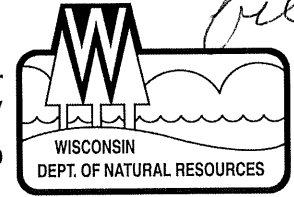


State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
101 S. Webster Street  
Box 7921  
Madison WI 53707-7921

Scott Walker, Governor  
Cathy Stepp, Secretary  
Telephone 608-266-2621  
FAX 608-267-3579  
TTY Access via relay - 711



March 18, 2016

Jeffrey Tracy (Representative for the Ripon FF/NN Landfill Potentially Responsible Party (PRP) Group)  
Quantum Management Group, Inc.  
216 North Green Bay Road, Suite 201  
Thiensville, WI 53092

SUBJECT: Proposed New Sentinel Monitoring Well Approval, Groundwater Monitoring Program  
for the Ripon HWY FF/NN Landfill  
Ripon HWY FF/NN Landfill  
License #467, Ripon, WI  
**WDNR BRRTS #02-20-000915**

Dear Mr. Tracy:

The Department has reviewed the proposal for a new sentinel monitoring well prepared by Tetra Tech and received by email on March 16, 2016. The proposal is approved subject to the following condition:

1. The new well sampling frequency will depend on the initial sampling results. If initial sampling shows the well to be free of landfill related contaminants, then the frequency of sampling will be semi-annual, in the spring and fall sampling rounds.

The Department appreciates your efforts to restore the environment at this site. Should you have any questions regarding this letter, please call me at (608)267-7563 or email me at [gary.edelstein@wisconsin.gov](mailto:gary.edelstein@wisconsin.gov). Thank you for your cooperation.

Sincerely,

Gary A. Edelstein  
Waste Management Engineer  
Remediation & Redevelopment Program

Attach.

cc: Rick Joslin, DNR - ecopy  
Mary Tierney, EPA – ecopy – [tierney.mary@epa.gov](mailto:tierney.mary@epa.gov)  
Mike Noel, Tetra Tech – ecopy – [Mike.Noel@tetrattech.com](mailto:Mike.Noel@tetrattech.com)  
Lori Rich, City of Ripon – ecopy – [lrich@cityofripon.com](mailto:lrich@cityofripon.com)



TETRA TECH

March 15, 2016

Gary A. Edelstein, Waste Management Engineer  
Wisconsin Department of Natural Resources  
Bureau for Remediation and Redevelopment - RR/5  
P.O. Box 7921  
Madison, WI 53707

RE: New Monitoring Well Installation  
Ripon HWY FF/NN Landfill  
License #467, Ripon, WI  
BRRTS #02-20-000915

Dear Gary,

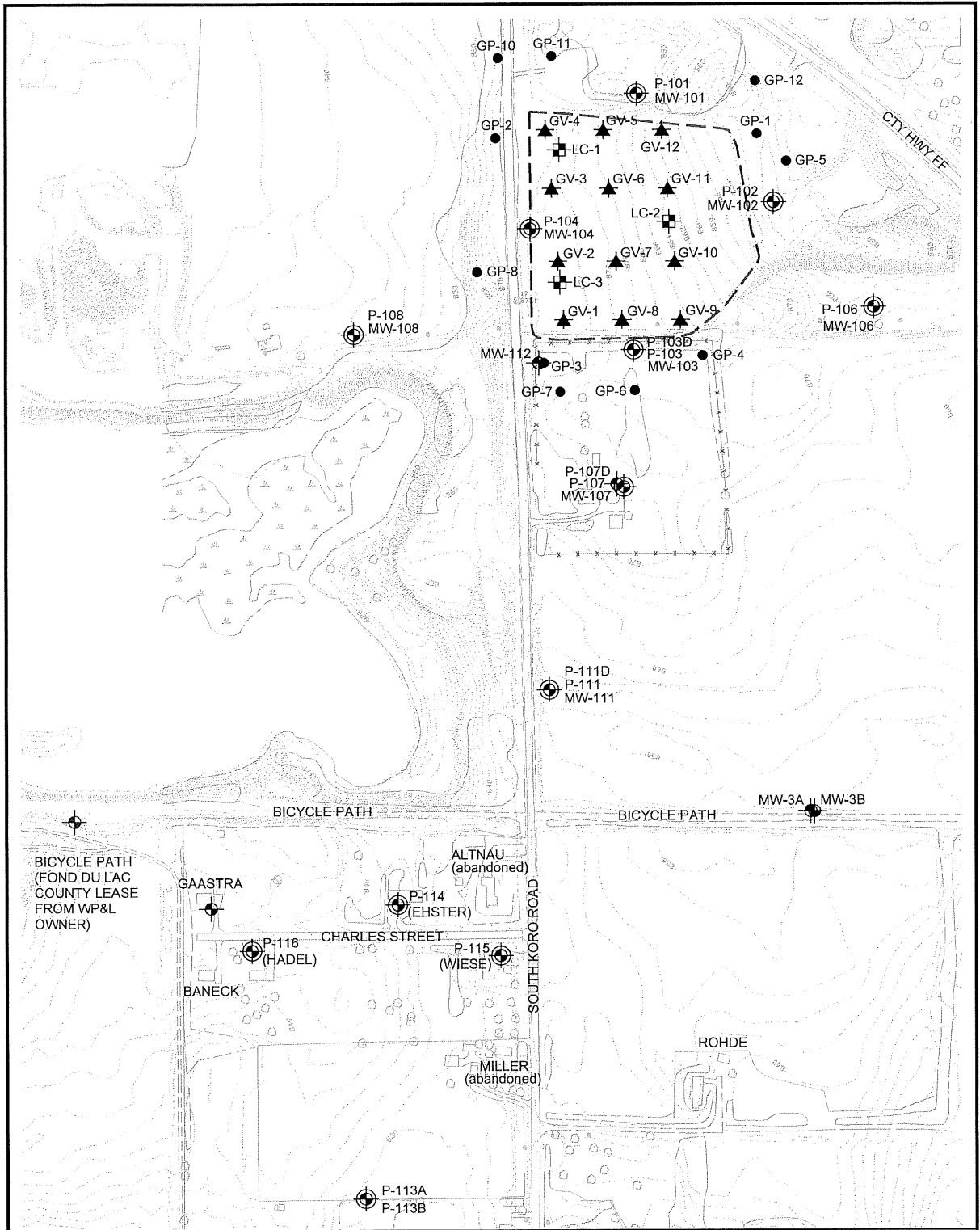
The FF/NN Landfill PRP Group proposes to install a new monitoring well near the downgradient extent of the groundwater plume migrating from the FF/NN Landfill in Ripon, Wisconsin. Per our conference call on February 24, 2016, the well will be installed approximately 300 feet west of the Gaastra property (W14297 Charles Street) along the bike trail to the north (Figure 1) and, as agreed upon, the well will serve as the downgradient sentry well. The bike trail property is leased by Fond du Lac County from the owner, Wisconsin Power & Light (Alliant Energy). The well installation will require an access agreement with the property owner and/or lessee.

The well will be constructed as a Layer 3 monitoring well in the top of the sandstone bedrock to coincide with the depth of contamination detected in the Gaastra private well, MW-114 and MW-115. A sonic drill rig will be used to drill 10 feet into the top of the sandstone bedrock to a depth of approximately 165 feet below ground surface. The soil and bedrock cores will be logged according to the United Soil Classification System by a Tetra Tech geologist. Samples from the cores will be collected at 10-foot intervals and screened for volatile organic compounds (VOCs) using a photoionization detector (PID). The bottom 25 feet of core from the borehole will be contained in 55 gallon drums for characterization and proper disposal. The remaining soil will be thin spread on the ground surface in the vicinity of the borehole.







The monitoring well will be constructed in accordance with NR141 Wisconsin Administrative Code (WAC) using 2-inch ID, Schedule 80 PVC riser and screen. The screen will have a slot size of 0.010-inches, and be 5 feet in length. Filter pack will be placed 6 inches beneath the bottom of the well screen and extend 2 feet above the top of the well screen. The filter pack seal will consist of 2 feet of clean fine sand on top of the filter pack followed by bentonite chips or pellets to seal the remainder of the annular space to 5 feet below ground surface. The ground surface seal will be constructed of concrete. A steel, above grade protective well casing will be set in the concrete. Protective bollards will be placed around

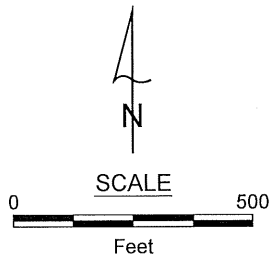
TETRA TECH

175 North Corporate Drive, Suite 100, Brookfield, WI 53045  
Tel 262.792.1282 Fax 262.792.1310 [www.tetrattech.com](http://www.tetrattech.com)




**EXPLANATION**

- 
 MONITOR WELL, PIEZOMETER  
LOCATION, DESIGNATION
- 
 LEACHATE HEAD WELL  
LOCATION, DESIGNATION
- 
 OUTLINE OF CLOSED LANDFILL
- 
 GAS PROBE LOCATION  
AND DESIGNATION
- 
 GAS VENT LOCATION  
AND DESIGNATION
- 
 PROPOSED WELL LOCATION



BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FF/NN LANDFILL RIPON, WISCONSIN	DATE: 3/9/16
<b>MONITORING LOCATION MAP</b>	DESIGNED: HJW
	CHECKED: MRN
	APPROVED: MRN
	DRAWN: HJW
	PROJ.: 117-220254
 <b>TETRA TECH</b>	Figure 1

## Edelstein, Gary A - DNR

---

**From:** Noel, Mike <Mike.Noel@tetrattech.com>  
**Sent:** Friday, March 18, 2016 10:57 AM  
**To:** Edelstein, Gary A - DNR  
**Cc:** Joslin, Richard R - DNR; Noel, Mike  
**Subject:** RE: Proposed Monitoring Well Installation, Ripon FF/NN Landfill, BRRTS #02-20-000915  
**Attachments:** 2016.03.15 Proposed Well Installation.pdf

Gary, the proposed location is 300 feet west of the property line (see attached). The exact location will depend on site access.

---

**From:** Edelstein, Gary A - DNR [<mailto:Gary.Edelstein@wisconsin.gov>]  
**Sent:** Friday, March 18, 2016 10:10 AM  
**To:** Noel, Mike <[Mike.Noel@tetrattech.com](mailto:Mike.Noel@tetrattech.com)>  
**Cc:** Joslin, Richard R - DNR <[Richard.Joslin@wisconsin.gov](mailto:Richard.Joslin@wisconsin.gov)>  
**Subject:** RE: Proposed Monitoring Well Installation, Ripon FF/NN Landfill, BRRTS #02-20-000915

Mike, eyeballing the map, it appears the location shown in red for the well location is less than 300 feet from the property line. Is that the exact location proposed or approximate? Will a more accurate location be provided later once we approve and you obtain access?

Thanks, Gary E

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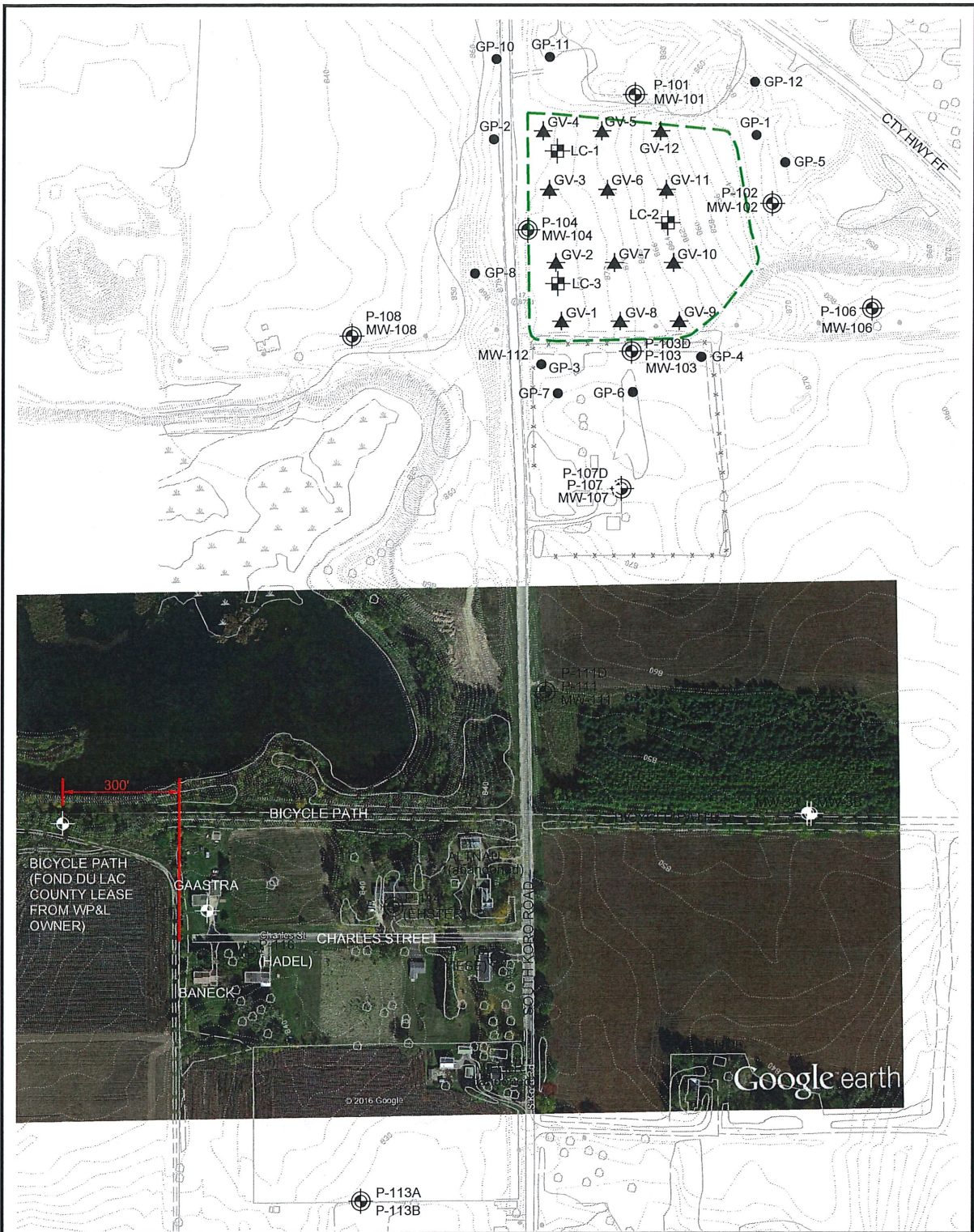
**From:** Noel, Mike [<mailto:Mike.Noel@tetrattech.com>]  
**Sent:** Wednesday, March 16, 2016 1:09 PM  
**To:** Edelstein, Gary A - DNR  
**Cc:** Mary Tierney; Lori Rich ([Lrich@cityofripon.com](mailto:Lrich@cityofripon.com)); Jeffery Tracy; Joslin, Richard R - DNR; Noel, Mike  
**Subject:** Proposed Monitoring Well Installation, Ripon FF/NN Landfill, BRRTS #02-20-000915

Gary,  
The attached letter proposes a new downgradient sentry monitoring well that you requested be installed at the Ripon FF/NN Landfill site. If this proposal meets your requirements, please provide a letter of approval.  
Mike

**Michael R. Noel** | Vice President, Principal Hydrogeologist  
Office: 262-792-1282 x 223 | Fax: 262-792-1310 | Mobile: 262-853-4983  
[mike.noel@tetrattech.com](mailto:mike.noel@tetrattech.com)

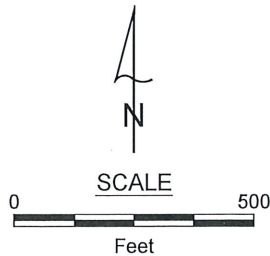
Tetra Tech, Inc.  
175 N Corporate Drive, Suite 100 | Brookfield, WI 53045 | [www.tetrattech.com](http://www.tetrattech.com)

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**EXPLANATION**

- P-104  
 MW-104  
 MONITOR WELL, PIEZOMETER  
 LOCATION, DESIGNATION
- LC-2  
 LEACHATE HEAD WELL  
 LOCATION, DESIGNATION
- OUTLINE OF CLOSED LANDFILL
- GP-1  
 GAS PROBE LOCATION  
 AND DESIGNATION
- GV-1  
 GAS VENT LOCATION  
 AND DESIGNATION
- PROPOSED WI DNR  
 ALTERNATE WELL LOCATION



BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FFNN LANDFILL RIPON, WISCONSIN	DATE: 3/9/16
<b>MONITORING LOCATION MAP</b>	DESIGNED: HJW
	CHECKED: MRN
	APPROVED: MRN
	DRAWN: HJW
	PROJ.: 117-2202954



Figure 2