102	11/1/2006																																					
P-102	2/15/2007																																					
P-102	5/2/2007																																					
P-102	8/14/2007																																					
P-102	10/16/2007	2.9 J																																				
P-102	5/6/2008																																					
P-102	10/2/2008																																					
P-102	4/8/2009																																					
P-102	11/4/2009																																					
P-102	11/4/2009 Dup																																					
P-102	5/20/2010																																					
P-102	4/11/2011																																					
P-102	4/3/2012	9.1 J																																				

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-103	10/27/1993	NR																	**410**																	**75**	
MW-103	04/11/1994	NR																	**1100**																	**440**	
MW-103	04/01/94 Dup	NR																	**970**																	**410**	
MW-103	05/01/1996	NR							7J										**740**	9J												**10J**				**170**	
MW-103	05/01/96 Dup	NR							8J			**9 J**							**840**	10J												**11J**				**180**	
MW-103	10/01/1996	NR	3.3						8.1 J	1.9		1.1	0.76 J			0.99 J		0.30 J	**520 E**	5	1.9											4.7				**98 E**	
MW-103	05/01/1997	NR	4.3						8.5	2.7			0.98			1.2	0.52	0.75	**790**	4.7	1.6					0.27						**5.6**				**230**	
MW-103[2]	10/01/1997	NR	4.2						7.9	2.4			1.4			0.89	0.38		**550J**	5.2	1.5					0.38		3.1				**6.6**				**220J**	
MW-103	04/98*	NR																																			
MW-103	10/01/1998	NR	2						5.7										**260**	3.3												**5.8**				**45**	
MW-103	04/01/1999	NR	1.4						4.7										**150**	2.4												3.9				**47**	
MW-103	10/01/1999	NR							5.2										**170**	2.6												2.4				**48**	
MW-103	05/01/2000	NR	1.8						6.5										**170**	3.4												4.1				**60**	
MW-103	10/01/2000	NR	1.6						6.9	3.1			0.84			0.33			**130**	4.5	0.75											**6.6**				**78**	
MW-103	05/01/2001	NR	1.2						5.7	1.5			0.92						**94**	3.4	0.54				2.6L			1.1				4.5				**46**	
MW-103	10/11/2001	NR	1.1			80			2.6	0.62			0.54						25	2.7					6.4L				0.8							**15**	
MW-103[2]	2/4/2002	NR	1.8			NA			6.4	1.1			0.81			0.36			**71**	5.5	0.53				0.28		0.13	NA	0.72			3.1				**40**	
MW-103	5/21/2002*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-103	8/19/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-103	12/05/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-103	04/21/03 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-103	10/21/2003		0.8						1.3										58	1.9												1.7				**21**	
MW-103	04/28/2004	27	0.61 J			26			0.53 J										16													1.9				**6.7**	
MW-103	10/13/2004	56	1.4						1.7			0.52							12	2.5									0.89			0.78				**7.9**	
MW-103	4/26/2005		1.2						2.8										1.9	3.0									0.71							**1.8**	
MW-103	4/25/2006	31				8.0 J			0.62 J										5.2													0.48 J				**1.8**	
MW-103	10/31/2006*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-103	2/1/2007					6.1J		2.2 J											10													0.82J				**0.34**	
MW-103	5/2/2007								1.7										14													1.7				**0.75**	
MW-103	10/18/2007																		26													2.8				**2.2**	
MW-103	5/5/2008								0.63J										15.7													3.4					
MW-103	10/2/2008								0.43J										12.3													3.8					
MW-103	4/7/2009																		7.7													3.1					
MW-103	10/28/2009																		4.6													2.4					
MW-103	2/25/2010																		2.9													2.1					
MW-103	5/24/2010																		4													2.1					
MW-103	10/4/2010																		3.5						0.73J							2.4					
MW-103	1/26/2011																		2.9													2.7					
MW-103	4/11/2011																		2.7													2.1					
MW-103	7/11/2011																		4.2						0.74J							2.3					
MW-103	10/19/2011																		4.3													3					
MW-103	1/24/2012																		3.2													2.6					
MW-103	4/3/2012																		2.9													2.3					
MW-103	4/3/2012 Dup																		3.3													2.4					
MW-103	7/25/2012																		2													2.2					
MW-103	10/17/2012																		2.1													1.7					
MW-103	1/16/2013																		1.7													2.3					
MW-103	4/24/2013																		1.1													1.7					
MW-103	10/24/2013																		2													1.6					
MW-103	4/16/2014																		0.77J													1.5					

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-103	10/24/2014																		1.1													2					
MW-103	4/28/2015																		0.45 J													1.6					
MW-103	4/12/2016																		0.35 J													1.4					
MW-103	10/27/2016																		0.28 J													1.5					
MW-103	4/5/2017																		0.30 J													1.5					
MW-103	10/18/2017																		0.33 J													1.7					
MW-103	6/4/2018 [6]											0.048 JB							0.21 J	0.052 J							0.27					1.3					
MW-103	10/31/2018	0.43										0.049 B							0.24	0.045							0.27					1.4					

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-103	10/27/1993	NR																																			
P-103	04/12/1994	NR																																			
P-103	05/9/1996	NR																	0.1J										0.1J							0.1J	
P-103	10/31/1996	NR										0.84 J																									
P-103	05/13/1997	NR																																			
P-103	10/27/1997	NR																																			
P-103	04/13/1998	NR																																			
P-103	2/4/2002	NR				NA																						NA								
P-103	05/21/2002	NR				NA													[0.54]									NA								
P-103	10/13/2004											0.52 J																								**1.7**	
P-103	1/26/2005																																				
P-103	1/26/2005 dup																																				
P-103	4/26/2005																																			**2.4**	
P-103	8/3/2005																																			**3.2**	
P-103	10/26/2005																																			**3.2**	
P-103	02/01/2006																																			**3.6**	
P-103	4/25/2006																																			**2.9**	
P-103	7/28/2006											0.49 J																								**1.6**	
P-103	11/1/2006																																			**1.4**	
P-103	2/1/2007																																			**1.5**	
P-103	5/2/2007																																			**1.6**	
P-103	8/14/2007																																			**1.4**	
P-103	10/18/2007																																			**1.2**	
P-103	5/5/2008																																			**0.74**	
P-103	5/5/2008 Dup																																			**0.81**	
P-103	10/2/2008																																			**0.81J**	
P-103	10/2/2008 Dup																																			**0.89J**	
P-103	4/7/2009																																			**0.75J**	
P-103	10/28/2009											0.43J																								**0.58J**	
P-103	2/25/2010											0.52J																								**0.49J**	
P-103	5/24/2010																																				
P-103	10/5/2010																								0.53J											**0.41J**	
P-103	1/25/2011																																			**0.34J**	
P-103	4/12/2011																																			**0.39J**	
P-103	7/11/2011																																				
P-103	10/18/2011																																			**0.29J**	
P-103	1/24/2012																																			**0.28J**	
P-103	4/4/2012																																			**0.28 J**	
P-103	7/25/2012																																				
P-103	10/17/2012																																				
P-103	1/16/2013																																				
P-103	4/26/2013																																				
P-103	10/24/2013																																				
P-103	4/16/2014																																				
P-103	10/24/2014																																				
P-103	4/28/2015																																				
P-103	10/27/2015																																				
P-103	4/13/2016																																				
P-103	10/27/2016																																				
P-103	4/6/2017																																				

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-103	10/18/2017																																				
P-103	6/4/2018 [6]																																				
P-103	10/31/2018											0.090 B																								0.042	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-103D	02/4/2004					NA																			0.55J			NA								**1.1**	
P-103D	05/11/2004																																			**1.5**	
P-103D	05/11/04 dup																																			**1.5**	
P-103D	07/23/2004																																			**1.3**	
P-103D	07/23/04 dup																																			**1.5**	
P-103D	10/13/2004											0.43 J							0.86 J																	
P-103D	04/26/2005																		0.84 J																	**3.0**	
P-103D	10/26/2005																		0.98 J																	**2.7**	
P-103D	10/26/2005 dup																		0.95 J																	**2.8**	
P-103D	4/25/2006																																			**2.6**	
P-103D	11/1/2006																																			**1.9**	
P-103D	5/2/2007																																			**1.4**	
P-103D	10/18/2007																																			**1.2**	
P-103D	5/5/2008																																			**0.69**	
P-103D	5/5/2008 Dup																																			**0.66**	
P-103D	10/2/2008																																			**1.1**	
P-103D	10/2/2008 Dup																																			**1.5**	
P-103D	4/7/2009																																			**0.77J**	
P-103D	4/7/2009 Dup																																			**0.74J**	
P-103D	10/28/2009											1.1																								**0.75J**	
P-103D	2/25/2010																																			**0.64J**	
P-103D	5/24/2010																																				
P-103D	10/5/2010																								0.86J											**0.71J**	
P-103D	1/25/2011																																				
P-103D	4/11/2011																																			**0.69J**	
P-103D	7/11/2011																																			**0.78J**	
P-103D	10/18/2011																																			**0.54J**	
P-103D	1/24/2012																																			**0.73J**	
P-103D	4/4/2012	10.7 J																																		**0.98J**	
P-103D	7/25/2012																																				
P-103D	10/17/2012																																				
P-103D	1/16/2013																																				
P-103D	4/26/2013																																				
P-103D	7/2/2013																																				
P-103D	10/24/2013																																				
P-103D	1/9/2014																																			**0.67J**	
P-103D	4/16/2014																		0.26J																	**0.43J**	
P-103D	7/17/2014																		0.49 J																	**0.54 J**	
P-103D	10/24/2014											0.71 J							0.46 J																	**0.68 J**	
P-103D	1/15/2015	3.0 J																	0.37 J																	**0.40 J**	
P-103D	4/28/2015																		0.42 J																	**0.46 J**	
P-103D	7/1/2015																																				
P-103D	10/27/2015																		0.33 J																	**0.26 J**	
P-103D	1/14/2016																																			**0.36 J**	
P-103D	4/13/2016																		0.27 J																	**0.39 J**	
P-103D	7/28/2016																		0.44 J																		
P-103D	10/27/2016																		0.30 J																	**0.28 J**	
P-103D	1/20/2017																																			**0.28 J**	
P-103D	4/6/2017																																			**0.26 J**	
P-103D	7/14/2017																		0.32 J																		

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-103D	10/18/2017																		0.30 J																	**0.35 J**	
P-103D	3/21/2018 [5]			NR			NR																NR	NR						NR				NR	NR		NR
P-103D	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR	0.062	NR	NR	NR	**0.25**	NR
P-103D	6/4/2018 [6]		0.025 J									0.041 JB							0.27																		
P-103D	8/2/2018		0.031																0.27													0.089				0.19	
P-103D	10/31/2018	0.37	0.031									0.10 B							0.32													0.086				**0.27**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-104	10/27/1993	NR	2						2				2						1 JB										31							
MW-104	4/19/1994	NR	1						1				1						10													0.8J				**6.0**	
MW-104	05/9/1996	NR	**6**						5	1		0.3 J				0.2 J			6	0.3 J		0.1J							0.2 J			0.5J				**10**	
MW-104	10/30/1996	NR	0.64 J						1.1	0.34 J		0.46 J							3.6	0.22 J		0.80 J										0.31 J				**4.3**	0.77 J
MW-104	05/12/1997	NR	4.8						4.5	1.5			0.91						1.1							0.32										**4.5**	
MW-104	10/27/1997	NR	0.63						1.3				0.85						7.3																	**18**	
MW-104	04/13/1998	NR	1.2																**74**	0.67									0.46			3.5				**17**	
MW-104	10/13/1998	NR	1.7										0.76						3.3																	**15**	4.1
MW-104	04/07/1999	NR	3.2						1.4										6.6													0.71				**6.1**	
MW-104	10/27/1999	NR	3.5						5.4				0.92						4.5																	**2.8**	
MW-104	05/2/2000	NR	3						5.7				1.5						0.7										0.13							**1.1**	
MW-104	10/30/2000	NR	2						6.2				1.6						2.6										0.12			0.33				**29**	
MW-104	05/1/2001	NR	2.5						5.6				2		0.47				7				0.26		0.51L			0.81	0.13			0.66				**8.6**	
MW-104	10/11/2001	NR	3.1						9.5				2.3					0.85	2						0.39L				0.1					0.14		**2.2**	
MW-104	02/5/2002	NR	2.7			NA	0.16		8				2		0.19				5.1				0.23					NA	0.17			0.73				**13**	
MW-104	05/21/02*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-104	08/19/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-104	12/05/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-104	4/21/2003 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-104	04/22/2003		1.8			6.9J			3.1										4.6																	**6.5**	
MW-104	10/23/2003	3.2	4						7.8				1.8						3.3																	**8.6**	
MW-104	04/28/2004		2.4						6				2.2 J						6.4																	**8.7**	
MW-104	10/13/2004		2.5						6.5				2.2 J						10																	**20**	
MW-104	4/27/2005		1.7						5.4				2.1 J																							**0.64**	
MW-104	10/25/2005		1.4						6.9				2.5 J						3.9																	**13**	
MW-104	4/25/2006		1.4			4.6 J			4.9				2.2 J						1.0 J																	**1.1**	
MW-104	11/2/2006		1.2 J						4.8				1.7 J																								
MW-104	11/2/2006 dup		1.3 J						5																												
MW-104	5/2/2007		0.8J						4				2.0J																								
MW-104	10/18/2007		0.75 J						6				2.0 J																								
MW-104	5/6/2008		0.62J						3.3				1.8																								
MW-104	10/1/2008		0.52J						3.7				1.9																								
MW-104	4/7/2009		0.68J						3.5				2.3																								
MW-104	11/4/2009								3.9				1.9																								
MW-104	5/20/2010								3.5				2.4																								
MW-104	4/11/2011								3.1				1.9																								
MW-104	10/19/2011								3.6				2																								
MW-104	4/3/2012		0.41J						3.5				1.9																								
MW-104	10/17/2012								2.8				1.8																								
MW-104	4/24/2013								3				1.8																								
MW-104	4/16/2014								2.4				1.8																								
MW-104	4/15/2015								2.8				1.7																								
MW-104	4/12/2016								2.6				1.5																								
MW-104	4/5/2017								3				1.3																								
MW-104	6/4/2018 [6]		0.099						3.6	0.5		0.051 JB	1.6		0.15 J				0.12 J				0.14			0.055 J										0.041 J	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-104	10/27/1994	NR																																		
P-104	04/19/1994	NR																																		
P-104	05/09/1996	NR																																		
P-104	10/30/1996	NR										0.20 J																								
P-104	05/12/1997	NR																																		
P-104	10/27/1997	NR																																		
P-104	04/13/1998	NR																																		
P-104	10/11/2001	NR																							0.52L											
P-104	02/5/2002	NR	0.18			NA						0.85																NA								
P-104	5/21/2002	NR				NA																						NA								
P-104	08/20/2002	NR																										NA								
P-104	10/13/2004											0.45 J																								
P-104	10/13/04 Dup																																			
P-104	8/3/2005																																			
P-104	8/3/05 Dup																																			
P-104	7/28/2006																																			
P-104	8/14/2007																																			
P-104	5/5/2008																																			
P-104	4/7/2009																																			
P-104	5/26/2010																																			
P-104	4/12/2011																																			
P-104	4/3/2012																																			
MW-106	10/1/1993	NR																																		
MW-106	04/01/1994	NR																											11							
MW-106	02/04/02	NR				NA																						NA	0.25							
MW-106	05/21/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
MW-106	08/19/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
MW-106	120/5/02 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
MW-106	04/21/03 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
MW-106	07/23/2004																																			
MW-106	4/27/2005																																			
MW-106	4/27/05 Dup																																			
MW-106	7/28/06*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
MW-106	10/31/2006*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
MW-106	2/15/2007																																			
MW-106	8/14/2007																																			
MW-106	4/30/2008																																			
MW-106	4/8/2009																																			
MW-106	5/20/2010																																			
MW-106	4/11/2011																																			
MW-106	4/3/2012																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-106	10/01/1993	NR																														0.6J					
P-106	04/01/1994	NR																														0.8J					
P-106	05/01/1996	NR																	0.2 J													0.8J					
P-106	10/01/1996	NR										0.62J																				0.22 J					
P-106	05/01/1997	NR																														0.65					
P-106	10/01/1997	NR																														0.67					
P-106	04/01/1998	NR																														0.61					
P-106	10/01/1998	NR																														0.71					
P-106	04/01/1999	NR																														0.58					
P-106	10/1/1999	NR																														0.61					
P-106	05/01/2000	NR																														0.56					
P-106	10/01/2000	NR																														0.6					
P-106	05/01/2001	NR																														0.56					
P-106	10/11/2001	NR																														0.39					
P-106	2/5/2002	NR				NA																						NA				0.6					
P-106	02/05/02 Dup	NR				NA																						NA				0.6					
P-106	05/22/2002	NR				NA																						NA				0.49					
P-106	05/22/02Dup	NR				NA																						NA				0.47 J					
P-106	08/20/2002	NR																										NA				0.43 J					
P-106	12/4/2002	NR																														0.53					
P-106	04/22/2003																															0.55 J					
P-106	10/21/2003																															0.56					
P-106	10/21/03 Dup																																				
P-106	4/27/2004																																				
P-106	10/13/2004											0.9																				0.84 J					
P-106	4/27/2005																																				
P-106	10/25/2005																																				
P-106	4/28/2006																																				
P-106	11/1/2006																																				
P-106	5/1/2007																																				
P-106	10/22/2007																																				
P-106	4/30/2008																																				
P-106	10/1/2008																																				
P-106	4/8/2009																																				
P-106	4/8/2009 Dup																																				
P-106	11/4/2009																																				
P-106	5/26/2010																																				
P-106	4/12/2011																																				
P-106	4/3/2012																																				
P-106	4/24/2013																																				
P-106	4/16/2014																																				
P-106	4/15/2015																																				
P-106	4/12/2016																																				
P-106	4/5/2017																																				
P-106	6/4/2018 [6]																															0.15 J					

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-107	10/27/1993	NR																														2					
MW-107	4/12/1994	NR																														2					
MW-107	5/9/1996	NR																														2					
MW-107	10/21/1996	NR										0.80 J																				2.2					
MW-107	5/13/1997	NR													0.9																	2.6					
MW-107	10/27/1997	NR													0.7																	2					
MW-107	4/14/1998	NR																														2.1					
MW-107	10/13/98*	NR																														NA					
MW-107	4/6/1999	NR																														1.8					
MW-107	10/27/1999	NR																														1.1					
MW-107	5/2/2000	NR																														1.6					
MW-107	10/31/2000	NR																														1.2					
MW-107	5/31/2001	NR													0.47										0.57L							1.8					
MW-107	10/11/2001	NR																														0.87					
MW-107	2/4/2002	NR				NA									0.35													NA				1.4					
MW-107	05/21/2002*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-107	8/19/2002 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-107	12/5/2002 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-107	4/21/2003																								0.52 J							1.2					
MW-107	10/21/2003																															2.2					
MW-107	4/27/2004																															1.9					
MW-107	10/13/2004											0.63 J																				0.65 J					
MW-107	4/27/2005																															1.1					
MW-107	10/27/2005																															0.79 J					
MW-107	4/25/2006																								0.49 J							0.55 J					
MW-107	10/31/2006																																				
MW-107	5/1/2007																															0.86					
MW-107	10/17/2007																															0.53 J					
MW-107	5/5/2008																																				
MW-107	10/1/2008																																				
MW-107	4/7/2009																																				
MW-107	10/28/2009											1.6																				0.51J					
MW-107	5/24/2010																																				
MW-107	10/4/2010																								0.70J												
MW-107	1/26/2011																																				
MW-107	4/11/2011																																				
MW-107	10/18/2011																																				
MW-107	4/3/2012																																				
MW-107	10/17/2012																																				
MW-107	4/24/2013																																				
MW-107	4/16/2014																																				
MW-107	4/15/2015																																				
MW-107	4/12/2016																																				
MW-107	4/6/2017																																				
MW-107	6/4/2018 [6]																																				

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-107	10/27/1993	NR																	4																	**6**	
P-107	4/12/1994	NR																	2										0.7J							**3**	
P-107	4/12/94 Dup	NR																	2										0.7J							**3**	
P-107	5/9/1996	NR	0.1 J							0.2 J									2										0.1 J			0.1 J				**2**	
P-107	10/23/1996	NR								0.19		0.79 J							1.9																	**2.3**	
P-107	10/23/96 Dup	NR								0.21		0.49 J							2.1																	**2.7**	
P-107	5/14/1997	NR																	1.3																	**2**	
P-107	5/14/97 Dup	NR																	1.1																	**1.7**	
P-107	10/27/1997	NR																	2.2																	**2.6**	
P-107	10/27/97 DUP	NR																	1.8																	**2.3**	
P-107	4/14/1998	NR																	2.3																	**2.2**	
P-107	4/14/98 Dup	NR																	2.3																	**2.4**	
P-107	10/14/1998	NR																	2.1											0.2						**1.5**	
P-107	10/14/98 DUP	NR																	2.4																	**1.7**	
P-107	4/6/1999	NR																	1.5																	**0.58**	
P-107	10/27/1999	NR																	1.8																		
P-107	10/27/99 Dup	NR																	1.8																		
P-107	5/2/2000	NR																	1.5																	**1.2**	
P-107	5/02/00 Dup	NR																	1.6																	**1.2**	
P-107	10/31/2000	NR																	1.4																		
P-107	10/31/00 Dup	NR																	1.4																		
P-107	5/9/2001	NR																	0.96						0.52L			0.72			1.8					**0.85**	
P-107	5/9/2001 Dup	NR																	0.97						0.49L			0.79								**0.86**	
P-107	10/11/2001	NR																	1.6																	**1.7**	
P-107	10/11/01 Dup	NR																	1.5																	**1.7**	
P-107	2/4/2002	NR				NA													1.6									NA								**1.2**	
P-107	5/21/2002	NR				NA													1.8									NA								**1.5**	
P-107	5/21/02 Dup	NR				NA													1.7									NA								**1.4**	
P-107	8/20/2002	NR																	0.84									NA								**0.54J**	
P-107	12/4/2002	NR																	1.3																	**1**	
P-107	4/21/2003																		1.5 J																	**1**	
P-107	04/21/2003 Dup																		1.3 J																		
P-107	10/21/2003																		1.3																	**0.93**	
P-107	4/27/2004																		0.96 J																	**0.61**	
P-107	10/13/2004																		0.89 J																	**0.64**	
P-107	10/13/04 Dup																		1.1 J																		
P-107	4/27/2005																																				
P-107	10/27/2005																																				
P-107	4/25/2006																																			**0.79**	
P-107	10/31/2006																																			**0.33J**	
P-107	5/1/2007																																			**0.76**	
P-107	10/19/2007																		0.92 J																	**1**	
P-107	5/5/2008																																			**0.48J**	
P-107	10/1/2008																																				
P-107	4/7/2009											0.24J																								**0.88J**	
P-107	10/28/2009											1.6																								**0.64J**	
P-107	5/24/2010																																			**1.1**	
P-107	10/5/2010																																			**0.94J**	
P-107	1/24/2011																																				
P-107	4/12/2011																																			**0.84J**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-107	10/18/2011																																			**0.54J**	
P-107	4/4/2012	10.7 J																																		**1.1**	
P-107	10/17/2012																																				
P-107	4/26/2013																																				
P-107	4/16/2014																		0.51J																	**0.89J**	
P-107	4/15/2015																		0.48J																	**0.57J**	
P-107	4/13/2016																		0.52 J																	**0.72 J**	
P-107	4/6/2017																																			**0.79 J**	
P-107	6/4/2018 [6]		0.024 J																0.29													0.067 J				**0.58**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-107D	10/27/1993	NR																	2B																	**6**	
P-107D	4/13/1994	NR																																			
P-107D	5/9/1996	NR	0.1J									0.3J							0.2J										0.3J							**0.6J**	
P-107D	10/23/1996	NR										0.44 J																								**3.9**	
P-107D	5/14/1997	NR																	0.49																	**2.4**	
P-107D	10/27/1997	NR																	1.7																	**5.1**	
P-107D	4/14/1998	NR																	1																	**4.1**	
P-107D	10/14/1998	NR																																		**2.2**	
P-107D	4/6/1999	NR																	0.34																	**0.87**	
P-107D	10/27/1999	NR																																		**1.7**	
P-107D	5/2/2000	NR																																		**1.3**	
P-107D	10/31/2000	NR																	0.64																		
P-107D	01/05/2001	NR			0.33														1.5						0.44L			0.72B							**5.6**	
P-107D	10/11/2001	NR																	2.2																	**10**	
P-107D	2/4/2002	NR				NA													1.2									NA				0.17				**3.9**	
P-107D	02/04/02 Dup	NR																	1.2																	**3.9**	
P-107D	5/21/2002	NR				NA													1.1									NA								**3.3**	
P-107D	8/20/2002	NR																	1.1									NA								**3.1**	
P-107D	12/4/2002	NR																	0.75																	**0.81**	
P-107D	4/21/2003																		1.3 J																	**3.3**	
P-107D	10/21/2003																		0.97																	**3.5**	
P-107D	4/27/2004																		1.5 J																	**4.2**	
P-107D	10/13/2004									1.2 J		0.93							2.0 J																	**5.9**	
P-107D	4/27/2005																		1.3 J																	**3.1**	
P-107D	4/27/05 Dup									1.9 J									2.5																	**6.2**	
P-107D	10/27/2005									1.2 J									2.0 J																	**4.3**	
P-107D	4/25/2006									2.3 J									3.1						0.68 L											**7.7**	
P-107D	10/31/2006									2.0 J									2.1 J																	**4.3**	
P-107D	5/1/2007									1.6J									2.5J																	**6.2**	
P-107D	5/1/2007 Dup									1.6J									2.9																	**6.7**	
P-107D	10/19/2007																																			**3**	
P-107D	5/5/2008																																			**1.3**	
P-107D	10/1/2008																																			**1.6**	
P-107D	4/7/2009											0.96J																								**2.5**	
P-107D	10/28/2009																																			**2**	
P-107D	2/25/2010											0.25J																								**1.8**	
P-107D	5/24/2010																																			**4**	
P-107D	10/5/2010																																			**1.6**	
P-107D	1/24/2011																																			**2.6**	
P-107D	4/12/2011																																			**2.6**	
P-107D	7/11/2011																		1.2																	**5.3**	
P-107D	10/18/2011																																			**1.8**	
P-107D	1/23/2012																																				
P-107D	4/4/2012																																			**4.5**	
P-107D	7/25/2012																																			**2.1**	
P-107D	10/17/2012																																			**2**	
P-107D	1/16/2013																																			**2.3**	
P-107D	4/26/2013																																			**2.1**	
P-107D	7/2/2013																																				
P-107D	10/24/2013																																			**2.6**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-107D	1/9/2014																		0.57 J																	**2.9**	
P-107D	4/16/2014									0.60J									1.1																	**5.6**	
P-107D	7/17/2014									0.75 J									1.2																	**4.8**	
P-107D	10/24/2014									0.78 J		0.54 J							0.77 J						0.32 J											**3.1**	
P-107D	1/15/2015									0.87 J									1.4																	**4.7**	
P-107D	4/28/2015									1.2									0.79 J																	**2.1**	
P-107D	7/1/2015																		0.59 J																	**2.1**	
P-107D	10/27/2015																		1.2																	**3.1**	
P-107D	1/14/2016									1.3									0.77 J																	**2.6**	
P-107D	4/13/2016																		1.5																	**4.8**	
P-107D	7/28/2016																		1.0 J																	**1.9**	
P-107D	10/27/2016																		0.45 J																	**2**	
P-107D	1/20/2017									2.4									1.6																	**4.3**	
P-107D	4/6/2017									0.77 J									0.99 J																	**2.2**	
P-107D	7/14/2017									1.4									1.7																	**3.8**	
P-107D	10/18/2017									0.76 J									0.52 J																	**1.9**	
P-107D	3/21/2018 [5]			NR			NR			0.88 J									1.3				NR	NR						NR				NR	NR	**3.6**	NR
P-107D	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR	0.072	NR	NR	NR	**3.2**	NR
P-107D	6/4/2018 [6]									0.86									0.78																	**2.2**	
P-107D	8/2/2018									0.35									0.55																	**1.6**	
P-107D	10/31/2018									2.0		0.12 B							2.6									0.96				0.18				**6.5**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-108	10/18/1993	NR																											11								
MW-108	4/13/1994	NR																											2								
MW-108	5/8/1996	NR																	0.2 J										0.2 J								
MW-108	10/23/1996	NR										0.85 J																									
MW-108	5/12/1997	NR																																			
MW-108	10/27/1997	NR																																			
MW-108	4/14/1998	NR																																			
MW-108	10/11/2001	NR																							0.34L												
MW-108	05/21/2002*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-108	8/19/2002 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-108	12/5/2002	NR																																			
MW-108	10/14/2004																		1.2 J												1.3 J				**0.67**	
MW-108	4/27/2005																		1.0												0.7				**0.3**	
MW-108	8/3/2005																														0.70 J					
MW-108	10/25/2005																																			
MW-108	02/01/2006																																			
MW-108	4/28/2006																																			
MW-108	7/27/2006											0.36 J																								
MW-108	11/2/2006																																			
MW-108	2/1/2007																																			
MW-108	5/2/2007																																			
MW-108	8/14/2007																																			
MW-108	10/16/2007																																			
MW-108	5/6/2008	2.7J																																			
MW-108	10/2/2008																																			
MW-108	4/8/2009																																			
MW-108	11/4/2009																																			
MW-108	11/4/2009 Dup																																			
MW-108	5/20/2010																																			
MW-108	5/20/2010 Dup																																			
MW-108	4/11/2011																																			
MW-108	4/11/2011 Dup																																			
MW-108	4/2/2012																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-108	10/25/1993	NR																																		
P-108	10/25/93 Dup	NR																																		
P-108	4/13/1994	NR																																		
P-108	4/13/94 Dup	NR																																		
P-108	10/11/2001	NR																							0.32L											
P-108	2/5/2002	NR				NA																						NA								
P-108	5/21/2002	NR				NA																						NA								
P-108	10/14/2004											0.45 J																								
P-108	1/28/2005																																			
P-108	10/25/2005																																			
P-108	7/27/2006											0.75 J																								
P-108	8/14/2007														2.7 J																					
P-108	5/6/2008																																			
P-108	4/8/2009																																			
P-108	5/20/2010																																			
P-108	4/11/2011																																			
P-108	4/2/2012																																			
MW-111	4/19/1994	NR																																		
MW-111	10/11/2001	NR																							0.30L											
MW-111	05/21/2002*	NR	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-111	8/19/2002	NR																										NA								
MW-111	12/5/2002	NR																																		
MW-111	10/13/2004																																			
MW-111	10/26/2005																																			
MW-111	4/24/2006																																			
MW-111	8/8/2007																																			
MW-111	5/5/2008																																			
MW-111	4/7/2009																								0.44J											
MW-111	10/28/2009																																			
MW-111	5/24/2010																																			
MW-111	10/4/2010																								0.80J											
MW-111	1/26/2011																																			
MW-111	4/11/2011																																			
MW-111	4/3/2012																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-111	4/19/1994	NR																											2								
P-111	10/11/2001	NR																																			
P-111	2/5/2002	NR				NA																						NA								
P-111	5/22/2002	NR				NA																						NA								
P-111	8/19/2002	NR																										NA								
P-111	08/19/02 Dup	NR																										NA								
P-111	12/5/2002	NR																																		
P-111	12/05/02 Dup	NR																																		
P-111	4/22/2003																																			
P-111	10/22/2003																																			
P-111	4/28/2004																																			
P-111	8/3/2005																																			
P-111	7/27/2006																																			
P-111	8/8/2007																																			
P-111	5/5/2008																																			
P-111	4/7/2009																																			
P-111	10/28/2009																																			
P-111	5/24/2010																																			
P-111	10/5/2010																																			
P-111	1/24/2011																																			
P-111	4/13/2011																																			
P-111	4/4/2012	10.5 J																																		

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-111D	4/4/2002	NR																	0.6										0.3							**13**	
P-111D	5/22/2002	NR				NA													0.59 J									NA								**15**	
P-111D	8/19/2002	NR																	0.37 J									NA								**12**	
P-111D	12/5/2002	NR																	0.42 J																	**11**	
P-111D	4/23/2003																																				**12**	
P-111D	10/23/2003																																				**9.1**	
P-111D	5/11/2004									1.4																											**15**	
P-111D	07/23/2004																																				**14**	
P-111D	10/13/2004									1.9 J																			1.6 J								**11**	
P-111D	1/27/2005																																				**8.8**	
P-111D	4/26/2005									3.7									0.87 J																		**13**	
P-111D	4/26/05 Dup									3.5																											**13**	
P-111D	8/3/2005											2.9 J							0.96 J																		**10**	
P-111D	10/26/2005									3.1 J									1.1 J																		**10**	
P-111D	10/26/2005 dup									2.7 J									0.93 J																		**10**	
P-111D	02/01/2006									4.2									0.89 J																		**11**	
P-111D	4/24/2006									2.8 J									1.3 J																		**11**	
P-111D	7/27/2006											0.30 J							1.2 J																		**10**	
P-111D	10/31/2006									1.4 J									1.3 J																		**8.5**	
P-111D	1/31/2007									3.0J									1.4J																		**8.2**	
P-111D	5/1/2007									3.1J									1.3J																		**8.2**	
P-111D	8/8/2007									2.9 J									1.5 J																		**8.5**	
P-111D	10/17/2007									2.7 J									1.5 J																		**8**	
P-111D	5/5/2008																		1.5																		**4.7**	
P-111D	10/2/2008									1.8									1.5																		**5.7**	
P-111D	4/7/2009									1.4									1.7																		**5.5**	
P-111D	10/28/2009									1.8									1.5																		**5**	
P-111D	2/25/2010									1.8									1.5																		**4.4**	
P-111D	2/25/2010 Dup									1.5									1.5																		**3.9**	
P-111D	5/24/2010									1.9									1.5																		**5.9**	
P-111D	5/24/2010 Dup									1.8									1.4																		**4.4**	
P-111D	10/5/2010									1.5									1.3						0.55J												**4.7**	
P-111D	10/5/10 Dup									1.6									1.3						1.2												**4.7**	
P-111D	1/24/2011									1.9									1.1																		**5.2**	
P-111D	1/24/11 Dup									1.7									1.4																		**4.5**	
P-111D	4/13/2011									2.3									1.6																		**5.8**	
P-111D	4/13/2011 Dup									2.8									1.3																		**7.1**	
P-111D	7/11/2011																		1.4						0.88J												**5.3**	
P-111D	10/18/2011									1.5									1.4																		**4.5**	
P-111D	10/18/2011 Dup									1.4									1.5																		**4.8**	
P-111D	1/23/2012									2									1.7																		**4.3**	
P-111D	4/4/2012	8.0 J								2.1									2																		**6**	
P-111D	4/4/2012 Dup	8.3 J								2									2																		**5.7**	
P-111D	7/25/2012																		1.6																		**6.5**	
P-111D	10/17/2012									1.3									1.7																		**7.2**	
P-111D	10/17/2012 Dup									1.8									1.9																		**6.9**	
P-111D	1/16/2013									2.2									1.7																		**8.1**	
P-111D	4/26/2013									2.3									1.4																		**6.5**	
P-111D	4/26/2013 Dup									2.2									1.3																		**6.7**	
P-111D	7/2/2013									1.9									1.9																		**6.8**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-111D	10/24/2013									1.5									1.6																	**6.7**	
P-111D	1/9/2014									2.1									1.5																	**6.9**	
P-111D	4/16/2014									2									1.7																	**7.9**	
P-111D	4/16/2014 Dup									1.8									1.7																	**8**	
P-111D	7/17/2014									1.9									1.9																	**7.7**	
P-111D	10/24/2014									3									2.1																	**12.2**	
P-111D	1/15/2015	3.3 J								1.9									2.1																	**6.9**	
P-111D	1/15/2015 Dup	4.3 J								1.7									1.9																	**6.7**	
P-111D	4/28/2015									1.7									2.2																	**7.8**	
P-111D	4/28/2015 Dup									2.5									2.1																	**7**	
P-111D	7/1/2015	11.2 J								1.7									1.7																	**8**	
P-111D	10/27/2015																		2.4																	**6.5**	
P-111D	10/27/2015 Dup																		2.2																	**6.5**	
P-111D	1/14/2016									1.6									2.1																	**5.8**	
P-111D	4/13/2016									2.2									2.1																	**5.1**	
P-111D	4/13/2016 Dup									2.2									2																	**5.2**	
P-111D	7/28/2016																		2.3																	**7.4**	
P-111D	10/27/2016									1.3									2.1																	**6.9**	
P-111D	1/20/2017									1.6									2.4																	**6.4**	
P-111D	4/6/2017									1.7									2.7																	**5.9**	
P-111D	4/6/2017 Dup									1.3									2.5																	**4.9**	
P-111D	7/14/2017									1.6									3																	**6.2**	
P-111D	10/18/2017									1.4									2.3																	**6.2**	
P-111D	3/21/2018 [5]			NR			NR			0.52 J									2.6				NR	NR					NR				NR	NR	**4.7**	NR
P-111D	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR	**4.1**	NR
P-111D	6/5/2018 [6]									1.4					0.066 J				3																	**3.9**	
P-111D	6/5/2018 Dup [6]									1.4					0.065 J				3																	**3.7**	
P-111D	8/2/2018									0.96		0.048							2.7																	**3.8**	
P-111D	10/31/2018	0.46								0.99		0.11 B							2.9																	**4.6**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-112	11/27/1996	NR	0.6J							2 J									59	1 J												3J				**15**	
MW-112	11/27/96 Dup	NR	0.7J							2 J									58	1 J												4J				**16**	
MW-112	5/12/1997	NR	0.59						0.27										5.4																	**2.2**	
MW-112	10/26/1997	NR	0.5						0.29										1.3																		
MW-112	4/13/1998	NR	0.69							1.4									57	1.3												1.9				**12**	
MW-112	10/13/1998	NR	0.76																**80**													1.2				**25**	
MW-112	4/6/1999	NR	0.72							1.4									40	0.56												1.7				**7.9**	
MW-112	10/27/1999	NR																	7.6													1					
MW-112	5/2/2000	NR	0.46																3.4													0.39					
MW-112	10/30/2000	NR							0.37										5.6													0.37					
MW-112	5/9/2001	NR	0.42						0.42										3.5																	**0.98**	
MW-112	10/11/2001	NR	0.36						0.39	0.53									27													0.83				**3.7**	
MW-112	2/4/2002	NR	0.23			NA			0.48										0.49									NA									
MW-112	05/21/2002*	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-112	8/19/2002 *	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
MW-112	12/4/2002																		**150**													2.7 J				**56**	
MW-112	4/22/2003		1.2 J							7.4 &									**220**	4.5 J												5.9				**45**	
MW-112	10/22/2003	2.5	0.88							5.9									60	1.4												1.6				**51**	
MW-112	4/28/2004		0.53 J						0.45 J	4									18													1.1 J				**9.9**	
MW-112	4/28/04 dup	6.5	0.61 J						0.48 J	4.7									22													1.1 J				**9.3**	
MW-112	07/23/2004	110	1.1							23									**140**	2.6	0.58						1					**7.4**				**31**	
MW-112	10/13/2004		1.0 J						0.42	14									**110**	2.4 J												2.9				**25**	
MW-112	10/13/04 Dup		0.87 J							15		0.56 J							**94**	2.1 J							0.60 J				2.9				**29**	
MW-112	1/26/2005		0.76 J							20									**85**	2.3 J																**27**	
MW-112	4/26/2005		0.6 J							13									64	1.2 J												1.8				**17**	
MW-112	8/3/2005								0.48 J										4.6																	**1.5**	
MW-112	10/25/2005																		2.5 J																	**1.4**	
MW-112	02/01/2006		0.41 J						0.45 J	3.2 J									11													0.76 J				**4.9**	
MW-112	4/25/2006								0.48 J	0.97 J									5.4																	**2.8**	
MW-112	7/27/2006								0.43 J			0.24 J							2.9																	**1.7**	
MW-112	7/27/2006 dup											0.52 J																								**1.5**	
MW-112	11/2/2006																		2.3 J																	**1.7**	
MW-112	2/1/2007								0.46J	1.4J									3.8																	**2.5**	
MW-112	5/2/2007								0.53J	1.3J									6.1																	**2.6**	
MW-112	8/14/2007								0.51 J										4.4																	**1.8**	
MW-112	8/14/2007 dup								0.51 J										4.9																	**1.6**	
MW-112	10/18/2007								0.49 J										4																	**1.2**	
MW-112	5/5/2008																		33.3													1.8				**1.3**	
MW-112	10/2/2008																		13.3													0.60J				**0.79J**	
MW-112	4/7/2009																		5.1													0.57J				**0.56J**	
MW-112	11/4/2009																																				
MW-112	5/20/2010																		2.7																	**0.33J**	
MW-112	4/11/2011																		1.8																		
MW-112	7/11/2011																		5.3						0.60J							1.5				**0.27J**	
MW-112	10/19/2011																		1.4																		
MW-112	1/24/2012																															0.76J					
MW-112	4/3/2012																																				
MW-112	7/25/2012																		1.5																		
MW-112	10/17/2012																																				
MW-112	1/16/2013																																				

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
MW-112	4/24/2013																																				
MW-112	10/24/2013																																				
MW-112	4/16/2014																																				
MW-112	10/24/2014																																				
MW-112	4/28/2015																																				
MW-112	10/28/2015																																				
MW-112	4/12/2016																																				
MW-112	10/27/2016																																				
MW-112	4/5/2017																																				
MW-112	10/18/2017																																				
MW-112	6/4/2018 [6]								0.12 J			0.042 JB							0.081 J								0.084 J					0.43					
MW-112	10/31/2018	0.8							0.12			0.069 B							0.21								0.19					0.86				0.024	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-113A	9/12/2002	NR									0.37J																		1.0J							
P-113A	12/3/2002	NR																																		
P-113A	4/23/2003																												2.2							
P-113A	10/22/2003																																			
P-113A	5/11/2004																																			
P-113A	8/2/2005																																			
P-113A	7/27/2006											0.84																								
P-113A	8/8/2007																																			
P-113A	5/6/2008																																			
P-113A	4/6/2009																																			
P-113A	10/29/2009											0.42J																								
P-113A	5/25/2010																																			
P-113A	10/6/2010																																			
P-113A	1/25/2011																																			
P-113A	4/13/2011																																			
P-113A	7/12/2011																								1.3											
P-113A	10/19/2011																																			
P-113A	1/23/2012																																			
P-113A	4/4/2012	7.5 J																																		
P-113A	7/25/2012																																			
P-113A	10/16/2012																																			
P-113A	1/15/2013																																			
P-113A	4/26/2013																																			
P-113A	7/2/2013																																			
P-113A	10/24/2013																																			
P-113A	1/9/2014																																			
P-113A	4/17/2014																																			
P-113A	7/17/2014																																			
P-113A	10/24/2014																								0.24 J											
P-113A	1/15/2015																																			
P-113A	4/28/2015																																			
P-113A	7/1/2015																																			
P-113A	10/27/2015																																			
P-113A	1/14/2016																																			
P-113A	4/13/2016																																			
P-113A	7/28/2016																																			
P-113A	10/27/2016																																			
P-113A	1/20/2017																																			
P-113A	4/6/2017																																			
P-113A	7/14/2017																																			
P-113A	10/18/2017																																			
P-113A	3/21/2018 [5]			NR			NR					NR	NR		NR	NR		NR	NR	NR		NR	NR	NR						NR				NR	NR		NR
P-113A	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR		NR
P-113A	6/5/2018 [6]											0.09 JB																								
P-113A	8/2/2018																																			
P-113A	10/31/2018	0.32										0.052 B																								

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-113B	9/11/2002	NR		0.59							1			0.35								0.41J							6.6							2.6
P-113B	12/3/2002	NR																																		
P-113B	4/23/2003																																			
P-113B	7/30/2003																																			
P-113B	10/22/2003																																			
P-113B	2/4/2004																																			
P-113B	5/11/2004																																			
P-113B	07/22/2004																																			
P-113B	10/14/2004											0.49 J																								
P-113B	1/27/2005																																			
P-113B	4/27/2005																																			
P-113B	8/2/2005																																			
P-113B	10/26/2005											0.42 J																								
P-113B	02/01/2006																																			
P-113B	4/24/2006																																			
P-113B	7/27/2006											0.49 J																								
P-113B	10/31/2006																																			
P-113B	1/31/2007																																			
P-113B	5/1/2007																																			
P-113B	8/8/2007																																			
P-113B	10/19/2007																																			
P-113B	5/6/2008																																			
P-113B	10/1/2008											0.29J																								
P-113B	4/6/2009																																			
P-113B	4/6/2009 Dup																																			
P-113B	10/29/2009																																			
P-113B	5/25/2010																																			
P-113B	10/6/2010																								0.51J											
P-113B	1/25/2011																								1.6											
P-113B	4/13/2011																																			
P-113B	7/12/2011																								1.3											
P-113B	10/19/2011											0.43J																								
P-113B	1/23/2012																																			
P-113B	4/4/2012																																			
P-113B	7/25/2012																																			
P-113B	10/16/2012																																			
P-113B	1/15/2013																																			
P-113B	4/26/2013																																			
P-113B	7/2/2013																																			
P-113B	10/24/2013																																			
P-113B	1/9/2014																																			
P-113B	4/17/2014																																			
P-113B	7/17/2014	4.0 J																																		
P-113B	10/24/2014	3.2 J																																		
P-113B	1/15/2015																																			
P-113B	4/28/2015																																			
P-113B	7/1/2015																																			
P-113B	10/27/2015																																			
P-113B	1/14/2016																																			
P-113B	4/13/2016																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-113B	7/28/2016																																				
P-113B	10/27/2016																																				
P-113B	1/20/2017																																				
P-113B	4/6/2017																																				
P-113B	7/14/2017																																				
P-113B	10/18/2017																																				
P-113B	3/21/2018 [5]			NR			NR																NR	NR						NR				NR	NR		NR
P-113B	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR		NR
P-113B	6/5/2018 [6]							0.087 J				0.065 JB																									
P-113B	8/2/2018																																				
P-113B	10/31/2018	0.47 B										0.12 B																									

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-114	11/19/2001	NR																	0.93																	**7**	
P-114	2/5/2002	NR																	0.85																	**5.5**	
P-114	5/22/2002	NR																	1.2																	**6.2**	
P-114	8/21/2002	NR																	0.93																	**5.4**	
P-114	12/3/2002	NR																	1.3										0.40J							**6.3**	
P-114	4/23/2003																																			**3.3**	
P-114	10/23/2003																		1.2																	**8.6**	
P-114	10/23/03 Dup																		1.4																	**9.2**	
P-114	5/11/2004																		1.5 J																	**10**	
P-114	07/22/2004																		1.4 J																	**7.9**	
P-114	10/13/2004											0.39 J							1.7 J																	**10**	
P-114	1/27/2005																																			**3.5**	
P-114	4/26/2005																																			**3.0**	
P-114	8/2/2005																		1.1 J																	**6.1**	
P-114	10/26/2005											0.84							1.3 J																	**6.6**	
P-114	10/26/2005 dup											0.49							1.4 J																	**6.9**	
P-114	01/31/2006																		1.3 J																	**8.4**	
P-114	4/24/2006																		1.3 J																	**7.6**	
P-114	4/24/2006 dup																		1.3 J																	**7.9**	
P-114	7/27/2006											0.48 J							1.6 J																	**8.9**	
P-114	7/27/2006 dup											0.38 J							1.6 J																	**8.7**	
P-114	11/2/2006																		2.7 J																	**13**	
P-114	11/02/2006 dup																		2.7 J																	**13**	
P-114	2/1/2007																		1.2J						0.46J											**7.5**	
P-114	2/1/2007 dup																		1.4J																	**8.5**	
P-114	5/1/2007																		1.1J																	**7.4**	
P-114	5/1/2007 dup																		1.2J																	**7.8**	
P-114	8/8/2007																		1.1 J																	**6.7**	
P-114	8/8/2007 dup																		1.2 J																	**7.5**	
P-114	10/22/2007																		0.95 J																	**7.8**	
P-114	10/22/2007 Dup																		1.2 J																	**8.1**	
P-114	5/6/2008																		1.5																	**6.6**	
P-114	10/2/2008																		1.2																	**6.1**	
P-114	4/6/2009																		1.6						0.47J											**6.5**	
P-114	10/29/2009											1.5							1.5																	**4.7**	
P-114	2/26/2010																		1.6																	**5.1**	
P-114	5/26/2010																		1.3																	**4.5**	
P-114	5/26/2010 Dup																		1.3																	**4.3**	
P-114	10/6/2010																		1.4																	**5.4**	
P-114	10/6/10 Dup																		1.3																	**5.4**	
P-114	1/25/2011																		1.3																	**4.8**	
P-114	1/25/11 Dup																		1.3																	**5.3**	
P-114	4/13/2011																		1.6																	**8.2**	
P-114	4/13/2011 Dup																		1.7																	**8.5**	
P-114	7/12/2011																		1.3						0.80J											**5.6**	
P-114	7/12/2011 Dup																		1.5						0.67J											**5.8**	
P-114	10/19/2011																		1.2																	**5.6**	
P-114	10/19/2011 Dup																		1.3																	**5.5**	
P-114	1/23/2012																		1.1																	**5**	
P-114	1/23/2012 Dup																		1.3																	**5.1**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-114	4/4/2012																		1.5																	**7.2**	
P-114	4/4/2012 Dup																		1.5																	**7.5**	
P-114	7/25/2012																		1.2																	**6.5**	
P-114	7/25/2012 Dup																		1.4																	**6.3**	
P-114	10/17/2012																		1.6																	**6.6**	
P-114	10/17/2012 Dup																		1.6																	**6.4**	
P-114	1/16/2013																		1.2																	**8.2**	
P-114	1/16/13 Dup																		1.3																	**7.6**	
P-114	4/26/2013																		1.2																	**6.5**	
P-114	4/26/2013 Dup																		1.1																		
P-114	7/2/2013																																				
P-114	7/2/2013 Dup																		1.3																		
P-114	10/24/2013																		1.3																	**7.2**	
P-114	10/24/2013 Dup																		1.4																	**7**	
P-114	1/9/2014																		1.3																	**8.2**	
P-114	1/9/2014 Dup																		1.3																	**8.8**	
P-114	4/17/2014																		1.4																	**6.5**	
P-114	4/17/2014 Dup																		1.4																	**6.4**	
P-114	7/17/2014																		1.5																	**6.4**	
P-114	7/17/2014 Dup																		1.5																	**6.6**	
P-114	10/24/2014																		1.5																	**10**	
P-114	10/24/2014 Dup																		1.4																	**10**	
P-114	1/15/2015																		1.3																	**6.2**	
P-114	4/28/2015																		1.3																	**6.5**	
P-114	4/28/2015 Dup																		1.4																	**6.5**	
P-114	7/1/2015																		1.3																	**7**	
P-114	7/1/2015 Dup																		1.2																	**6.5**	
P-114	10/27/2015																		1.4																	**6.5**	
P-114	1/14/2016																		1.5																	**6.1**	
P-114	1/14/2016 Dup																		1.3																	**5.9**	
P-114	4/13/2016																		1.4																	**7**	
P-114	4/13/2016 Dup																		1.5																	**7.5**	
P-114	7/28/2016																		1.6																	**7.8**	
P-114	7/28/2016 Dup																		1.4																	**8.4**	
P-114	10/27/2016									0.72 J									1.5																	**6.4**	
P-114	10/27/2016 Dup									0.72 J									1.6																	**7.3**	
P-114	1/20/2017																		1.5																	**6.7**	
P-114	1/20/2017 Dup																		1.6																	**6.9**	
P-114	4/6/2017																		1.5																	**7**	
P-114	4/6/2017 Dup																		1.5																	**6.7**	
P-114	7/14/2017																		1.5																	**7**	
P-114	7/14/2017 Dup																		1.7																	**7.4**	
P-114	10/18/2017																		1.1																	**7.6**	
P-114	10/18/2017 Dup																		1.3																	**8.8**	
P-114	3/21/2018 [5]			NR			NR												1.3				NR	NR					NR				NR	NR	**6.2**	NR
P-114	3/21/2018 Dup [5]			NR			NR												1.4				NR	NR					NR				NR	NR	**6.3**	NR
P-114	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR	**4.7**	NR
P-114	3/21/2018 SIM Dup [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR	**4.7**	NR
P-114	6/5/2018 [6]							0.086 J							0.061 J				1.6																	**5.8**	
P-114	6/5/2018 Dup [6]									0.27									1.7																	**6.5**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-114	8/2/2018									0.44									1.6																	**6.2**	
P-114	8/2/2018 Dup									0.28									1.6																	**6.0**	
P-114	10/31/2018	0.61 B																	1.5																	**6.1**	
P-114	10/31/2018 Dup									0.33		0.047 B							1.6																	**6.5**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-115	10/9/2001	NR																																			
P-115	10/09/01 Dup	NR																																			
P-115	11/19/2001	NR																																			
P-115	2/5/2002	NR																																			
P-115	5/22/2002	NR																																			
P-115	8/19/2002	NR										0.20J																									
P-115	12/3/2002	NR																																			
P-115	4/22/2003																																				
P-115	7/30/2003																																				
P-115	10/22/2003																																				
P-115	2/4/2004																																				
P-115	4/27/2004																																				
P-115	10/14/2004																																			**0.33 J**	
P-115	1/27/2005																																				
P-115	4/26/2005																																				
P-115	8/2/2005																																			**0.34 J**	
P-115	10/26/2005											0.24 J																								**0.33 J**	
P-115	1/31/2006																																				
P-115	4/24/2006																																			**0.62**	
P-115	7/27/2006																																			**0.44 J**	
P-115	10/31/2006																																			**0.39J**	
P-115	2/1/2007																																			**0.50J**	
P-115	5/1/2007																																			**0.54J**	
P-115	8/14/2007																																			**0.62**	
P-115	10/22/2007																																			**0.49 J**	
P-115	10/22/2007																																			**0.55 J**	
P-115	5/6/2008																																			**1.1**	
P-115	10/2/2008																																			**1.9**	
P-115	4/6/2009																																			**1.3**	
P-115	10/29/2009											1.6																								**1.3**	
P-115	2/26/2010											0.30J																								**0.95J**	
P-115	5/26/2010																																				
P-115	10/6/2010																																			**1.2**	
P-115	1/25/2011																																			**0.86J**	
P-115	4/13/2011																																			**1.4**	
P-115	7/12/2011																								0.69J											**0.99J**	
P-115	10/19/2011																																			**1.0**	
P-115	1/23/2012																																			**0.77J**	
P-115	4/4/2012	7.2 J																																		**1.3**	
P-115	7/25/2012																																			**1.1**	
P-115	10/17/2012																																				
P-115	1/16/2013																																			**1.3**	
P-115	4/26/2013																																			**1.1**	
P-115	7/2/2013																																				
P-115	10/24/2013																																			**1.1**	
P-115	1/9/2014																																			**1.5**	
P-115	4/17/2014																																			**1.0**	
P-115	7/17/2014																																			**1.1**	
P-115	10/24/2014																																			**1.7**	
P-115	1/15/2015																																			**1.1**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-115	4/28/2015																																			**1.1**	
P-115	7/1/2015																																			**1.2**	
P-115	10/27/2015																																			**1.1**	
P-115	1/14/2016																																			**0.95 J**	
P-115	4/13/2016																																			**1.0**	
P-115	7/28/2016																																			**1.1**	
P-115	10/27/2016																																			**0.81 J**	
P-115	4/6/2017																																			**1.1**	
P-115	7/14/2017																																			**1.0**	
P-115	10/18/2017																																			**1.4**	
P-115	3/21/2018 [5]			NR			NR																NR	NR						NR				NR	NR	**0.62 J**	NR
P-115	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR	**0.85**	NR
P-115	6/5/2018 [6]																		0.13 J																	**0.98**	
P-115	8/2/2018																		0.14																	**0.97**	
P-115	10/31/2018	0.40 B										0.040 B							0.15																	**1.0**	

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																	
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-116	10/9/2001	NR																																			
P-116	11/19/2001	NR																													0.18						
P-116	2/5/2002	NR																																			
P-116	5/22/2002	NR																																			
P-116	8/19/2002	NR																																			
P-116	08/19/02 Dup	NR																																			
P-116	12/3/2002	NR																																			
P-116	12/03/02 Dup	NR																																			
P-116	4/22/2003																																				
P-116	7/30/2003																																				
P-116	10/22/2003																																				
P-116	2/4/2004																																				
P-116	5/11/2004																																				
P-116	7/22/2004																																				
P-116	10/14/2004																																				
P-116	1/27/2005																																				
P-116	4/26/2005																																				
P-116	8/2/2005																																				
P-116	10/26/2005																																				
P-116	1/31/2006																																				
P-116	01/31/06 Dup																																				
P-116	4/24/2006																																				
P-116	7/27/2006											0.35 J																									
P-116	10/31/2006																																				
P-116	2/1/2007																																				
P-116	5/1/2007																																				
P-116	8/8/2007																																				
P-116	10/22/2007																																				
P-116	5/6/2008																																				
P-116	10/2/2008																																				
P-116	4/6/2009																																				
P-116	10/29/2009																																				
P-116	2/26/2010																								1.1												
P-116	5/25/2010																																				
P-116	10/6/2010																								0.44J												
P-116	1/25/2011																																				
P-116	4/13/2011																																				
P-116	7/12/2011																								0.46J												
P-116	10/19/2011																																				
P-116	1/23/2012																																				
P-116	4/4/2012																																				
P-116	7/25/2012																																				
P-116	10/17/2012																																				
P-116	1/15/2013																																				
P-116	4/26/2013																																				
P-116	7/2/2013																																				
P-116	10/24/2013																																				

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000
P-116	1/9/2014																																			
P-116	4/17/2014																																			
P-116	7/17/2014																																			
P-116	10/24/2014																																			
P-116	1/15/2015	4.2 J																																		
P-116	4/28/2015																																			
P-116	7/1/2015																																			
P-116	10/27/2015																																			
P-116	1/14/2016																																			
P-116	4/13/2016																																			
P-116	7/28/2016																																			
P-116	10/27/2016																																			
P-116	1/20/2017																																			
P-116	4/6/2017																																			
P-116	7/14/2017																																			
P-116	10/18/2017																																			
P-116	3/21/2018 [5]			NR			NR					NR	NR			NR	NR							NR	NR						NR			NR	NR		NR
P-116	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR	NR
P-116	6/5/2018 [6]							0.3																												
P-116	8/2/2018																																			
P-116	10/31/2018	0.41 B										0.071 B																								
P-117	1/20/2017																		0.89 J																**1.4**	
P-117	4/6/2017																		0.98 J																**1.5**	
P-117	7/14/2017																		1.1																**1.4**	
P-117	10/18/2017																		0.79 J																**1.4**	
P-117	3/21/2018 [5]			NR			NR												0.66 J				NR	NR					NR				NR	NR	**0.89 J**	NR
P-117	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR	0.057	NR	NR	NR	**1.0**	NR
P-117	6/5/2018 [6]		0.019 J							0.55		0.044 JB							0.83													0.053 J				**1.4**	
P-117	8/2/2018		0.020							0.30									0.87													0.058				**1.2**	
P-117	10/31/2018	0.33								0.36		0.065 B							0.86													0.076				**1.3**	
P-118	10/18/2017																																			
P-118	3/21/2018 [5]			NR			NR																NR	NR					NR				NR	NR		NR
P-118	3/21/2018 SIM [5]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR		NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR		NR		NR	NR	NR	NR
P-118	6/5/2018 [6]							0.15 J				0.061 JB																								
P-118	8/2/2018																																		0.070	
P-118	10/31/2018											0.062 B																							0.036	
Gaastra[3]	1/14/2016																																			
Gaastra[3]	4/12/2016																																			
Gaastra[3]	7/28/2016																																		**1.1**	
Gaastra[3]	10/27/2016																																		**1**	
Gaastra[3]	1/20/2017																																		**0.76 J**	
Gaastra[3]	4/5/2017																																			
Perry [4]	1/14/2016							0.73 J																												
Perry [4]	4/12/2016							1.2 J																												
Perry [4]	7/28/2016																																			
Perry [4]	10/27/2016																																			
Perry [4]	1/20/2017											0.71 J																								
Perry [4]	4/5/2017																																			

Table 2. Groundwater VOC Analytical Results for Monitoring Wells
FF/NN Landfill, Ripon, WI

		Parameters																																		
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromodichloromethane	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dibromochloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl Ether	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	0.06	1	90	NE	200	NE	80	0.6	0.3	15	6	200	85	0.5	0.7	7	20	0.5	140	NE	NE	0.5	12	0.5	10	200	14		0.5	NE	96		0.02	1000
NR140	ES	1000	5	0.6	10	460	NE	1000	NE	400	6	3	75	60	1000	850	5	7	70	100	5	700	NE	NE	5	60	5	50	1000	70		5	NE	480		0.2	10000

Results in µg/L (microgram per liter)

B = analyte found in method blank as well as sample
E = exceeds calibration range
J = estimated value between LOD and LOQ
LOD= Limit of Detection adjusted for dilution factor and percent moisture
LOQ= Limit of Quantitation adjusted for dilution factor and percent moisture
L = Lab Artifact
& = Laboratory control spike recovery not within control limits
NE = None Established
NA= Not Analyzed; no sample collected for analysis
NR = Value not reported by lab or not recorded during initial evaluation by Tetra Tech

PAL = Preventive Action Limit
ES = Enforcement Standard
Underline indicates exceeds NR 140 PAL
Bolding indicates exceeds NR 140 ES
Blank = Sample analyzed but No VOCs detected
Historical data for abandoned wells MW-105, P-105, P-109 and MW-110 can be found in reports prior to October 2004

* Not sampled due to insufficient water for sample collection.
[1] The reporting of acetone on an 8260B VOC scan varies with labs. Enchem, which began analyzing samples in April 2003, does report acetone. Acetone has appeared in several wells beginning in October 2003.
[2] MW-103 had low concentrations of isopropyl ether detected in October 1997 and February 2002.
[3] Gaastra residence connected to city's water supply July 13, 2015. Outside faucet connected to original well for sampling purposes.
[4] Perry residence connected to city's water supply September 7, 2015. Outside faucet connected to original well for sampling purposes.
[5] Test America began analyzing samples in March 2018. Both standard 8260C and 8260SIM analysis were performed, and reported.
[6] CT Laboratories began analyzing samples in June 2018. Low Level 8260C analysis performed and reported.
P-114 (former Ehster well)
P-115 (former Wiese well)
P-116 (former Hadel well)

Attachment 2

Detected Parameters in Vapor – Second Quarter 2019

Table 8
Detected Parameters in Vapor
FF/NN Landfill
Ripon, Wisconsin
Second Quarter 2019

Parameter	Units	GP-03 5/20/2019 P1902998-005	GV-06 5/20/2019 P1902998-004	LC-1 5/20/2019 P1902998-001	LC-2 5/20/2019 P1902998-002	LC-3 5/20/2019 P1902998-003
1,1-Dichloroethane	ppbV	< 0.090	2.1	< 0.087	1.5	1.3
1,1-Dichloroethene	ppbV	< 0.087	< 0.078	< 0.084	< 0.082	1.2
1,3-Butadiene	ppbV	< 0.19	1.2	< 0.18	< 0.17	1.0
2-Butanone	ppbV	< 0.17	14	16	11	7.4
Acetone	ppbV	< 2.4	13	22	26	21
Acrolein	ppbV	< 0.31	3.8	< 0.29	< 0.29	< 0.29
alpha-Pinene	ppbV	< 0.069	0.86	< 0.066	0.56	0.43
Benzene	ppbV	< 0.11	1.5	2.1	12	6.9
Carbon disulfide	ppbV	< 0.24	< 0.22	6.6	10	5.1
Chlorobenzene	ppbV	< 0.072	< 0.065	< 0.069	1.7	< 0.067
Chloroethane	ppbV	< 0.12	16	3.8	12	2.4
Chloromethane	ppbV	< 0.19	< 0.17	< 0.19	< 0.18	1.1
cis-1,2-Dichloroethene	ppbV	< 0.088	< 0.079	4.4	0.90	120 D
Cyclohexane	ppbV	< 0.20	46	13	51	28
Dichlorodifluoromethane	ppbV	0.54	36	10	33	98 D
Dichlorotetrafluoroethane	ppbV	< 0.056	120 D	11	67 D	32
Ethanol Gas	ppbV	36	13	16	< 0.86	< 0.86
Ethyl acetate	ppbV	< 0.36	< 0.33	2.0	< 0.34	< 0.34
Ethylbenzene	ppbV	< 0.081	1.1	< 0.078	1.6	5.8
Fluorotrichloromethane	ppbV	< 0.067	1.9	< 0.065	1.7	8.5
Heptane	ppbV	< 0.097	11	4.4	47	13
Methyl-tert-butyl-ether	ppbV	< 0.082	0.93	< 0.079	< 0.076	0.82
Methylene chloride	ppbV	< 0.20	< 0.18	< 0.19	< 0.19	2.7
N-Hexane	ppbV	< 0.15	39	25	100	38
n-Nonane	ppbV	< 0.079	0.63	< 0.076	1.1	1.1
n-Octane	ppbV	2.0	3.1	0.82	9.7	2.8
Propylene	ppbV	12	210	160	160	160
Tetrachloroethene	ppbV	< 0.048	< 0.043	< 0.046	< 0.045	0.46
Tetrahydrofuran	ppbV	< 0.11	12	32	24	20
Toluene	ppbV	< 0.081	0.81	6.0	3.2	160 D
trans-1,2-dichloroethene	ppbV	< 0.087	< 0.078	< 0.084	< 0.082	2.0
Trichloroethene	ppbV	< 0.063	< 0.056	< 0.060	< 0.059	8.2
Vinyl chloride	ppbV	< 0.10	< 0.094	2.0	< 0.098	74
Xylene, M + P	ppbV	< 0.15	< 0.14	< 0.15	9.3	14
Xylene, O	ppbV	< 0.083	< 0.074	< 0.080	< 0.078	2.0

Notes:

1. ppbV = parts per billion by volume.
2. D = Reported result is from a dilution.

Attachment 3

Historical Vapor Analytical Detections

Table 7. Landfill Gas Analytical Results
FF/NN Landfill, Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluorethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Total Hydrocarbons as gas	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorotrifluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
GP-3	9/29/04	102		689					909			110	6660	229	131									205					25400	
	1/28/05			450					590				4500								4800								12600	
	6/2/06												464			105					10900	708							72.9	85.8
	11/2/06			5.9									28.7			19					1360	122								50.1
	5/30/07	1.3	3					2.4	2				7.1			9				0.86	2800	7.4		1			1.9	3.1		25
	8/9/07																				2770									
	10/22/2007												135									33							24.4	
	1/23/2008								3.4				7.3											2.2						
	7/22/2008						1.6														66.4	0.74								
	10/7/2008								7.2				1.9		1.4		1.1		0.87		243	2.7								1.9
	1/27/2009								3.6								1.9													
	4/16/2009																				251	0.95								
	7/27/2009				0.83												109				55.8	19.4						1.2		0.76
	10/27/2009								1.7				5.7	0.82								0.95		6.5						
	2/25/2010				0.86												28					1.7								
	5/25/2010					8.2											15.8							6.2						
	10/12/2010								0.96								299					4.2								
	1/25/2011																1													
	4/25/2011								6.5				19	3			52.2			1.3		3.4		18.4						
	7/13/2011																					1.1					0.87			
	10/26/2011																6.4													
	1/25/2012								1.8								27.8													
	4/3/2012																													
	7/25/2012								2.09				2.28						2.98			3.11		6.9			2.04			
	10/17/2012								2.5				1.1							1.3		1.3								
	1/15/2013								1.8					2.3			36.7													
	4/29/2013																2.1													
	4/22/2014				0.49				0.44																					
	4/22/2015	0.32			0.44				0.47								0.57								0.18					0.41
	5/3/2016	0.84			0.85			0.28	1.7				0.8	0.49	0.51		11.7		0.41			1.5			0.59		0.46	0.33		1.2
	4/18/2017	0.24							1.8				0.37		0.35		3.6					2.7			0.49					0.75
	6/6/2018[1]																													
	5/20/2019								0.54																					

Table 7. Landfill Gas Analytical Results
FF/NN Landfill, Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluorethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Total Hydrocarbons as gas	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorotrifluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
GV-6	7/28/2006	172	117	373					1070	42.6			19		281	323					27500	107	27.9		38				3590	649.5
	11/2/2006	50.2	50.4	73.5					166	35.8					70.4	246					29300	155					45	33.7	84.9	666
	2/23/2007								111	24.4					44.3			7.4			2780	7	33.5		17.6					
	5/30/2007	32		190					160	21			19		120	73					17400	56							150	151
	8/9/2007	75.8	127	255				27.6	119	35			22.4		72.5	543					57300	84.6					98.9	88	54.5	1123
	10/22/2007			32					82	68.9			33.9		23	16.3					3320	41.1	29.9		42.3					29
	1/23/2008			87.6					375	64.8			16		69.5								40		41.4					
	7/22/2008	15.3	16.8	84.7					95.5	83.1					58.4	66.2		22.8			9150		63.4							112
	10/7/2008			43					93.6						21.4						4230									
	1/27/2009																8							1.8						
	4/16/2009								3.1								238				259	1.7					0.85			
	7/27/2009								61.9	28					16.7		502		38.5		4220									
	10/27/2009	17.7		78.7					40.6						77.7	34	32.7					48					39			107.60
	2/25/2010								133						132															
	5/25/2010			1.5					3	1.1							3					1.3								
	10/12/2010	1.9		11.8					5.3	1.6							23													
	1/25/2011																3.6													
	4/25/2011								192						184		4260					86								
	7/13/2011			6.2									10.7		2.9		15.7					4.6	0.96						4.2	
	10/26/2011								3.4								68.9					2.7								
	1/25/2012																					0.9								
	4/3/2012			37.8					53.3	6.3												1.1	5.1		3.3					
	7/25/2012								4.3						1.93				2.36			4.02								
	10/17/2012			15.6					19.6						10		9					1.5								
	1/15/2013			22.9					30.4						38.7															
	4/29/2013																31.4													
	4/22/2014				0.48				0.47																		0.54			
	4/22/2015	0.26		0.29	0.45				0.47								0.72			0.19		1.2			0.12					0.46
	5/3/2016	0.93		29				0.19	76.8	0.55			0.52		54.1		5.8					1.8			1.6		1.3	0.59		1.80
	4/18/2017	0.27		10.6					22.8						39.9	0.37	19.9			0.45		4.5			0.48					1.37
	6/6/2018			1.2				0.35	14				0.88		6.8							0.83			0.43				11	
	5/20/2019	1.5		16					36	2.1						1.1						0.81			1.9					

Table 7. Landfill Gas Analytical Results
FF/NN Landfill, Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluoroethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Total Hydrocarbons as gas	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorotrifluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
LC-1	9/29/04			9.1					70.8						9.5															
	1/28/05								553				1080		178						10400								130	
	7/28/2006	117							71.6						168	149					23600	118								563
	11/2/2006	92.6	16.4	54.3					62.4	27.7			1010		30.5	636				22.1	35400	3010		46.9			38.1	29.8		1954
	2/23/2007	48							129						14.6	64.2		21			13300	40.8								175.2
	5/30/2007	160		270					180	24						380	500				34800	270					57	43		1140
	8/9/2007	76.4	21.8	108					118	17.4					34.8	216	106				16800	46.1					32.3	21		489.8
	10/22/2007	51.1	150	86.9					170	49.3					38	328	15.9				22100	38.7					47.5	39.4		546.7
	1/23/2008																													
	7/22/2008	31.6	84.8	48.7					13.5	48.5			1.4		13.1	235		23		3.5	7450		6.4	2.2	2.4	0.95	18	12.1		409.8
	10/7/2008	11.2		27.2					2.8	26.4			1.3				1.8				863	1.9	1.9	1.4	1.1					
	1/27/2009			7.6													3.3				106			4						
	4/16/2009								1.1				1.3				1.8				196	0.94								
	7/27/2009	1.5															7.1			1.2	472	1.5					3.6	1.7		6.4
	10/27/2009			267					388							384														626
	2/25/2010			123					176	19.2					88.9															
	5/25/2010	3.4		62.4					24.1																		1.3			
	10/12/2010	3.1		14.2					43.4	1.1					16.3	4.9	34.6					6.2					3.8	1.4		4.7
	1/25/2011																5.4													
	4/25/2011	83.2	74.9						542	70.7					193	193	665					68.8								309
	7/13/2011			63.4					36.8	10.7					18.6															
	10/26/2011															11.4	193					10.6		39.1						20.5
	1/25/2012			57.4					55.8	6.4					34.2															
	4/3/2012	19.5		29.5					91.2						22.7		52.2													
	7/25/2012			76.4					296																					
	10/17/2012								260						57															
	1/15/2013																3.5					1.8								
	4/29/2013																					65.1								
	4/22/2014	2			32.1				109						56.7															
	4/22/2015	1.5		21.5					38.8	1.7					35.7					0.23		1.4			0.71	0.25				0.47
	5/3/2016	8.3		46				0.22	61.7	3.8		0.41	0.62		42.6		9.4					2.2			0.46	10.1				1
	4/18/2017	4.5		37.6					25.3								4.6					2.6				0.74				
	6/6/2018								2.4						0.5															
	5/20/2019	2.1		3.8					10				4.4									6							2.0	

Table 7. Landfill Gas Analytical Results
FF/NN Landfill, Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluorethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Total Hydrocarbons as gas	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorotrifluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
LC-2	7/28/2006	447	404	265					1060				3850	48.7	408	2790	88.6			81	98200	8920		238			191	143	166	13006
	11/2/2006	221	96.9	216					1130						263	378					47000	43.2					79.4	56		8532
	2/23/2007	186	182	148				36.2	309						176	449		194			73800	83.7					173	157		7088.5
	5/30/2007	1.2		4.4					7.7				1.8		7.4	1.2					290	3.3							2.4	2.7
	8/9/2007	24.9		75.9					75.6						40.6	17.3					3580	25.9								38
	10/22/2007	236	112	344						14.3			16.4		90.5	335					22000				14.8		38.2	27.3		1744.1
	1/23/2008	282	54.7	426					956	19.1					274	200						80			82		77.7	24.1	18.4	1549.9
	7/22/2008	354	114	535					840						286	400					29300	119								1820
	10/7/2008	37.2		284					538						211		18.3				9190									
	1/27/2009					1.2							1.8				9.7			1.3				8.8		3.2				
	4/16/2009			1.5					5.3								200				521	2								
	7/27/2009								1490							243					50000									1270
	10/27/2009	578		637					595						422	375							777	995						1920
	2/25/2010			224					161						197															
	5/25/2010	16.1		64.1					10.7	1.2					39.2		11.8					2.3								
	10/12/2010			43.7					113						56.9		38.7													
	1/25/2011																2.6					1.1								
	4/25/2011																10.3					3.6					0.83			
	7/13/2011	58							439																					
	10/26/2011	20		243					379						211															
	1/25/2012			2.3					4						3.1		79													
	4/3/2012								408						190															
	7/25/2012	22.6																	3.3			4.33								
	10/17/2012								0.95													1.2					1.8			
	1/15/2013																1.6							1.9						
	4/29/2013	9.4	31.4			9.8		12.5				3.9	3.9			2.3	1.2					35.8		1.5			6.3	3.6		23.4
	4/22/2014	9.4		147					632	1.4						231	10					0.87			38.3					
	4/22/2015				0.34				0.32								1.6					0.74								
	5/3/2016				0.6				0.56								3.5					0.56			0.26					
	4/18/2017								0.57								4.6					0.76								
	6/6/2018	8	2.1	4.3					9.6				14		5.1	2.5						18		2.8					26	17.74
	5/20/2019	12	1.7	12					33	1.5			0.9			1.6						3.2			1.7					9.3

Table 7. Landfill Gas Analytical Results
FF/NN Landfill, Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluoroethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Total Hydrocarbons as gas	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorotrifluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
LC-3	7/28/2006												516									1070								1340
	11/2/2006	1110	95.4					33.4	740	98.5		254	5840	228	115	526	1430		22.6	209	122000	5030		912	184		158	85.1	1600	3310
	2/23/2007	434							2810	81.6		166	43400		231	185	1440	21.1		63.2	219000	10000		573 J	1210				11900	632
	5/30/2007	610	110					71	5200	64		460	137000		260	18400	2700			260	560000	146000		3200	270		260	150	172000	47400
	8/9/2007	28.8							258	58.6			4960		25.9		197				4630	328		64.1	19.3				4680	
	10/22/2007	162							447	21.6			38300	91.3	66.4	179	1370			20.7	26700	16800		1770	45.4				10700	362.7
	1/23/2008	4.5							44.2	1		10.4	1820		14.2		69.1					37.9		14.5	2.1				1220	
	7/22/2008	30.2	10.3	4.9				1.8	62.4	3.5	0.95	25	6050	13.1	14.3	320	196		15.2	12.6	5570	5140		301	2.6		12.8	7.4	1920	931
	10/7/2008												1.3				2.1				94.1			2.1						
	1/27/2009			1.6	2												3.2													
	4/16/2009																674				521	5.6								
	7/27/2009	26.7	13.2						9.1			24.5	4560		27	311	131			10	5880	2730		289	6.2		0.86	5.5	1760	876
	10/27/2009	256											66400		250	1900	450					33600		1500					9760	7150
	2/25/2010												33.8				54.6											82.5		
	5/25/2010	24.1							94.1			24.5	2470		39	19.3	68.1					692		55.5					1670	41.8
	10/12/2010								24.5			2.2	31.6		5.6		3.8							0.92	0.84					394
	1/25/2011																2.4													
	4/25/2011												34600			3540						44400							27600	10370
	7/13/2011	172							68.9			97.2	9120		49.8	75.9	305					3180		402					11000	159.9
	10/26/2011																22.7													
	1/25/2012								1340				15800									1910							26300	
	4/3/2012								1420				13800									3260							27100	
	7/25/2012	3.2							19.3			1.69	52.1		1.8	2.06	4.02		2.61			43.3		6.96					85.1	3.42
	10/17/2012	92.7							467			46.9	8300	25	52.6	99.5	92.6					2810		248	24.7				10200	237
	1/15/2013																1.6													
	4/29/2013											3.9	3.9									1.1		25.6						
	4/22/2014								0.43																					
	4/22/2015	0.3		0.21	0.65				0.68				4.9				2.3					1.6					0.38		9.3	0.38
	5/3/2016	65.5	0.65	14.2				0.27	290		0.84	39.6	1770	16.2	83.3	15.3	40.3			1.5		1190	0.22		61.2	0.37			3220	29.7
	4/18/2017																19.2					1.2								
	6/6/2018	110		34					310			30	1900	16	120	57	35					1600		320					3900	120
	5/20/2019	6.9		2.4	1.1				98	1.3		1.2	120	2		5.8	2.7			0.46		160		8.2	8.5				74	16

Values in ppbv (parts per billion by volume)
Analyzed using EPA Method TO-14A or TO-15
Starting 6/6/2018 ALS Laboratories analyzed samples using EPA Method TO-15
NA = Not Analyzed