

**From:** Beggs, Tauren R - DNR  
**Sent:** Friday, August 29, 2014 12:54 PM  
**To:** 'halbur.kathy@epa.gov'  
**Subject:** Soil Delineation Maps for Aniwa Arsenic Site, BRRTS # 02-59-000198  
**Attachments:** SoilDelineationMaps\_08-29-2014.pdf

Hi Kathy,

My bad on the email address. I will now send the emails to your EPA one.

Based on soil analytical results from 1983, 1990, 2007, and 2012, a 2011 Conductivity (EM-31) Survey, and maps prepared by environmental consultants for this site, I have prepared three maps (attached):

- 1) Soil Delineation Map for 0-4ft depth Hotspot (>500 mg/kg As) and 0-4ft depth RML exceedances (>67 mg/kg)
  - Some 2012 & 2007 Additional Investigation soil borings show decreased As concentrations below 67 mg/kg and/or concentrations below 8 mg/kg (background) in locations adjacent to 1990 soil locations that exceeded 67 mg/kg. These are adjacent to the outlier hotspot locations where arsenic >500 mg/kg.
- 2) Soil Delineation Map >=8ft depth, soil concentrations near the water table or saturated.
- 3) Combined Soil Delineation Map
  - Some areas of soil contamination at depth (near the water table or saturated) tend to match up with the highest conductivity areas discovered during the 2011 conductivity survey.
  - The other areas of soil contamination at depth (near the water table or saturated) tend to match up with the hotspot area and is adjacent to the former drum burial pit that was excavated in May 1984.

There is still highly contaminated soil within the upper four feet (highest confirmed remaining As concentration in soil is 8,360 mg/kg), but also contamination at depth within saturated soil (highest confirmed remaining As concentration at depth is 465 mg/kg). The remaining soil contamination that could leach to groundwater still does not explain why groundwater concentrations have spiked during high groundwater level fluctuation, such as in 2011 (highest As concentration in B-13 was 72,000 ug/L) and 2013 (highest As concentration in B-13 was 19,000 ug/L).

If you have any questions, please let me know.

Thanks,

**We are committed to service excellence.**

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

**Tauren R. Beggs**

Hydrogeologist – Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources  
2984 Shawano Ave  
Green Bay, WI 54313  
Phone: (920) 662-5178  
Fax: (920) 662-5197  
[Tauren.Beggs@wisconsin.gov](mailto:Tauren.Beggs@wisconsin.gov)

(0-4') Direct Contact Hotspot >500mg/kg

(0-4') EPA RML Exceedances >67mg/kg

(concentrations range from 67mg/kg -



08/29/2014 TRB



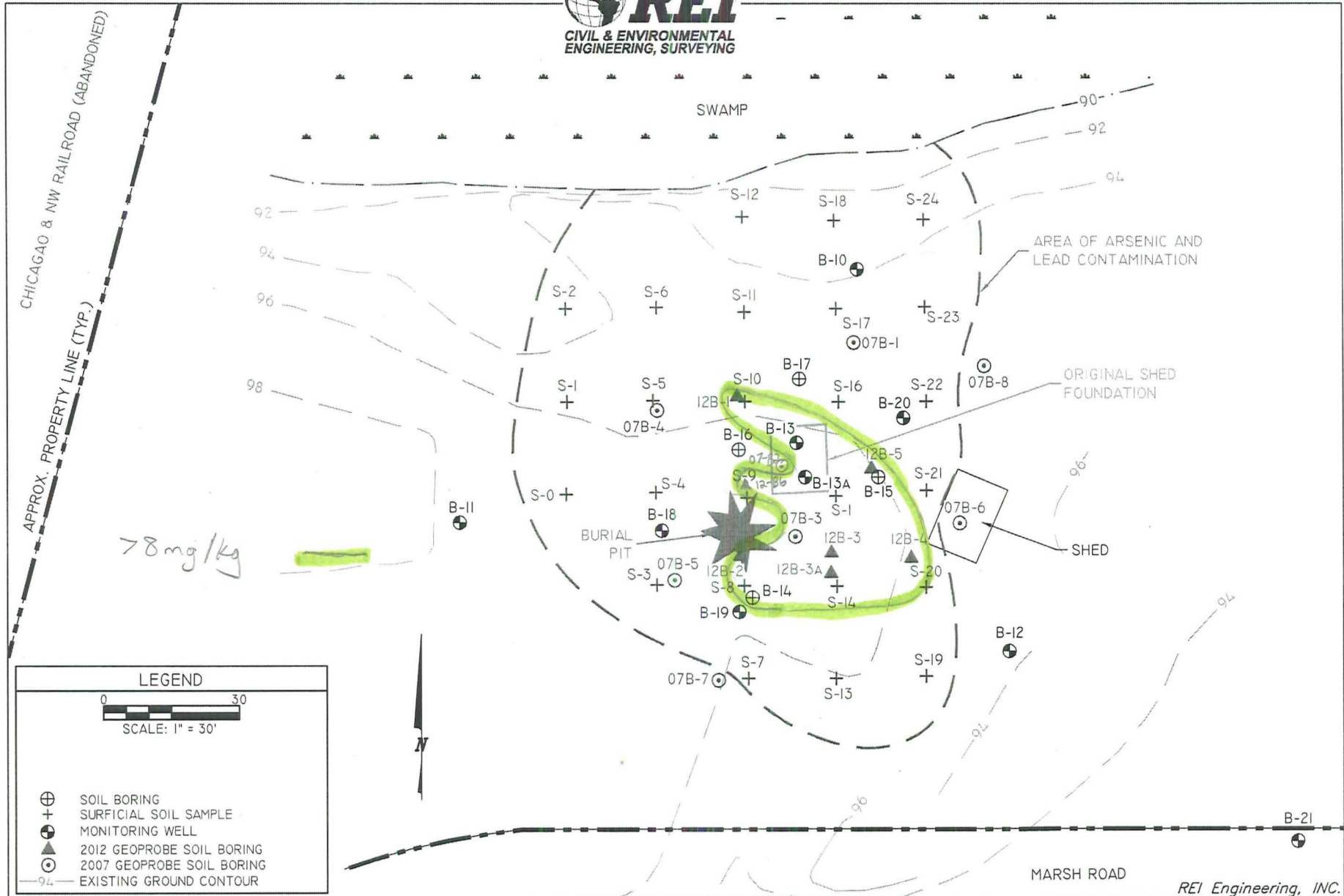
TOWN OF ANIWA DISPOSAL SITE  
MARSH ROAD NEAR CHICAGO & NW RAILROAD  
TOWN OF ANIWA, SHAWANO COUNTY, WI

FIGURE B.2.c : PRE/POST-REMEDIAL SOIL CONTAMINATION

PROJECT NO. 6663	DRAWN BY: TAW	DATE: 6/17/2014
---------------------	------------------	--------------------

At depth  $\geq 8'$ :  $> 8 \text{ mg/kg}$

08/29/14 TRB



TOWN OF ANIWA DISPOSAL SITE  
 MARSH ROAD NEAR CHICAGO & NW RAILROAD  
 TOWN OF ANIWA, SHAWANO COUNTY, WI

FIGURE B.2.c : PRE/POST-REMEDIAL SOIL CONTAMINATION.

PROJECT NO.

6663

DRAWN BY:  
TAW

DATE:

6/17/2014

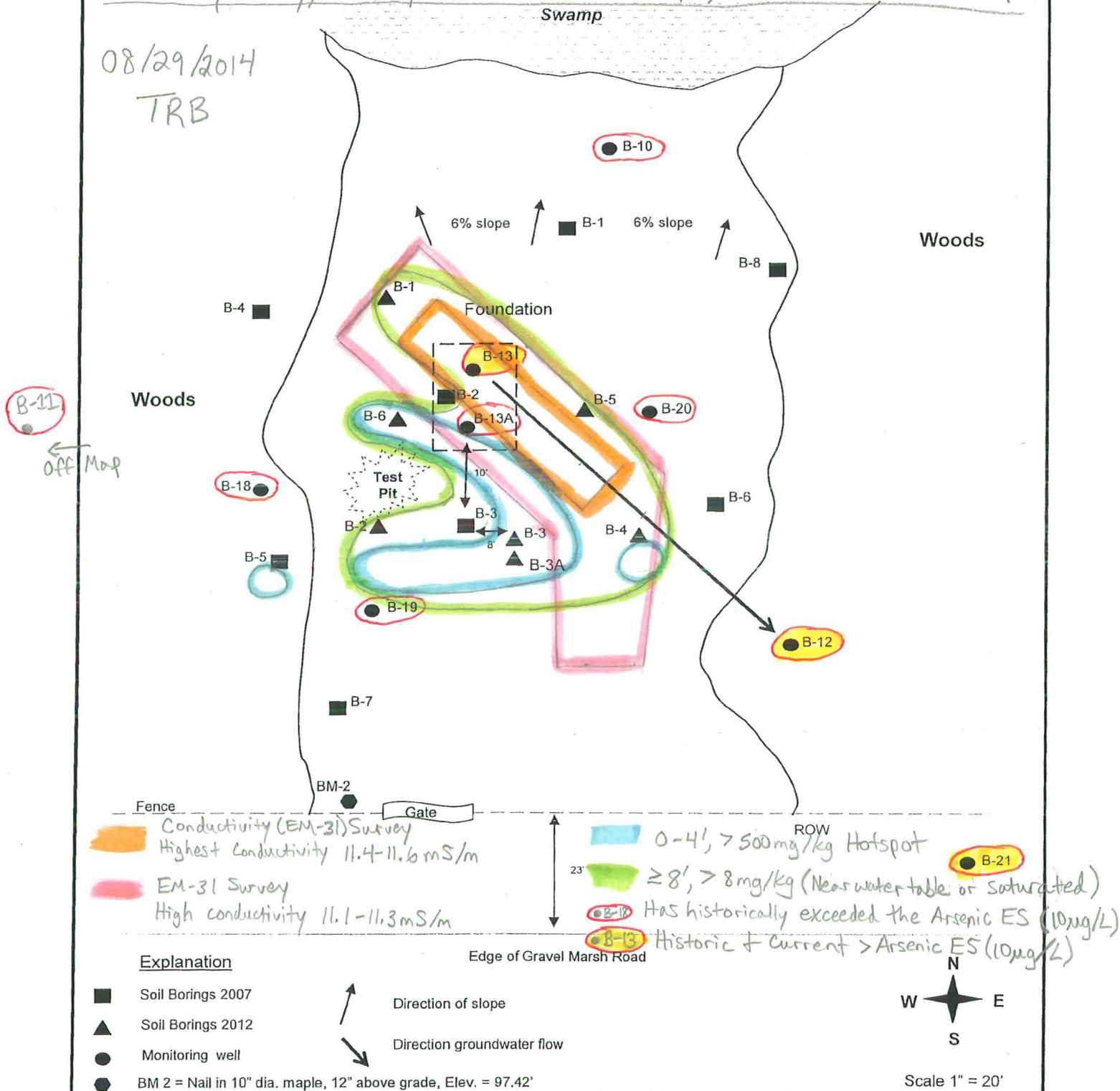
REI Engineering, INC.

2/26/14

Land delivered by  
Bob Yerrubi, NRP  
KBC

# Conductivity Survey, Hotspot, Soil Contamination & Depth, + GW > ES Combined Map

08/29/2014  
TRB



Client: Warren Hohn | Project: Town of Aniwa Site | Location: Shawano Co., WI

**Cartographic Services**  
Date: 12/21/13 | File: SBL\_13.doc

Figure XX. Town of Aniwa  
Monitoring Wells & Soil Borings

Figure  
XX