

LeRoy, Bruce J - DNR (BJ)

From: LeRoy, Bruce J - DNR (BJ)
Sent: Monday, July 1, 2019 11:51 AM
To: 'Jeff Tracy'
Cc: 'Marita D. Stollenwerk'; Wedekind, James; 'Lori Rich'
Subject: RE: Ripon FF/NN Landfill - Sentinel Well Monitoring

Hello all,

In a cursory review, I'm not ready to give up on the idea of a further sentinel well. That said, I'm not sure that it's warranted right now, not having established a trend of detects at P118. It looks like two detects in the last eight rounds, with the latest being ND and likely another sample result at the lab or in your hands.

The plume is either expanding or not regardless of the method or the limited data we have. I'd say, regarding the "expanding plume" that it was our knowledge of the plume's physical location that expanded. We've not yet shown that it's physically expanding beyond P-118, though it's certainly reached that location. An up-to-date plume map may be a good idea in the next quarterly report.

As I look at the detects and the flow map, my thoughts are first that we seem to have bounded the SE portion of the plume, at P113/P116. Gastra had a couple recent hits that were concerning. Flow is W/SW in Layer 3 according to the previous maps. At the moment I'd be most concerned with the Roeder property, SW of P117. We know P118 has had detects and flow is in that direction, so the Roeder location is probably a private well that should be sampled if it hasn't already been. It appears there is a farm on the SW corner of that property.

I think your time may be better spent looking at the groundwater flow in that overall area, improving the flow map if possible, incorporating any data you can from the adjacent landfill (guessing there is data in BRRTS). If there is no data in BRRTS, maybe I can get permission to use the data from GEMS. And of course a recent plume map.

I'm looking forward to seeing the new quarterly report format and where we're going from here. Thanks for the update. I'm out for the next week so if you have questions, we can catch up when I get back.

BJ

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

B.J. LeRoy, PG

Hydrogeologist – Northeast Region Remediation and Redevelopment

Wisconsin Department of Natural Resources

2984 Shawano Avenue, Green Bay WI 54313-6727

Phone: 920-662-5164

BJ.Leroy@wisconsin.gov



From: Jeff Tracy <JTracy@Geosyntec.com>

Sent: Monday, July 1, 2019 10:13 AM

To: LeRoy, Bruce J - DNR (BJ) <bruce.leroy@wisconsin.gov>

Cc: 'Marita D. Stollenwerk' <mstollenwerk@trcsolutions.com>; Wedekind, James <JWedekind@trccompanies.com>; 'Lori Rich' <lrich@cityofripon.com>

Subject: Ripon FF/NN Landfill - Sentinel Well Monitoring

BJ –

Resty and I discussed placing an additional sentinel well downgradient (west) of P-118. During due diligence, we identified a landfill adjacent to the proposed well location (intersection of HWY PP and the WI Power and Light trail). Therefore, we are proposing to monitor trends in the existing sentinel well (P-118) to continue evaluating the plume geometry. Please review the attached letter at your convenience.

Let me know if you have any questions or wish to discuss.

Thanks,

Jeff

Jeff Tracy, PG (WI)

Senior Geologist

Geosyntec Consultants, Inc.

10600 N. Port Washington Road, Suite 100

Mequon, WI 53092

Phone: 262.834.0224 Mobile: 414.378.8633

[GEOSYNTEC](#) | [SIREM](#) | [SAVRON](#)

Follow Us – [LinkedIn](#) | [Twitter](#) | [Facebook](#) | [YouTube](#)



708 Heartland Trl.
Suite 3000
Madison, WI 53717

T 608.826.3600
TRCcompanies.com

June 28, 2019

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

Subject: Sentinel Well Proposal
Ripon HWY FF/NN Landfill License #467
BRRTS No. 02-20-000915

Dear B.J.:

As you are aware, TRC was recently selected by the FF/NN PRP Group (the Group) to serve as the environmental consultant for the project. One of the first tasks assigned to TRC was to establish a new sentinel well in the deep aquifer southwest of the landfill.

The Group has twice installed presumed sentinel wells downgradient of the landfill in hydrogeologic Layer 3. The first was P-117 installed in bedrock at a depth of 163 feet below ground surface (bgs) adjacent to the bike path (Northwestern Trail) located approximately 1,200 feet west of South Koro Road (Figure 1). Vinyl chloride was detected in all groundwater samples from that well at concentrations exceeding the Wisconsin Administrative Code (WAC) Chapter NR 140 Enforcement Standard (ES).

A second well (P-118) was installed in the same bedrock unit at 165 feet bgs in August 2017. Well P-118 is located approximately 900 feet west of P-117. During the seven groundwater sampling events since P-118 well installation, vinyl chloride was detected in samples collected in August and October 2018 and in May 2019 at concentrations above the WAC Chapter NR 140 Preventative Action Level (PAL) ranging from 0.036 µg/L to 0.07 µg/L. Vinyl chloride was not detected in samples collected during the other monitoring events. During six of the seven sampling events (exception being October 2017), laboratory reporting limits were below the PAL.

On March 6, 2019, Mr. Aristeo (Resty) Pelayo of the WDNR and Mr. Jeff Tracy on behalf of the Group discussed installing an additional sentinel well west of P-118. The WDNR requested the additional well because vinyl chloride was being detected in P-118. Vinyl chloride was being detected in samples from P-118 after June 2018 due to a change in analytical methods. At the request of the WDNR, the Group began analyzing the groundwater samples using method 8260C, which has a lower detection limit than the method that was being used (8260 SIM). The WDNR stated the plume was expanding; therefore, an additional sentinel well was necessary. The Group does not agree that data from P-118 supports an expanding plume. The concentrations detected in samples after June 2018 would not have been detected or reported using the 8260 SIM method. The Group believes the data from 2018 merely redefines the plume boundary secondary to the lower detection limit associated with method 8260C.

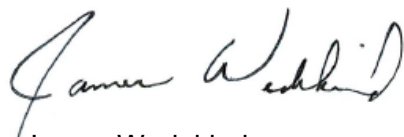
Mr. Pelayo and Mr. Tracy discussed installing a sentinel well (proposed as P-119) west of P-118 near the intersection of the bike path and County Trunk Highway (CTH) PP. Initial due diligence by TRC identified that this proposed location is immediately adjacent to a closed landfill – Ripon Landfill HWY 23 (PP) BRRTS #02-20-000916. A subsequent file review by TRC discovered that the landfill had received municipal and industrial wastes. Groundwater samples collected in May 1997 from shallow (<25 ft in depth) temporary wells detected chlorinated volatile organic compounds (CVOCs) including trichloroethene (2.3 to 2.6 µg/L) and cis-1,2-dichloroethene (33 µg/L to 65.4 µg/L) above the respective PALs appropriate at the time. The WDNR records indicate waste material may have been disposed in a secondary landfill directly north of the HWY 23 (PP) Landfill (north of the Northwestern Trail; i.e., the proposed P-119 would be between two historic landfills). The WDNR determined that no further action associated with the landfill was required and closed case in February 1998.

It is TRC's opinion that owing to the uncertainty on impact of the HWY 23 (PP) Landfill on deeper groundwater, the new sentinel well should not be placed in close proximity to this site. As an alternative, we propose that the existing monitoring well P-118 remain as the sentinel well. Although it periodically contains vinyl chloride at concentrations above the PAL, the majority of sampling events since installation have noted no vinyl chloride detections at this location. With concentrations of vinyl chloride below the health-based ES – and frequently below the “early warning” PAL, this well can adequately serve as a sentinel well. Continued monitoring of P-118 will identify vinyl chloride concentration trends. If subsequent sampling and reporting indicates an increasing trend of vinyl chloride concentrations that approach the ES, an alternative TRC, on behalf of the Group, will evaluate and propose alternative monitoring points to the WDNR.

Please consider our request and we look forward to your concurrence. We are glad to have you engaged in the project. Thank you and we look forward to working with you!

Sincerely,

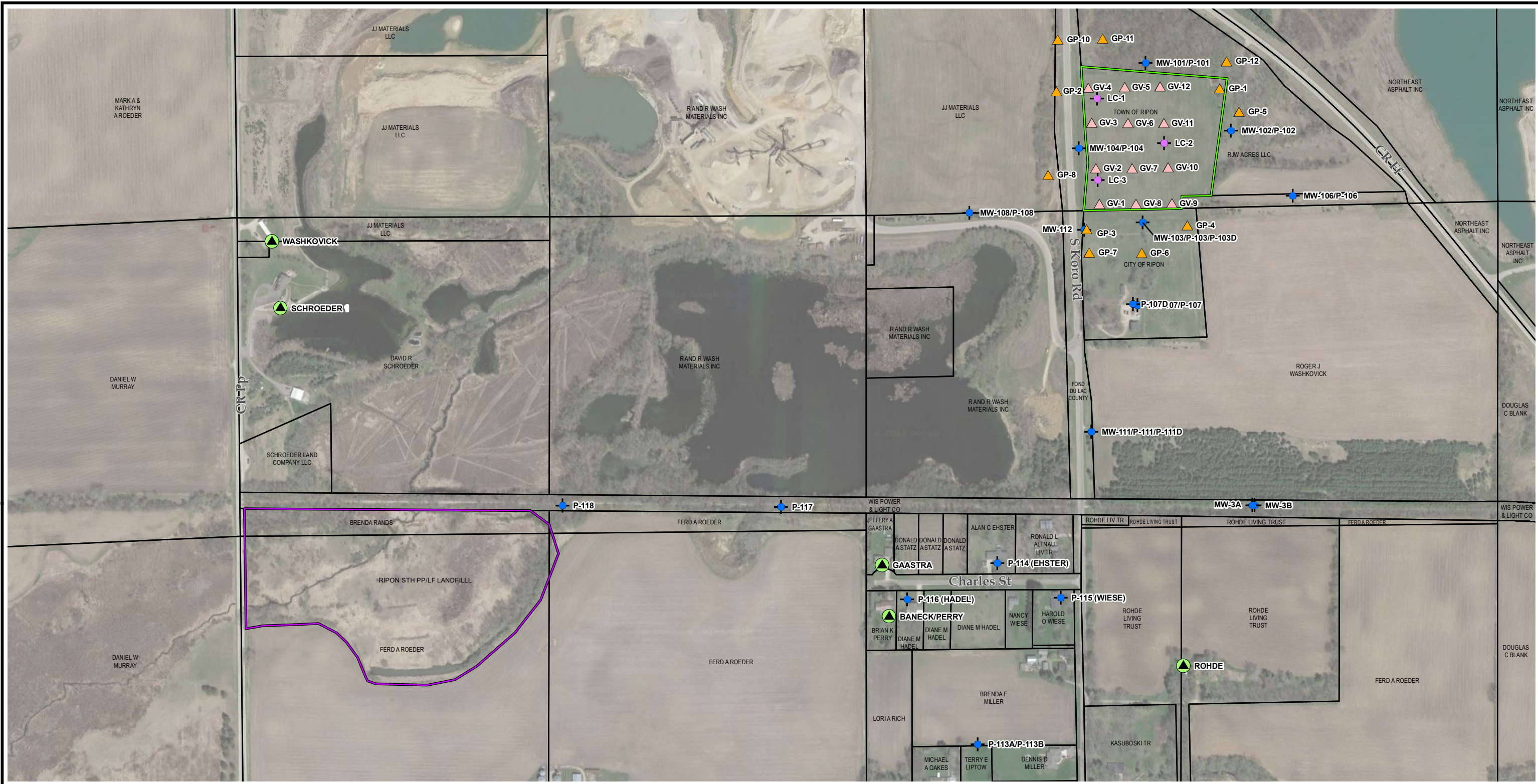
TRC



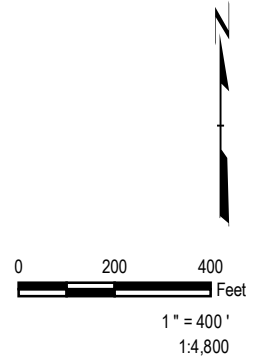
James Wedekind
Senior Geologist



Marita Stollenwerk
Project Manager



- LEGEND**
- GAS PROBE
 - GAS VENT
 - LEACHATE HEAD WELL
 - MONITORING WELL, PIEZOMETER LOCATION
 - PRIVATE WELL
 - RIPON FF/NN LANDFILL SITE
 - RIPON LF - HWY 23 (PP) LANDFILL



PROJECT:		FF/NN LANDFILL RIPON, WI	
TITLE:		SITE LAYOUT	
DRAWN BY:	A. ADAIR	PROJ. NO.:	327275
CHECKED BY:	M. STOLLENWERK	FIGURE 1	
APPROVED BY:	J. WEDEKIND		
DATE:	JUNE 2019		
		150 North Patrick Blvd., Suite 180 Brookfield, WI 53045 Phone: 262.879.1212 www.trcsolutions.com	
FILE NO.:		327275_002_SLP.mxd	