State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor Cathy Stepp, Secretary

Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



January 7, 2015

Mr. Mike Nass 460 West Barry Street, #3E Chicago, IL 60657

SUBJECT:

**Environmental Conditions of Property** 

One Hour Martinizing, 1233 South Military Avenue, Green Bay, Wisconsin

BRRTS # 02-05-217270

Dear Mr. Nass:

#### **Purpose**

The purpose of this letter is to provide you with the current environmental conditions of the One Hour Martinizing located at 1233 South Military Avenue, Green Bay, Wisconsin (the Property). The Property is located in Subdivision of Private Claim No. 8, west side of the Fox River, City of Green Bay, Brown County, Wisconsin, Township 24 North, Range 20 East. The Property is located in a one-story minimall with commercial businesses. An active dry cleaning facility occupies the Property.

# Request

On September 18, 2014, the Department of Natural Resources (the Department) received your request to issue a letter with a determination regarding what further response actions are needed under the ch. NR 700 rule series, Wis. Adm. Code, based on the release or presence of one or more hazardous substances at the Property. The Department received the fee for providing assistance, in accordance with s. NR 749.04(1), Wis. Adm. Code, on January 5, 2014.

In order for the Department to make this determination, you have requested a complete review of the Department's file regarding the Property. The Department's file consists of the following documents:

- Release notification form submitted to the Department on March 30, 1999.
- Phase II Environmental Site Assessment, dated March 23, 1999, prepared by Northern Environmental.
- Work Plan for Site Assessment, dated April 1999, prepared by STS Consultants Ltd.
- Project Status Report, dated September 2, 1999, prepared by STS Consultants Ltd.
- Additional Site Investigation and Remedial Action Recommendations Report, dated April 2000, prepared by STS Consultants Ltd.
- Site Investigation Addendum Report, dated March 2001, prepared by STS Consultants Ltd.



- Additional Site Investigation Information, dated November 29, 2001, prepared by STS Consultants Ltd.
- Remedial Options Addendum, dated February 1, 2002, prepared by STS Consultants Ltd.
- Final Remedial Options Addendum, dated November 14, 2002, prepared by STS Consultants Ltd.
- Proposal for Environmental Services, dated August 27, 2003, prepared by STS Consultants Ltd.
- One Hour Martinizing Military Avenue Proposal, dated November 17, 2003, prepared by STS Consultants Ltd.
- Acknowledgment of Receipt/Notice to Proceed, dated March 10, 2004, prepared by the Department.
- Transmittal Letter, dated June 30, 2004, prepared by STS Consultants Ltd.
- One Hour Martinizing Sites Email, dated May 9, 2005, prepared by STS Consultants Ltd.
- Liability Clarification and Current Environmental Conditions, dated June 6, 2005, prepared by the Department.
- Change Order for Revised Scope of Services, dated August 17, 2005, prepared by STS Consultants Ltd.
- Acknowledgment of Receipt/Notice to Proceed, dated August 29, 2005, prepared by the Department.
- Underground Injection Control Approval Request for Groundwater Remediation, dated June 13, 2006, prepared by STS Consultants Ltd.
- Summary of July 12, 2006 Telephone Conversation Memo, dated July 12, 2006, prepared by the Department.
- Requested Case Status Update Memo, dated January 25, 2007, prepared by STS Consultants Ltd.
- Telephone Log, dated May 21, 2007, prepared by the Department.
- Transmittal Letter, dated June 12, 2007, prepared by STS Consultants Ltd.
- One Hour Martinizing Letter, dated June 18, 2008, prepared by Mallery, Zimmerman & Hoida.
- Reported Contamination at One Hour Martinizing Letter, dated August 15, 2008, prepared by the Department.
- Potential Claim Notification for OHM at 1233 S. Military Avenue, Green Bay, dated August 26, 2008, prepared by the Department.

- Potential Claim Notification for Martinizing Drycleaning at 1233 S. Military Avenue and 1923
   Main Street in Green Bay, dated March 17, 2009, prepared by the Department.
- June 2013 Work Plan and Cost Estimate Proposal for Groundwater Monitoring, Vapor Sampling and Reporting, dated June 28, 2013, prepared by AECOM.
- Approval of Remedial Action Change Order # 2, dated July 26, 2013, prepared by the Department.
- One Hour Martinizing Email, dated January 2014, prepared by AECOM.
- Summary of April 8, 2014 Phone Call Memo, dated April 8, 2014, prepared by the Department.

Note: STS Consultants Ltd. is now known as AECOM.

The Department has reviewed the submittals listed above and provides the following summary of the facts of the case and opinions concerning environmental conditions at the Property.

#### Background

The Property has operated as an active dry cleaning facility for more than 35 years. In 1967, Marti-Chic Corporation of Madison, Wisconsin opened a One Hour Martinizing franchised dry cleaning facility at the Property. The business was purchased by PEP Enterprises (a partnership) in April of 1972. Peter F. Fink was one of the partners. In 1975, Mr. Fink bought out the partnership and operated the location as the sole proprietor until incorporating the business (P.F. Fink, Inc.) in October 1997. On June 24, 2008, the Department was informed that Mr. Fink died in 2007 and that he was the sole owner and shareholder of P.F. Fink, Inc.

On August 15, 2008, the Department issued a responsible party letter to the current Property owner Synergy Investors, LLC (Synergy). On August 26, 2008, the Department informed Synergy that it was eligible to apply to the Dry Cleaner Environmental Response Fund (DERF) for reimbursement of cleanup costs associated with the Property.

The Property continues to operate as an active dry cleaning facility. The Property is located in a strip mall owned by Synergy with several operating businesses.

## **Summary of Environmental Conditions – Site Investigation**

The purpose of the Phase II Environmental Site Assessment was to confirm the presence or absence of contamination associated with dry cleaning operations on the Property. One soil boring was completed inside the building near both the dry cleaning machine and the aboveground storage tank formerly used to store tetrachloroethene (PCE). Two additional soil borings were completed near the front and back doors of the building. The soil borings were advanced to a maximum depth of 10 feet below ground surface (bgs). Two of the soil borings were converted to temporary groundwater monitoring wells.

As part of the Phase II Environmental Site Assessment, soil and groundwater samples were laboratory analyzed for volatile organic compounds (VOCs). PCE, a chlorinated solvent, was detected in all three of the soil borings and breakdown products were detected in two of the soil borings. PCE was detected in the groundwater samples collected from the two temporary wells at concentrations above the ch. NR 140, Wis. Adm. Code, enforcement standard (ES) of 5 micrograms per liter (µg/L). Trichlorethene (TCE) and cis-1,2-dichloroethene (cis-DCE) were detected in one of the groundwater samples at a

concentration above the ch. NR 140, Wis. Adm. Code, ES of 5  $\mu$ g/L and preventive action limit (PAL) of 7  $\mu$ g/L, respectively.

Between June 1999 and September 2001, additional site investigation activities were conducted at the Property in an effort to define the lateral and vertical extent of chlorinated solvent contamination which is thought to have originated from the dry cleaning operations. As part of the site investigation, STS Consultants Ltd. collected soil samples for laboratory analysis from nine locations. The soil sample locations were associated with three hand auger soil borings, seven groundwater monitoring wells and three piezometers. Soil analytical results identified cis-DCE, TCE and/or PCE above laboratory detection limits. One of the hand auger borings (HA-1) detected petroleum compounds in the soil at concentrations below ch. NR 720, Wis. Adm. Code, values. During the October 30, 2000 groundwater sampling event, one groundwater monitoring well (MW-3) and one piezometer (PZ-1) had detections of PCE and TCE above the ch. NR 140. Wis. Adm. Code, ES of 5 µg/L and 5 µg/L, respectively. Three other monitoring wells (MW-1, MW-4 and MW-6) and one other piezometer (PZ-6) had detections of PCE above the ch. NR 140, Wis. Adm. Code, PAL of 0.5 µg/L. The remaining three wells (MW-2, MW-5 and MW-7) and piezometer (PZ-2) were non-detect for VOCs in groundwater. A figure depicting the sample locations and tables depicting the soil and groundwater analytical results are attached to this letter. Please be aware that soil and groundwater associated with the Property is considered a hazardous waste under ch. NR 600. Wis. Adm. Code.

Site investigation activities revealed chlorinated solvent soil impacts near the dry cleaning machine, on the west side of the building and on the east side of the building. Groundwater contamination above ch. NR 140, Wis. Adm. Code, PALs and/or ESs was also identified. To date, no sampling has been completed to evaluate the vapor intrusion pathway.

## **Summary of Environmental Conditions – Remedial Action**

The Final Remedial Options Addendum, dated November 14, 2002, describes the proposed remedial action for cleaning up the soil and groundwater contamination identified on the Property. Per the requirements of ch. NR 169, Wis. Adm. Code, the referenced document was prepared for bidding the remediation/operation and maintenance portion of the project. The proposed remedial action consisted of the following:

- Natural Attenuation Monitoring. This option consisted of two years of quarterly groundwater monitoring of all groundwater monitoring wells and piezometers to determine the effectiveness of natural attenuation as a remedial option.
- In-situ Bioremediation Enhancement. This remedial option was to be implemented if natural
  attenuation monitoring was not proven to be effective and consisted of injecting a carbon
  amendment into the unsaturated and/or saturated soil. The injection of the carbon amendment
  was intended to encourage the growth of chlorinated solvent reducing bacteria. Following
  injection, two years of quarterly groundwater monitoring was to be conducted on all groundwater
  monitoring wells and piezometers.
- Institutional Controls. Institutional controls restrict access to a property or a portion of a
  property. Examples of institutional controls are fences, floor slabs and pavement. As part of
  natural attenuation and in-situ bioremediation enhancement, the building floor slab and any
  other impermeable surfaces would need to be maintained as an institutional control to limit the
  potential risk to human health through direct contact with soils and for groundwater protection.

- Case closure of the site would require a listing of the Property on the Department's GIS Registry for soil, groundwater and possibly vapors. Examples of possible continuing obligations include:
  - Groundwater contamination present above ch. NR 140, Wis. Adm. Code, enforcement standards.
  - Residual soil contamination exists that must be properly managed should it be excavated or removed.
  - Pavement and/or buildings must be maintained over contaminated soil and the Department must approve of any changes to this barrier.
  - o As applicable, actions to address the vapor intrusion pathway.

On March 10, 2004, the Department issued a "Notice to Proceed" letter to Mr. Fink informing him that he could proceed with hiring STS Consultants Ltd. as his environmental consultant for the proposed remedial action at the Property. Per the STS Consultants Ltd. Proposal, the cost to complete two years of natural attenuation groundwater monitoring and bring the site to closure was \$30,011.00. If the insitu bioremediation enhancement was necessary an additional \$15,720.00 would be necessary to achieve closure.

One year, or four rounds, into the natural attenuation groundwater monitoring effort a request was made to proceed with the in-situ bioremediation enhancement option. The request was approved by the Department on August 29, 2005. The approved dollar amount for the in-situ bioremediation enhancement was increased by \$90.00 for a total of \$15,810.00.

To date, no in-situ bioremediation enhancement has been implemented and seven of the eight approved natural attenuation groundwater sampling events have been completed. During the most recent groundwater sampling event, November 4, 2013, three groundwater monitoring wells (MW-1, MW-3 and MW-6) had detections of PCE above the ch. NR 140, Wis. Adm. Code, ES of 5  $\mu$ g/L. One piezometer (PZ-1) had detections of PCE above the ch. NR 140, Wis. Adm. Code, PAL of 0.5  $\mu$ g/L. The remaining wells (MW-2, MW-5 and MW-7) and piezometers (PZ-2 and PZ-6) were non-detect for VOCs in groundwater. A figure depicting the sample locations and tables depicting the groundwater analytical results are attached to this letter. The soil and groundwater associated with the Property is still considered a hazardous waste under ch. NR 600, Wis. Adm. Code.

## **Summary of Environmental Conditions – Future Actions**

The Department is currently working with Synergy and AECOM to develop a work plan for investigating the vapor intrusion pathway. The results of the vapor investigation will aid in determining whether or not the vapor risk screening level (VRSL) and/or vapor action level (VAL) have been exceeded at the Property, adjacent strip mall units and/or off-site properties. If exceedances of the VRSL and/or VAL are discovered mitigation will be required. Depending on the results of the vapor investigation, it may also be necessary to implement a remedial action to address the soil and groundwater contamination on the Property.

The last approved groundwater sampling event, eighth round, has not been completed. This sampling event will likely occur after the vapor intrusion pathway has been assessed. The need for additional groundwater sampling events will be based on the analytical results obtained from the last groundwater sampling event and the vapor investigation.

## **Dry Cleaner Environmental Response Fund**

The Property, through Synergy, is eligible for the Dry Cleaner Environmental Response Fund (DERF). DERF was developed by the dry cleaning industry to reimburse dry cleaners for their eligible costs for cleaning up dry cleaning solvent discharges to the environment. Section 292.65, Wis. Stats., contains

the statutory language from which the program must operate, and ch. NR 169, Wis. Adm. Code, contains more detailed rule language outlining how the rule is implemented. Complete information and details of DERF are available on-line at <a href="http://dnr.wi.gov/aid/derf.html">http://dnr.wi.gov/aid/derf.html</a>.

DERF has reimbursed \$57,731.25 in eligible expenses for the dry cleaning facility located at the Property. The maximum DERF award for investigating and cleaning up a dry cleaning facility is \$500,000.00.

The Department's records indicate the cost to complete the site investigation at the Property was \$39,493.50. This dollar amount includes the initial \$10,000.00 DERF deductible. The proposed remedial action for this site was originally anticipated to cost between \$30,011.00 and \$45,821.00. To date, the Department has received six remedial action DERF reimbursement claims totaling \$18,237.75.

## **Liability Determination**

The Wisconsin Hazardous Substance Discharge Law, s. 292.11, Wis. Stats., commonly called the Spill Law, requires those who cause, possess or control a hazardous substance discharge to "take actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands or waters of this state". Section 292.55, Wis. Stats., authorizes the Department to issue clarification letters concerning liability for environmental pollution.

The data summarized above indicates that one or more hazardous substance discharges have occurred on the Property. The discharge(s) is thought to have originated from the dry cleaning operations taking place on the Property.

Site investigation activities conducted between March 1999 and September 2001 have defined the lateral and vertical extent of the soil and groundwater contamination thought to be associated with the dry cleaning operations. The DERF has reimbursed Mr. Fink and/or Synergy for site investigation and/or remedial activities.

To date, no in-situ bioremediation enhancement has been implemented and seven of the eight approved natural attenuation groundwater sampling events have been completed.

The Department is currently working with Synergy and AECOM to develop a work plan for investigating the vapor intrusion pathway. The results of the vapor investigation will aid in determining whether or not the VRSL and/or VAL have been exceeded at the Property, adjacent strip mall units and/or off-site properties. If exceedances of the VRSL and/or VAL are discovered mitigation will be required. Depending on the results of the vapor investigation, it may also be necessary to implement a remedial action to address the soil and groundwater contamination on the Property.

The last approved groundwater sampling event, eighth round, will likely occur after the vapor intrusion pathway has been assessed. The need for additional groundwater sampling events will be based on the analytical results obtained from the last groundwater sampling event and the vapor investigation.

Please be aware that the total cost and time to complete this project is likely to change based on the vapor investigation work plan AECOM is preparing and changing environmental conditions on the Property.

At the time of case closure, the Department anticipates the environmental repair case will close with continuing obligations and a listing on the Department's GIS Registry. These items were described in the Summary of Environmental Conditions – Remedial Action portion of this letter.

This response letter relates only to those conditions described above, and makes no determination concerning the presence or absence of hazardous substances, other than those identified in the reports listed above.

In the future, if the Department becomes aware of new information concerning the contaminants referenced above, or the presence of other contaminants on the Property not previously identified, the Department will need to evaluate that data to determine if response actions may be required. Whenever possible, the Department requires the person who caused the discharge to take the appropriate response actions.

The Bureau for Remediation and Redevelopment Tracking System (BRRTS) identification number for this activity is shown at the top of this letter. The Department tracks information on all determinations such as this in a Department database that is available on the internet at <a href="http://dnr.wi.gov/topic/brownfields/rrsm.html">http://dnr.wi.gov/topic/brownfields/rrsm.html</a>. See "BRRTS on the Web" under "Cleanup & Redevelopment". The Department has issued BRRTS case number 02-05-217270 for the Property and will track this site activity as an environmental repair site.

If you have questions or concerns regarding this letter, please contact me by phone at 920-662-5443, by email at <a href="mailto:kristin.dufresne@wisconsin.gov">kristin.dufresne@wisconsin.gov</a>, or at the address listed in the letterhead.

Sincerely,

Kristin DuFresne Hydrogeologist

Region Remediation & Redevelopment Program

Attachments

Figure 3 - Groundwater Contour Map (August 21, 2001), October 12, 2001

Table 1 – Soil Analytical Results

Table 6 - Groundwater Analytical Results

Table 1 – Groundwater Analytical Results

cc: Bob Mottl - AECOM

Kisto Dutusne

One Hour Martinizing - Military Avenue Case File

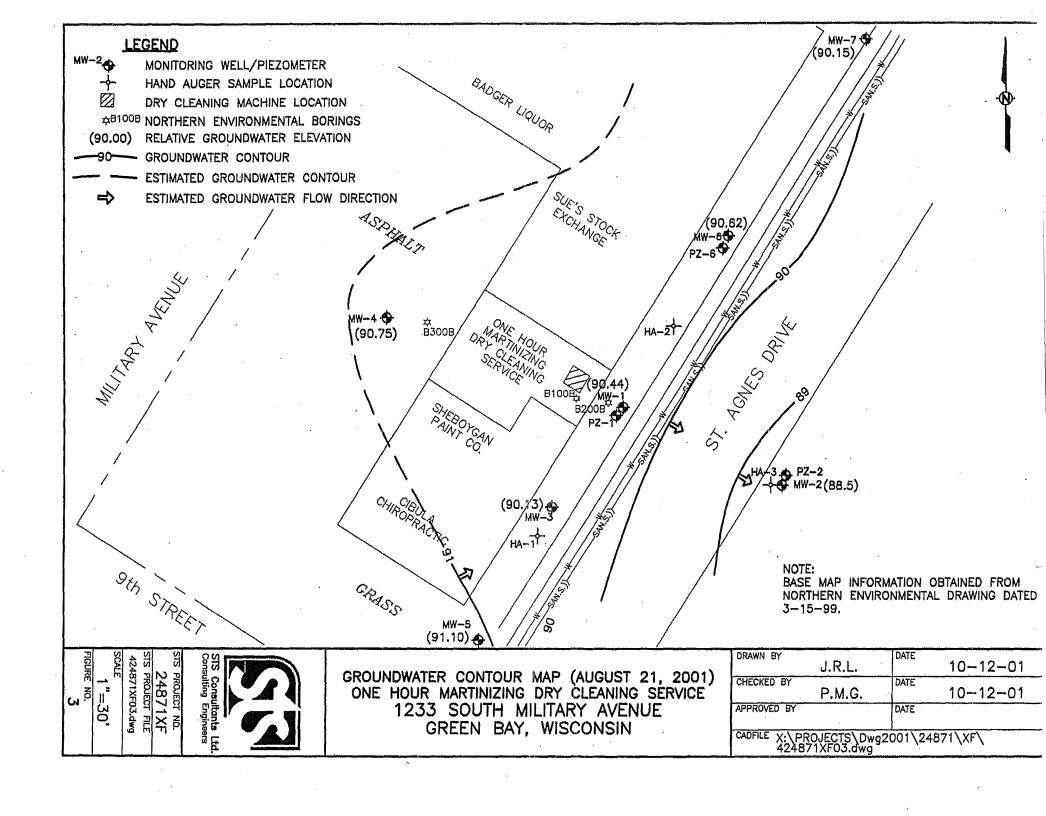


Table 1 Soil Analytical Results One Hour Martinizing 1233 S. Military Avenue Green Bay, Wisconsin

			Analyte Units	Benzene ug/kg	cis 1,2-Dichloroethene ug/kg	Ethylbenzene ug/kg	Methylene Chloride ug/kg	Naphthalene ug/kg	Tetrachloroethene ug/kg	Trichloroethene ug/kg	Toluene ug/kg	Trimethylbenzenes ug/kg	Xylenes ug/kg	TOC mg/kg
			Depth-ft											
MW-1/PZ-1	6/3/99	S-2	2.0 - 4.0	<116	<115	<120	<157	<50.7	10100	511	<68.0	<501	<352	
		S-3	4.0 - 6.0	<11.4	21.2 (p)	<11.8	<15.4	<4.97	2760	134	<6.67	<49.1	<34.6	
MW-2	6/3/99	S-3	4.0 - 6.0	<12.6	<12.5	<13.0	<17.1	<5.51	106	<14.2	<7.39	<54.5	<38.3	
MW-3	6/3/99	S-2	2.0 - 4.0	<11.7	<11.6	<12.1	<15.8	<5.12	<21.0	<13.2	<6.86	<50,6	<35.6	••
		S-4	6.0 - 8.0	<12.9	<12.8	<13.3	<17.5	<5.64	378	<14.6	<7.56	<55.7	<39.1	
MW-4	6/3/99	S-2	3.0 - 5.0	<11.7	-<11.6	<12.1	<15.8	<5.11	<21,0	<13.2	<6.86	<50.5	<35.5	'
MW-5	12/14/99	S-2	2.0 - 4.0	~**		· · ·			₩.			·		4640
MW-6	12/14/99	S-2	2.0 - 4.0			_:					**	<del>.</del>	-	2150
HA-1	8/21/01	S-1	1.0-2.0	<12	<12	31	<51	60	140	<14	56	40	176	
HA-2	8/21/01	S-1	1.0-2.0	<12	<11	<12	<49	<33	42	<13	<6.8	<50	<24	
HA-3	8/21/01	S-1	1.0-2.0	<12	<12	<12	<51	<35	<22	<14	<7.1	<52	<25	
Soil Analytical I	Results from	Northern E	nvironmenta.	l's March 23,	1999, Phase 2 ESA.		<u> </u>		-					
B100B	S102B	3/10/99	1.0 - 3.0	<25	38	<25	<25	<25	33000	66	<25	<50	<75	
B200B	S201B	3/10/99	1.0 - 3.0	<25	<25	<25	<25	<25	7800	88	<25	<50	<75	
. В300В	S301B	3/10/99	1.0 - 3.0	<25	<25	<25	<25	<25	34	<25	<25	<50	<75 ·	
WAC NR 720 G		<del>-</del>	<del></del>	5.5		2900	- Marine Control of the Control of t			Market	1500		4100	
Site-Specific RC					1100000				18000	83000				
Site-Specific RC					***				55000	260000				
Site-Specific RCL - Non-industrial Inhalation Pathway Site-Specific RCL - Industrial Inhalation Pathway Site-Specific RCL - Leaching to Groundwater Pathway				150000				20000	5300					
				120000				19000	5200					
					240				130	36				
Suggested Generic RCL (WDNR Pub. RR-519-97) WAC NR 746 Soil Screening Level				8500		4600		400			38000	83000(1,2,4)/11000(1,3,5)	42000	
1110 1111 140 20	on sereening	TYACI		טטכא		4600					00000	8,5000(1,2,4)/11000(1,5,3)	72000	

ug/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
(p) = Reported result is less than the practical quantitation limit

<sup>1</sup>Wisconsin Administrative Code Chapter NR 720 Generic Residual Contaminant Level

TOC = Total Organic Compounds

		Relevant	Relevant and Significant Analytical Results (µg/l)														
Well ID	Date Sampled	Benzene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Naphthalene	Tetrachloroethene	Toluene	Trichloroethene	Trimethylbenzenes	Xylenes						
WDNR P	PAL (µg/l)	0.5	NE	NE	140	8	0.5	68.6	0.5	96	124						
WDNR I	WDNR ES (µg/l)		NE	NE	700	40	5	343	5	480	620						
TW200B*	200B* 03/10/99		9.3	<0.38	<0.34	2.2"J"	>200	0.41"J"	41	<0.99	<0.98						
TW300B*	03/10/99	<0.32	<0.32	<0.38	<0.34	2.1"J"	29	0.78"J"	<0.48	<0.99	<0.98						

Key:

μg/l

= micrograms per liter

WDNR

= Wisconsin Department of Natural Resources

PAL

= Preventive Action Limit

ES

≐ Enforcement Standard

NE

= Not established by WDNR

---

= Not Analyzed

= Sample did not meet Laboratory QC Limits

"J"

= Analyte detected between Limit of Detection

and Limit of Quantitation



= WDNR Preventive Action Limit Exceeded

WDNR Enforcement Standard Exceeded

Table 1
Groundwater Analytical Results
One Hour Martinizing
1223 S. Military Avenue
Green Bay, Wisconsin

DRAFT

		Volatile Org	anic Compounds							****						1000	Natural A	tennation .				
	Aualyte		cis 1,2-Dichloro-	1,1-Dichloro-	Ethyl-	Bromodichloro-	Methylene		Tetrachloro-	Trichloro-			ro- 1,1,1-Trichloro-	Trimethyl-	Vinyl		Nitrate/					
		Benzene	ethene	ethene	benzene	methane	Chloride	Naphthalene µg/L	ethene ng/L	ethene µg/L	Toluene	ethene µg/L	ethane µg/L	benzenes	Chloride 11g/L	Xylenes µg/L	Nitrite mg/L	Ethane µg/L		Methane		Sulfat mg/I
		pg/L	µg/L	jig/L	µg/L	µg/L	pg/L	112/14	IN/L	HE/L	µg/L	HE/L	HS/L	jig/L	118/L	HOL	mg/L	pg/L	ug/L	µg/L	mg/L	nigo
IW-1	06/17/99	<94	<93	<55	<97	<124	<127	<41	22800	233 (p)	<55	<105	257 (p)	<405	<70	<285			-	_	-	-
	01/04/00	< 0.19	62	0.38	< 0.19	2,4	< 0.25	< 0.082	13400	85	0.13	0,33	< 0.3	< 0.81	< 0.14	<0,39	11	<14	<14	1100	72	40
	10/30/00	< 0.19	< 0.19	< 0.18	< 0.13	<0.25	< 0.12	< 0.082	3,1	<0.098	< 0.11	< 0.17	< 0.13	0.35	< 0.23	<0.3	14	. <14	<14	12	56	45
	04/29/04	<41	89	<57	<54	<56	<43	<74	9100	120	<67	<89	<90	<180	<18	<263	17	<10	<10	<10	89	60
	07/28/04	<20	84	<28	<27	<28	<22	<37	9400	110	<34	<44	<45	<90	<9.0	<132	33	<10	<10	<10	97	65
	10/28/04	<100	<210	<140	<140	<140	<110	<180	12,000	<120	<170	<220	<220	<450	<45	<660	21	<10	<10	<10	97	56
	01/27/05	<51	<11 .	<71	<68	<70	<54	<92	11,000	81	<84	<110	<110	<220	<22	<320	21	<10	<10	<10	110	51
	10/24/06	<41	<83	<57	<54	<56	<43	<74	7,500	81	<67	<89	<90	<180	•	<263	20	<10	<10	<10	88	66
	05/01/07	<41	<19	<57	<54	<56	<43	<74	6,100	88	<67	<89	<90	<180	<18	<263	22	<10	<10	<10	76	70
	11/04/13	<12.5	<10.5	<10.7	<12.5	<11.3	<9.0	<62.5	3,120	12.6J	<11.0	<9.3	<11.1	<25	<4.6	<32,9	8.2	<0.36	<0.30	<0.64	213	60.0
IW-2	06/17/99	<0.19	<0.19	<0.11	< 0.19	< 0.25	< 0.25	< 0.08	< 0.34	< 0.21	< 0.11	< 0.21	< 0.30	<0.81	<0,14	<0.57		-	_	_	_	
	01/04/00	<0.19	<0.19	<0.11	< 0.19	< 0.25	< 0.25	< 0.082	< 0.34	< 0.21	< 0.11	< 0.21	< 0.30	<0.81	< 0.14	< 0.39	< 0.14	<14	<14	11	17	32
	10/30/00	<0.19	<0.35	<0.18	<0.13	< 0.25	< 0.12	<0,082	< 0.14	< 0.098	< 0.11	< 0.17	< 0.13	<0.23	< 0.23	<0.3	< 0.069	<14	<14	<7.2	32	35
	04/29/04	<0.41	< 0.83	< 0.57	< 0.54	<0.56	0.5	<0.74	< 0.45	< 0.48	< 0.67	<0.89	< 0.90	<1.80	<0.18	<2.63	< 0.031	<10	<10	<10	79	61
	07/28/04	< 0.41	< 0.83	< 0.57	< 0.54	<0.56	< 0.43	< 0.74	8.3	<0.48	< 0.67	< 0.89	< 0.90	<1.80	<0.18	<2.63	< 0.031	<10	<10	<10	66	52
	10/28/04	< 0.41	< 0.83	< 0.57	<0.54	< 0.56	< 0.43	< 0.74	11	<0.48	< 0.67	<0.89	< 0.90	<1.80	<0.18	<2.63	0.15	<10	<10	<10	64	52
	01/27/05	< 0.41	< 0.83	<0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	<0.48	< 0.67	< 0.89	<0.90	<1.80	< 0.18	<2.63	0.25	<10	<10	<10	2.4	0.82
	10/24/06	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	<0.74	<0.45	< 0.48	< 0.67	<0.89	< 0.90	<1.80	-	<2.63	<0.11	<10	<10	<10	37	41
	05/01/07	<0.41	< 0.83	< 0.57	< 0.54	< 0.56	<0.43	<0.74	<0.45	<0.48	<0.67	<0.89	< 0.90	<1.80	< 0.18	<2.63	<0.085	<10	<10	<10	88	65
	11/04/13	< 0.50	<0.42	< 0.43	<0.50	<0.45	<0.36	<2.5	<0.47	< 0.36	<0.44	<0.37	<0.44	<1.0	<0.18	<1.32	<0.055	<0.36	<0.30	<0.64	108	45.:
W-3	06/17/99	<9.4	<9.3	<5.5	<9.7	<12.5	<12.7	<4.1	477	<10.6	<5.5	<10.5	<15.1	<40.5	<7	<28.5	_	-	_		_	_
	01/04/00	< 0.19	1.8	< 0.11	< 0.19	< 0.25	< 0.25	<0.082	489	5.9	< 0.11	< 0.21	< 0.3	<0.81	< 0.14	<0.39	16	<14	<14	<7.2	47	38
	10/30/00	<0.19	2.3	< 0.18	< 0.13	< 0.25	< 0.12	< 0.082	386	5.7	0.19	< 0.17	< 0.13	< 0.23	< 0.23	<0.3	10	<14	<14	<7.2	21	34
	04/29/04	<2.0	<4.1	<3.8	<2.7	<2.8	2.6	<3.7	440	5.5	<3.4	<4,4	<4.5	<8.9	< 0.90	<13.1	23	<10	<10	<10	130	50
	07/28/04	<1.0	<2.1	<1.4	<1.4	<1.4	<1.1	<1.8	430	3.5	<1.7	<2.2	<2.2	<4.5	< 0.45	<6.6	19	<10	<10	<10	170	50
	10/28/04	<2.0	<4.1	<2.8	<2.7	<2.8	<2.2	<3.7	730	5.8	<3,4	<4.4	<4.5	<8.9	< 0.90	<13.1	20	<10	<10	<10	210	60
	01/27/05	<2.0	<4.1	<2.8	<2.7	<2.8	<2.2	<3.7	600	5.2	<3.4	<4.4	<4.5	<8.9	< 0.90	<1.31	20	<10	<10	<10	180	53
	10/24/06	<1.0	<2.1	<1.4	<1.4	<1.4	<1.1	<1.8	510	2.8	<1.7	<2.2	<2.2	<4.5	-	<6.6	20	<10	<10	<10	96	45
	05/01/07	<2.0	<4.1	<2.8	<2.7	<2.8	<2.2	<3.7	310	2.5	<3.4	<4.4	<4.5	<8.9	< 0.90	<13.1	23	<10	<10	<10	110	46
	11/04/13	<0.50	< 0.42	< 0.43	< 0.50	<0.45	< 0.36	<2.5	207	0.46J	<0.44	< 0.37	<0.44	<1.0	<0.18	<1.32	11.4	< 0.36	<0.30	<0.64	137	35.8
W-4	06/17/99	<0.19	<0.19	<0.11	< 0.19	<0.25	< 0.25	<0.08	<0,34	<0.21	0.47	<0.21	< 0.30	<0.81	< 0.14	<0.57		_	_	_	_	_
11	01/04/00	<0.19	<0.19	<0.11	< 0.19	<0.25	<0.25	< 0.082	< 0.34	<0.21	<0.11	< 0.21	<0.3	< 0.81	<0.14	<0.39	< 0.14	<14	<14	11	365	339
	10/30/00	<0.19	<0.19	<0.18	< 0.13	< 0.25	< 0.12	<0.082	1.0	< 0.098	<0.11	< 0.17	< 0.13	<0.23	<0.23	<0.3	0.25	<14	<14	9.3	407	373
	08/21/01	< 0.19	<0.19	<0.18	< 0.13	< 0.25	< 0.25	< 0.082	< 0.14	< 0.098	< 0.11	< 0.17	< 0.13	< 0.33	< 0.23	< 0.3		-	-	-		-
	04/29/04	< 0.41	<0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	< 0.48	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	1.8	<10	<10	<10	530	53
	07/28/04	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	< 0.48	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	1.6	<10	<10	<10	470	340
	10/28/04	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	< 0.48	< 0.67	< 0.89	<0.90	<1.80	< 0.18	<2.63	1.7	<10	<10	<10	410	330
	01/27/05	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	< 0.48	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	1.4	<10	<10	<10	400	320
	Lost during 2	006 parking lot r	epaving by others.																			
IW-5	01/04/00	< 0.19	< 0.19	<0.11	< 0.19	<0.25	<0.25	<0.082	< 0.34	<0.21	<0.11	<0.21	<0.3	<0.81	<0.14	<0.39	1.2	<14	<14	<7.2	1200	251
	10/30/00	< 0.19	< 0.19	< 0.18	< 0.13	<0.25	<0.12	< 0.082	< 0.14	< 0.098	<0.11	<0.17	<0.13	<0.23	<0.23	<0.3	2	<14	<14	<7.2	838	243
	04/29/04	< 0.41	<0.83	<0.57	<0.54	< 0.56	< 0.43	<0.74 <0.74	<0.45	<0.48 <0.48	< 0.67	<0.89	<0.90 <0.90	<1.80	<0.18	<2.63	2.7	<10 <10	<10	<10	800	170
	07/28/04	<0.41	<0.83	<0.75	<0.54 <0.54	<0.56 <0.56	< 0.43	<0.74 <0.74	<0.45 <0.45	<0.48 <0.48	<0.67 <0.67	<0.89 <0.89	<0.90 <0.90	<1.80 <1.80	<0.18 <0.18	<2.63 <2.63	2.4 1.6	<10 <10	<10 <10	<10 <10	660 400	16 13
	10/28/04	<0.41	<0.83	<0.75 <0.75	<0.54 <0.54	<0.56 <0.56	<0.43 <0.43	<0.74 <0.74	<0.45 <0.45	<0.48 <0.48	<0.67	<0.89 <0.89	<0.90 <0.90	<1.80 <1.80	<0.18	<2.63 <2.63	0.18	<10 <10	<10 <10	<10 <10	400 11	13
	01/27/05	<0.41	<0.83	<0.75 <0.57	<0.54 <0.54	< 0.56	<0.43	<0.74	< 0.45	<0.48	< 0.67	<0.89	<0.90 <0.90	<1.80 <1.80	~0.10	<2.63 <2.63	2.4	<10 <10	<10 <10	<10	200	11
	10/24/06 05/01/07	<0.41	<0.83 <0.83	<0.57	<0.54	< 0.56	<0.43	<0.74	<0.45	<0.48	< 0.67	< 0.89	<0.90	<1.80	<0.18	<2.63	6.6	<10	<10	<10	390	15
	11/04/13	<0.41 <0.50	<0.83 <0.42	<0.43	< 0.54	<0.45	< 0.45	<2.5	<0.45	< 0.46	<0.44	<0.37	< 0.44	<1.0	<0.18	<1.32	1.7	< 0.36	<0.30	<0.64	137	62.
R 140 ES		<0.30 5	70	850	700	0,43	5	40	5	5	343	NE	200	480	0.2	620	- 4: '	70,30	-0.50	70.04	137	02.
THE PARTY IN		0.5	70	85	140	0.06	0.5	8	0.5	0.5	68.6	NE NE	40	96	0.02	124						

Table 1 **Groundwater Analytical Results** One Hour Martinizing 1223 S. Military Avenue Green Bay, Wisconsin

		Volatile Organic Compounds												Natural Attenuation Parameters										
	Analyte .		cis 1,2-Dichloro-	1,1-Dichloro-	Ethyl-	Bromodichloro-	Methylene		Tetrachloro-	Trichloro-	Mary 11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Trans-1,2-Dichloro	1,1,1-Trichloro-	Trimethyl-	Vinyl		Nitrate/							
	•	Benzene	ethene	ethene	benzene	methane	Chloride	Naphthalene	ethene	ethene	Toluene	ethene	ethane	benzenes	Chloride	Xylenes	Nitrite	Ethane	Ethene	Methane	Chloride	Sulfate		
		µg/L_	µg/L	µg/L	µg/L	μg/L	µg/L	μg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	μg/L	μg/L	mg/L	μg/L	jig/L	μg/L	mg/L	mg/L		
MW-6	01/04/00	< 0.19	8.7	<0.11	<0.19	0.61	< 0.25	< 0.082	124	62	<0.11	< 0.21	<0.3	< 0.81	< 0.14	< 0.39	2.7	<14	<14	12	193	76		
	10/30/00	< 0.19	< 0.19	< 0.18	< 0.13	<0.25	< 0.12	<0.082	2,2	0.44	<0.11	< 0.17	< 0.13	< 0.23	< 0.23	< 0.3	1.2	<14	<14	103	90	48		
	04/29/04	< 0.41	5	< 0.57	< 0.54	<0.56	< 0.43	<0.74	95	11	<0.67	<0.89	<0.90	<1.80	<0.18	<2.63	2.4	<10	<10	24	110	53		
	07/28/04	< 0.41	4.2	< 0.57	< 0.54	< 0.56	< 0.43	<0.74	100	12	< 0.67	<0.89	< 0.90	<1.80	< 0.18	<2.63	1.4	<10	<10	56	120	39		
	10/28/04	< 0.41	5.5	< 0.57	< 0.54	<0.56	< 0.43	<0.74	130	21	<0.67	<0.89	< 0.90	<1.80	<0.18	<2.63	2.2	<10	<10	250	120	49		
	01/27/05	< 0.41	4	< 0.57	< 0.54	<0.56	< 0.43	<0.74	79	15	<0.67	<0.89	< 0.90	<1.80	<0.18	<2.63	3	<10	<10	11	130	48		
	10/24/06	< 0.41	3.8	< 0.57	< 0.54	< 0.56	< 0.43	<0.74	79	7.4	<0.67	<0.89	<0.90	<1.80	-	<2.63	l	<10	<10	52	130	43		
	05/01/07	< 0.41	3.4	< 0.57	< 0.54	< 0.56	< 0.43	<0.74	26	4.9	<0.67	<0.89	<0.90	<1.80	0.32	<2.63	1.7	<10	<10	<10	130	36		
	11/04/13	<0.50	55.4	< 0.43	<0.50	<0.49	<0.36	<2.5	46.9	16,4	<0.44	0,39J	<0.44	<1.0	20.7	<1.32	< 0.055	6.6	3.91	1060	106	15.1		
MW-7	10/30/00	< 0.19	2,3	<0.18	< 0.13	<0.25	<0.12	<0.082	<0.14	< 0.098	0.11	< 0.17	<0.13	< 0.23	< 0.23	<0.3	< 0.069	<14	<14	27	132	146		
	04/29/04	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	<0.45	< 0.48	< 0.67	< 0.89	< 0.90	<1.80	< 0.19	<2.63	< 0.031	<10	<10	<10	170	230		
	07/28/04	< 0.41	0.93	< 0.57	< 0.54	<0.56	< 0.43	< 0.74	4.9	<0.48	< 0.67	< 0.89	< 0.90	<1.80	<0.18	<2.63	< 0.031	<10	<10	<10	170	210		
	10/28/04	< 0.41	< 0.83	< 0.57	<0.54	<0.56	< 0.43	<0.74	<0.45	<0.48	< 0.67	<0.89	< 0.90	<1.80	<0.18	<2.83	0.16	<10	<10	<10	170	180		
	01/27/05	< 0.41	< 0.83	<0.57	< 0.54	<0.56	< 0.43	<0.74	<0.45	<0.48	< 0.67	< 0.89	<0.90	<1.80	< 0.18	<2.83		-	-	-	-	-		
	10/24/06	< 0.41	<0.83	<0.57	< 0.54	< 0.56	< 0.43	< 0.74	<0.45	<0.48	< 0.67	< 0.89	<0.90	<1.80	-	<2,63	< 0.11	<10	<10	22	420	69		
	05/01/07	< 0.41	< 0.83	< 0.57	<0.54	<0.56	< 0.43	< 0.74	< 0.45	< 0.48	< 0.67	<0.89	<0.90	<1.80	< 0.18	<2.63	0.64	<10	<10	<10	350	53		
	11/04/13	<0.50	<0.42	< 0.43	< 0.50	<0.49	< 0.36	<2.5	<0.47	< 0.36	< 0.44	< 0.37	<0.44	< 0.97	<0.18	<1.32	0.3	< 0.36	< 0.30	< 0.64	678	94.8		
MW-7 D	UP 11/04/13	<0.50	0.65J	<0.43	<0.50	<0.49	<0.36	<2.5	<0.47	<0.36	<0.44	<0.37	<0.44	<1.0	<0.18	<1.32	1.2	< 0.36	<0.30	<0.64	600	85		
PZ-i	06/17/99	< 0.94	< 0.93	< 0.55	<0.97	<1.24	<1.27	<0.41	98.3	4	< 0.55	<1.05	5.04	<4.05	<0.70	<2.85	-	-	-	-	-	-		
	01/04/00	< 0.19	1.2	< 0.11	< 0.19	< 0.25	< 0.25	<0.082	27	3.9	<0.11	< 0.21	< 0.19	< 0.81	< 0.14	<0.39	<0.14	<14	<14	136	42	50		
	10/30/00	< 0.19	2.1	<0.18	< 0.13	< 0.25	< 0.12	<0.082	9.6	12	<0.11	< 0.17	< 0.13	< 0.23	< 0.23	<0.3	< 0.069	<14	<14	81	59	70		
	04/29/04	< 0.41	4.0	< 0.57	< 0.54	< 0.56	< 0.43	<0.74	5.7	1.8	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	0.22	<10	<10	49	97	87		
	07/28/04	< 0.41	4.1	< 0.57	< 0.54	<0.56	< 0.43	<0.74	7.4	2	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	<0.031	<10	<10	26	87	86		
	10/28/04	< 0.41	5.9	< 0.57	<0.54	< 0.56	< 0.43	<0.74	47	1.7	<0.67	<0.89	< 0.90	<1.80	<0.18	<2.63	< 0.031	<10	<10	42	88	80		
	01/27/05	<0.41	4.6	<0.57	<0.54	<0,56	< 0.43	<0.74	5.5	1.4	<0.67	<0.89	< 0.90	<1.80	< 0.18	<2.63	0.36	<10	<10	13	83	77		
	10/24/06	<0.41	5.3	< 0.57	< 0.54	<0.56	< 0.43	<0.74	7.2	2.7	<0.67	<0.89	< 0.90	<1.80	-	<2.63	< 0.11	<10	<10	75	93	86		
	05/01/07	< 0.41	3.4	< 0.57	< 0.54	< 0.56	<0.43	<0.74	3.6	1.2	< 0.67	<0.89	< 0.90	<1.80	0.20	<2.63	0.25	<10	<10	19	64	47		
	11/04/13	<0.50	4.6	< 0.43	< 0.50	<0.45	<0.36	<2.5	4.0	3.3	<0.44	< 0.37	<0.44	<1.0	0.28J	<1.32	<0.055	<0.36	<0.30	104	86.8	63.9		
PZ-2	10/30/00	0.24	<0.19	< 0.18	0.21	< 0.25	< 0.12	< 0.082	<0.14	< 0.098	0.58	<0.17	< 0.13	0.2	<0.23	0.3	< 0.069	<14	<14	205	14	32		
	04/29/04	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	<0.45	<0.48	< 0.67	< 0.89	< 0.90	<1.80	<0.18	<2.63	< 0.031	<10	<10	31	11	31		
	07/28/04	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	<0.74	7.8	<0.48	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	< 0.031	<10	<10	130	11	31		
	10/28/04	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	13	<0.48	<0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	0.15	<10	<10	98	13	39		
1	01/27/05	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	<0.45	<0.48	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	0.23	<10	<10	110	12	36		
	10/24/06	< 0.41	< 0.83	<0,57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	< 0.48	<0.67	< 0.89	< 0.90	<1.80	•	<2.63	< 0.11	<10	<10	140	14	36		
	05/01/07	< 0.41	< 0.83	<0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	<0.48	< 0.67	< 0.89	< 0.90	<1.80	<0.18	<2.63	<0.085	<10	<10	75	12	27		
	11/04/13	<0.50	<0.42	< 0.43	<0.50	<0.45	< 0.36	<2.5	<0.47	<0.36	< 0.44	<0.37	<0.44	<1.0	<0.18	<1,32	< 0.055	0.80J	< 0.30	153	15.8	30.0		
PZ-6	11/01/00	< 0.19	18	<0.18	< 0.13	<0.25	< 0.12	< 0.082	1.2	4.9	0.31	<0.17	< 0.13	< 0.23	. 2.2	<0.3	-	<14	<14	306				
	04/29/04	< 0.41	< 0.83	<0.57	< 0.54	< 0.56	< 0.43	< 0.74	<0.45	<0.48	< 0.67	<0.89	< 0.90	<1.80	< 0.18	<2.63	-	<10	<10	340	-	-		
l	10/28/04	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	1.8	< 0.48	< 0.67	< 0.89	< 0.90	<1.80	< 0.18	<2.63	-	<10	<10	<10				
	10/24/06	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	<0.48	< 0.67	< 0.89	< 0.90	<1.80	-	<2.63	-	<10	<10	<10	37	15		
	05/01/07	< 0.41	< 0.83	< 0.57	< 0.54	< 0.56	< 0.43	< 0.74	< 0.45	<0.48	<0.67	< 0.89	<0.90	<1.80	<0.18	<2.63	< 0.085	<10	<10	<10	46	15		
	11/04/13	<0.50	<0.42	<0.43	< 0.50	<0.49	< 0.36	<2,5	<0.47	< 0.36	<0.44	<0.37	<0.44	<1.00	<0.18	<1.32	-	2.2J	0.61J	484	-			
NR 140 E	S	5	70	70	700	0.6	5	100	5	5	800	100	200	480	0.2	2,000				<del></del>				
NR140 P.	AL	0.5	7	7	140	0.06	0.5	10	0.5	0.5	160	20	40	96	0.02	400								

Notes:

pg/L = micrograms per liter
(p) = Reported result is less than the practical quantitation limit

NE = Not established

120

Wisconsin Administrative Code Chapter NR 140 Enforcement Standard (ES) Exceedance

140

Wisconsin Administrative Code Chapter NR 140 Preventive Action Limit (PAL) Exceedance