



October 10, 2023

**Waste Management Environmental  
Monitoring Group**  
N96 W13600 County Line Road  
Germantown, WI 53022

GEMS Data Submittal Contact-WA/5  
Bureau of Solid Waste Management  
Wisconsin Department of Natural Resources  
P.O. Box 7921  
Madison, WI 53707-7921

Re: **BOUNDARY ROAD LANDFILL  
SEMI-ANNUAL SEPTEMBER 2023 ENVIRONMENTAL SUBMITTAL  
LICENSE NO. 00011 - FID #268152390**

Dear GEMS Data Submittal Contact:

Enclosed is the semi-annual September 2023 groundwater, leachate and gas monitoring data for the Boundary Road Landfill. As per Department of Natural Resources Approved Long Term Sampling and Analysis Plan for the Boundary Road Landfill, April 2, 2014, all parameters for the wells indicated have been completed. This submittal includes final, certified hard copy reports and electronic data files from Waste Management Incorporated (WMI's) contract laboratory, Eurofins TestAmerica for the period April 2023 through September 2023. This information is being submitted as a file (sep23-00011.txt) on the enclosed diskette. Also attached is a printout of the data that is on the diskette.

As required by NR 140, the exceedances of the Preventive Action Limits (PAL) or Enforcement Standards (ES) are denoted as P or E respectively on the submittal. A 'P\*' is used when the concentration of a tested parameter exceeds the ES, but since the well meets the point of standards criteria as identified in NR 140.22, the ES does not apply. Please refer to Attachment II for identification and possible explanations of NR 140 exceedances.

Please note the following:

1. Environmental monitoring is now being done in accordance with the Proposed Modifications to the Long-Term Sampling and Analysis Plan – Boundary Road Landfill, October 2013 that was approved by Thomas Wentland on April 2, 2014.
2. The performance of the landfill gas extraction system was good for the period April – September 2023. The Blower/Flare operation was continuous with no unanticipated shutdowns.
3. Descriptive codes for barometric trend, ground conditions, exceedances, and J-Flag Qualifiers can be found on the cover sheet of the submittal.
4. Surface water point SW01 and leachate headwell LHW04 have been permanently abandoned as a result of the construction Orchard Ridge Eastern Expansion Southern Unit.

Boundary Road  
October 10, 2023  
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Should you have any questions regarding the information submitted, please contact me at (414) 405-6785.

Sincerely

A handwritten signature in black ink, appearing to read "Greg Konsionowski".

Greg Konsionowski  
Chemist

Enclosures

cc: Larry Buechel - WMWI / Boundary Road Master File  
BJ Le Roy - WDNR Southeast Region  
Greg Konsionowski - WMWI / Boundary Road Monitoring File

**Notice:** Personally identifiable information collected will be used for program administration and enforcement purposes. The Department may also provide this information to requesters as required under Wisconsin's Open Records law, ss. 19.31 to 19.39, Wis. Stats. When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30NR 635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats

**Instructions:**

- Prepare one form for each license or monitoring ID.
- Please type or print legibly.
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to:

GEMS Data Submittal Contact - WA/5  
 Wisconsin Department of Natural Resources  
 P.O. Box 7921  
 Madison, WI 53707-7921

**Monitoring Data Submittal Information**

Name of entity submitting data (laboratory, consultant, facility owner)  
 Waste Management of Wisconsin Inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and Email address:

Name Greg Konsionowski	Phone No. (include area code) (414) 405-6785
Email gkonsion@wm.com	

Facility Name  
 Boundary Road Landfill

License # / Monitoring ID 00011	Facility ID (FID) 268152390
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Actual sampling dates (e.g., July 2-6, 2003) April 4, 2023 through September 19, 2023	The enclosed results are for sampling required in the month(s) of: (e.g., June 2003) April 2023 through September 2023
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Type of Data Submitted (Check all that apply):

- |                                                                                                 |                                                         |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <input checked="" type="checkbox"/> Groundwater monitoring data from monitoring wells           | <input checked="" type="checkbox"/> Gas monitoring data |
| <input checked="" type="checkbox"/> Groundwater monitoring data from private water supply wells | <input type="checkbox"/> Air monitoring data            |
| <input checked="" type="checkbox"/> Leachate monitoring data                                    | <input type="checkbox"/> Other (specify):               |

Notification attached?

- No. No groundwater standards or explosive gas limits were exceeded.
- Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

**Certification**

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards.

Facility Representative Name (Print) Greg Konsionowski	Title Chemist	Phone No. (include area code) (414) 405-6785
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*Greg Konsionowski*  
 Signature

10/10/2023  
 Date Signed (mm/dd/yyyy)

**For DNR Use Only**

Check action taken, and record date and your initials. Describe on back side if necessary.

- Found uploading problems on \_\_\_\_\_ Initials \_\_\_\_\_
- Notified contact of problems on \_\_\_\_\_ Uploaded data successfully on \_\_\_\_\_
- EDD format(s):  Diskette  CD (initial submittal and follow-up)  E-mail (follow-up only)  Other: \_\_\_\_\_

**ATTACHMENT II**  
**BOUNDARY ROAD LANDFILL**  
**SEPTEMBER 2023**

Preliminary Cause and Significance of the Exceedances.

Arsenic

Arsenic exceeded the NR140 PAL in private wells PW07, PW08, and PW09. Arsenic has been historically high in background sampling around Boundary Road Landfill. The arsenic exceedances are likely due to natural hydrogeologic conditions.

Boron

Boron exceeded the NR 140 PAL in wells MW110, MW111, P104R, P107, P117, PW07, PW08, PW09, TW05R, TW09RR, and TW24R. Boron also exceeded the NR140 ES in well P103R. Boron has been historically high in background sampling around Boundary Road Landfill. The boron exceedances are likely due to natural hydrogeologic conditions.

Fluoride

Fluoride exceeded the NR140 PAL in wells P104R and P117. Fluoride has been historically high in background sampling around Boundary Road Landfill. The fluoride exceedance is likely due to natural hydrogeologic conditions.

Iron

Iron exceeded the NR140 ES in wells PW07, PW08, and PW09. Iron has been historically high in background sampling around Boundary Road Landfill. The iron exceedances are likely due to natural hydrogeologic conditions.

Chloride

Chloride exceeded the NR 140 PAL in wells MW107, MW117, P107, TW09RR, and TW24R. Chloride also exceeded the NR 140 ES in wells MW111, P103R, and TW05R. Chloride concentrations have been historically high at these wells. The chloride exceedances are possibly due to the upgradient Boundary Road Landfill or road salt. Remedial measures have been implemented at the site.

Sulfate

Sulfate exceeded the NR 140 PAL in wells TW24R, MW110, and MW116. Sulfate concentrations have been historically high in this well. The sulfate exceedances are likely due to natural hydrogeologic conditions.

Tetrahydrofuran

Tetrahydrofuran exceeded the NR140 PAL in wells MW111, P103R, TW09RR, and P107. The exceedances are possibly due to the upgradient Boundary Road Landfill. Remedial measures have been implemented at this site.

### Manganese

Manganese exceeded the NR140 PAL in private well PW07. Manganese has been historically high in background sampling around Boundary Road Landfill. The manganese exceedance is likely due to natural hydrogeologic conditions.

### Dichloromethane

The dichloromethane exceedance at well P103R is likely the result of laboratory contamination. Dichloromethane is a common laboratory contaminant.

ATTACHMENT I

LICENSE #s. 00011

BOUNDARY ROAD LANDFILL

FID #s. 268262940

Identification of NR140 Exceedances (page 1)

Well	Sample Date	Parameter	Sample Concentration	NR140 Standards PAL / ES	Units	Type of Standard	Type of Exceedance	Qualifier	RL	LOD	LOQ
MW107	230912	CHLORIDE-DISSOLVED AS CL	239.0000	125.0000	250.0000	MG/L	NR140	P	2.500	1.4000	4.7000
MW110	230912	BORON-DISSOLVED AS B	0.3400	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
	230912	SULFATE-DISSOLVED AS SO4	145.0000	125.0000	250.0000	MG/L	NR140	P	10.000	1.7000	5.8000
MW111	230912	BORON-DISSOLVED AS B	0.9400	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
	230912	CHLORIDE-DISSOLVED AS CL	877.0000	125.0000	250.0000	MG/L	NR140	E	10.000	5.6000	18.8000
	230912	TETRAHYDROFURAN	14.0000	10.0000	50.0000	UG/L	NR140	P	20.000	5.0000	17.0000
MW116	230912	SULFATE-DISSOLVED AS SO4	455.0000	125.0000	250.0000	MG/L	NR140	P*	10.000	1.7000	5.8000
MW117	230912	CHLORIDE-DISSOLVED AS CL	519.0000	125.0000	250.0000	MG/L	NR140	P*	5.000	2.8000	9.4000
P103R	230912	BORON-DISSOLVED AS B	2.3000	0.2000	1.0000	MG/L	NR140	E	0.020	0.0040	0.0130
	230912	CHLORIDE-DISSOLVED AS CL	544.0000	125.0000	250.0000	MG/L	NR140	E	5.000	2.8000	9.4000
	230912	DICHLOROMETHANE	1.9000	0.5000	5.0000	UG/L	NR140	P	4.000	1.8000	5.9000
	230912	TETRAHYDROFURAN	35.0000	10.0000	50.0000	UG/L	NR140	P	20.000	5.0000	17.0000
P104R	230912	BORON-DISSOLVED AS B	0.2400	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
	230912	FLUORIDE-DISSOLVED AS F	0.8300	0.8000	4.0000	MG/L	NR140	P	0.050	0.0260	0.0870
P107	230912	BORON-DISSOLVED AS B	1.2000	0.2000	1.0000	MG/L	NR140	E	0.020	0.0040	0.0130
	230912	CHLORIDE-DISSOLVED AS CL	141.0000	125.0000	250.0000	MG/L	NR140	P	2.500	1.4000	4.7000
	230912	TETRAHYDROFURAN	16.0000	10.0000	50.0000	UG/L	NR140	P	20.000	5.0000	17.0000
P117	230912	BORON-DISSOLVED AS B	0.2100	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
	230912	FLUORIDE-DISSOLVED AS F	0.9600	0.8000	4.0000	MG/L	NR140	P	0.050	0.0260	0.0870

\* = within the Design Management Zone (DMZ) and property boundary  
 P = NR140 Preventative Action Limit or NR500 Alternate Concentration Limit exceedance  
 E = NR140 Enforcement Standard exceedance  
 J = Sample Concentration is between the Limit of Detection (LOD) and the Limit of Quantification (LOQ)  
 EX = NR140.28 (NR508.19) Exemptions granted for exceedance

SPECIAL NOTE: J-Flags are detections of an analyte between the Limit of Detection (LOD) and the Limit of Quantification (LOQ). It is MW-Technologies' opinion that J-Flag detections as well as PAL exceedances below the reporting limit (RL) are not quantifiable numbers and should not constitute exceedances; however these values are being reported in compliance with NR 507.26 (3)(b) and NR 140.16.

ATTACHMENT I

LICENSE #s. 00011

BOUNDARY ROAD LANDFILL

FID #s. 268262940

Identification of NR140 Exceedances (page 2)

Well	Sample Date	Parameter	Sample Concentration	NR140 Standards PAL / ES	Units	Type of Standard	Type Of Exceedance	Qualifier	RL	L00	L00
PW07	230911	ARSENIC-TOTAL AS AS	5.7000	5.0000	50.0000	UG/L	NR140	P	1.000	0.2700	0.9000
	230911	BORON-TOTAL AS B	0.2600	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
	230911	IRON-TOTAL AS FE	1.7000	0.1500	0.3000	MG/L	NR140	E	0.100	0.0190	0.0640
	230911	MANGANESE-TOTAL AS MN	28.0000	25.0000	50.0000	UG/L	NR140	P	15.000	0.4000	1.3000
PW08	230911	ARSENIC-TOTAL AS AS	8.0000	5.0000	50.0000	UG/L	NR140	P	1.000	0.2700	0.9000
	230911	BORON-TOTAL AS B	0.2800	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
PW09	230911	IRON-TOTAL AS FE	0.7500	0.1500	0.3000	MG/L	NR140	E	0.100	0.0190	0.0640
	230911	ARSENIC-TOTAL AS AS	7.5000	5.0000	50.0000	UG/L	NR140	P	1.000	0.2700	0.9000
TW05R	230911	BORON-TOTAL AS B	0.2300	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
	230911	IRON-TOTAL AS FE	0.6200	0.1500	0.3000	MG/L	NR140	E	0.100	0.0190	0.0640
TW09RR	230912	BORON-DISSOLVED AS B	0.4800	0.2000	1.0000	MG/L	NR140	P	0.020	0.0040	0.0130
	230912	CHLORIDE-DISSOLVED AS CL	543.0000	125.0000	250.0000	MG/L	NR140	E	5.000	2.8000	9.4000
TW24R	230912	BORON-DISSOLVED AS B	1.1000	0.2000	1.0000	MG/L	NR140	E	0.020	0.0040	0.0130
	230912	CHLORIDE-DISSOLVED AS CL	194.0000	125.0000	250.0000	MG/L	NR140	P	2.500	0.0040	0.0130
	230912	TETRAHYDROFURAN	14.0000	10.0000	50.0000	UG/L	NR140	P	25.000	6.3000	21.0000
	230912	BORON-DISSOLVED AS B	2.6000	0.2000	1.0000	MG/L	NR140	E	0.020	0.0040	0.0130
	230912	CHLORIDE-DISSOLVED AS CL	334.0000	125.0000	250.0000	MG/L	NR140	P*	5.000	2.8000	9.4000
	230912	SULFATE-DISSOLVED AS SO4	156.0000	125.0000	250.0000	MG/L	NR140	P	20.000	3.5000	11.6000

|| P\* = within the Design Management Zone (DMZ) and property boundary  
 || P = NR140 Preventative Action Limit or NR500 Alternate Concentration Limit exceedance  
 || E = NR140 Enforcement Standard exceedance

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SPECIAL NOTE:

J-Flags are detections of an analyte between the Limit of Detection (LOD) and the Limit of Quantification (LOQ). It is MWX-Technologies' opinion that J-Flag detections as well as PAL exceedances below the reporting limit (RL) are not quantifiable numbers and should not constitute exceedances; however these values are being reported in compliance with NR 507.26 (3)(b) and NR 140.16.