REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

December 22, 2020

Wisconsin Department of Natural Resources
Attn: Gwen Saliares
625 East County Road Y
Oshkosh, WI 54901

Subject:

Aniwa Arsenic Site
Marsh Road near Chicago and NW Right of Way
Town of Aniwa, Shawano County, WI 54414
WDNR BRRTS #02-59-000198

Dear Ms. Saliares:

This letter and information will serve as an additional Remedial Action Plan for the above referenced site and a proposed work plan to closure. The site location is shown on Figure 1.

The most recent update report was submitted on November 16, 2020. The report summarized data collected by the EPA contractor during the primary remedial action in 2015, and the results of soil and groundwater sampling from 2015-2020. The results of additional sampling concluded that a) the excavation of 1,019 tons of arsenic contaminated soil was successful in reducing the volume and concentration of contamination at the site, b) the groundwater contaminant plume was stable in size and concentration and c) additional areas of uncapped soil exceeding 8 mg/kg were present and defined to the source property.

Based on the conclusions above, and discussions with the Department, REI has recommended the following be conducted in order to bring the site to closure:

Capping of Areas Outside of the Excavation Which Exceed 8 mg/kg

Soil contamination above 8 mg/kg remains within the area of excavation and beyond the perimeters of the excavation. Areas which were excavated to a depth of one (1) foot or more are considered sufficiently capped, with the excavation being backfilled with low permeability material. Areas outside of the excavation with exceedances were defined via hand auger soil sampling conducted by Warren Hohn Soil Testing in 2019 and 2020. The areas of contamination > 8 mg/kg arsenic are shown on Figure 2. The Town of Aniwa intends to solicit bids for capping of the additional areas detailed by the Department. The areas are shown on Figure 2.

The additional capping consists of three (3) distinct areas, to be described as "Northeast", "Northwest" and "Southwest". For the purposes of bidding, it is estimated that the Northeast area

is approximately 800 square feet, the Northwest 1,800 square feet, and the Southwest 1,100 square feet. The cap will be a minimum of twelve (12) inches in thickness for an estimated total of approximately 140 cubic yards of clay between the three (3) capping areas. The compacted cap material will have a hydraulic conductivity of less than 0.003 feet per day. REI will stake the areas to be capped prior to construction, and will be on site periodically to document the capping.

Monitoring Well Abandonment

Over thirty (30) years of groundwater sampling has demonstrated plume stability. As approved by the Department, equipment on site during construction will be used to remove the protective monitoring well risers. REI will fill the casings with chipped bentonite and cut the casings a minimum of six (6) inches below grade.

Construction Documentation Report

Upon completion of capping and monitoring well abandonment, REI will prepare a construction documentation report which summarizes construction. The report will include updated figures and photographs depicting the area of capping and summarizing the source and final volume of clay brought to the site. It is anticipated that an updated closure submittal will be appropriate following the documentation report. Closure will include a GIS registry on the residual soil and groundwater contamination, and continuing obligations for cap maintenance, and maintenance of the treatment system on the adjacent (Timm) potable well.

Evaluation of All Potential Contaminants

Based on the current and historic land use, it appears highly unlikely that perfluoroalkyl and polyfluoroalky substances were historically or are presently produced, used, handled or stored at the site. The source of the contamination is leftover sodium arsenite pesticide, which was stored in a shed on site from the 1930s to the 1950s. The site was wooded, vacant land before and since that time. Terracon (the EPA contractor) performed significant analysis beyond arsenic testing which included herbicides, pesticides, metals, Semi Volatile Organic Compounds (SVOCs), Volatile Organic Compounds (VOCs), Polychlorinated Biphenyls (PCBs), cyanide, flashpoint/ignitability, pH, and sulfide. All parameters beyond arsenic were non-detect.

REI will contact the Department when the capping has been scheduled. Thank you for your assistance with this project. Please contact me at (715) 675-9784 or Adelforge@REIengineering.com with any questions or comments.

Sincerely,
REI Engineering, Inc.

Andrew R. Delforge, P.G.
Senior Hydrogeologist

Enclosure A/S

CC: Dan Lex, Town of Aniwa Chairman, N10750 Sugarbush Road, Aniwa, WI 54414
Tammy Resch, Town of Aniwa Clerk (Electronic Only)
Warren Hohn (Electronic Only)

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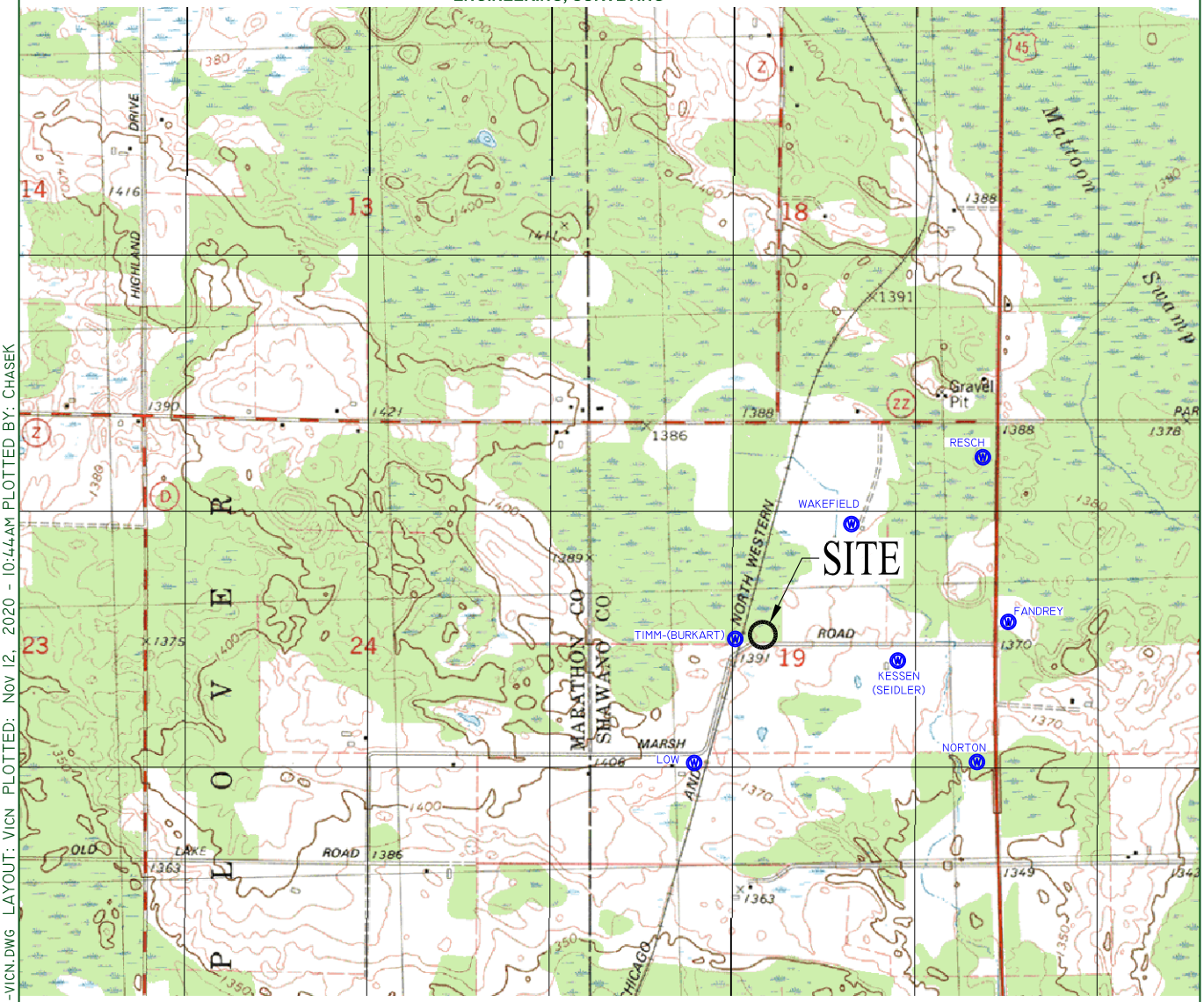

SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

W PRIVATE WELL

UTM GRID AND 1982 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

BIRNAMWOOD, WIS.
NW/4 WITTENBERG 15' QUADRANGLE
N4452.5–W8907.5/7.5

1982
REI Engineering, INC.

DRAWING FILE: P:\6600-6699\6663-TOWN OF ANIWA - ARSENIC SITE\DWG\6663-VICN.DWG LAYOUT: VICN PLOTTED: Nov 12, 2020 - 10:44AM PLOTTED BY: CHASEK

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

FIGURE 1 : LOCATION MAP

PROJECT NO.	DRAWN BY:	DATE:
6663	CJK	11/12/2020

XRF-A'0
SS-14
2020-B24
B3-19
B2-19
B4-19
2020-B13
SS-01
SS-02
SS-03
B1-19
2020-B23
B12-19
2020-B14
B5-19
SS-06
SS-05
SS-04
SS-07
2020-B15
XRF-D2/D3
SS-11
B11-19
SS-08
XRF-A'4
B6-19
SS-12
SS-09
SS-13
2020-B16
SS-10
XRF-A'5
B7-19
XRF-D4
SS-14
XRF-B5
B10-19
2020-B22
2020-B18
XRF-C5
B8-19
B9-19
XRF-A6
2020-B21
2020-B19
XRF-B6
XRF-C6
2020-B20

2015 EXCAVATION
EXTENTS AND EXISTING CAP

LEGEND

0 20
SCALE: 1" = 20'

- PROPOSED CAP AREA
- PROPERTY BOUNDARY
- 2015 EXCAVATION EXTENTS
- 2019 SOIL BORING
- 2020 SOIL BORING
- TETRA TECH SAMPLE LOCATION
- RESIDUAL ARSENIC ABOVE BACKGROUND THRESHOLD VALUE (8 MG/KG)

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

FIGURE 2 : PROPOSED ADDITIONAL CAP

PROJECT No.	DRAWN BY:	DATE:
6663	NAP	12/22/2020

DRAWING FILE: P:\6600-6699\6663-TOWN OF ANIWA - ARSENIC SITE\DWG\6663-SITE.DWG LAYOUT: FIGURE 3 PLOTTED: DEC 22, 2020 - 2:12PM PLOTTED BY: NATHANP