From: Nicole L. LaPlant <nlaplant@releeinc.com>
Sent: Tuesday, May 24, 2022 1:52 PM
To: Beggs, Tauren R - DNR
Cc: 'mjagemann@jagemannplating.com'; Rob Hoverman
Subject: Proposed Additional Soil & Groundwater Investigation - Jagemann Plating Co Inc, BRRTS # 02-36-555544
Attachments: Workplan Figures_05232022.pdf

Hello Tauren,

Robert E. Lee & Associates, Inc. (REL) has prepared a workplan for additional soil and groundwater investigation based on the results of the most recent soil and groundwater data from January/February 2022; and our discussion during the March 30, 2022 conference call. Isoconcentration maps of trichloroethene (TCE) in soil and groundwater based on the newly gathered soil and groundwater data are included as attached Figures 8.a and 9.a.

The proposed additional work is as follows:

- Advance three (3) soil borings within the northwest portion of the Building's manufacturing area using a Geoprobe® to further define the extent of the contaminants detected in soil beneath the Building to the north and west of borings B-22, B-23, and B-24. The proposed soil boring locations are shown in the attached Figure 5. Soil samples will be collected at two-foot continuous intervals to a maximum depth of 14 feet below grade (fbg) using hydraulic push sampling methods. Each soil sample will be described in the field by an REL geologist. One soil sample from the 0 to 4 fbg sampling interval in each boring will be submitted to Pace Analytical Services, LLC for analysis of VOCs, RCRA metals, and PFAS. A second soil sample from a depth greater than 4 fbg that exhibits the greatest PID reading or the greatest potential for contamination in each soil boring may also be submitted for laboratory for analysis. Soil sample collection, handling, and field-screening procedures will follow WDNR guidance and those included in our November 2021 workplan. Soil drill cuttings will be placed in 55-gallon steel drums and temporarily stored on-site, pending the results of the sampling.
- Following completion of soil sampling, three (3) temporary monitoring wells will be constructed within the borings to evaluate groundwater quality. The temporary wells will be constructed of one-inch diameter polyvinyl chloride (PVC) pipe with 10 feet of 0.010-inch slot screen placed to intersect the groundwater table. The actual screen length and interval will depend on field observations made during drilling. Wells will be installed with a filter pack and annual space seal. No glues, solvents, or lubricants will be used in the well construction. All wells will be completed with flush-mount protective covers. The horizontal and vertical locations of the new wells will be surveyed to determine the ground surface and groundwater elevation. The proposed temporary well locations are shown in the attached Figure 5.

- Following installation, REL personnel will develop the temporary monitoring wells using a peristaltic pump to remove the effects of drilling, well installation, and to maximize well yield. Development will continue until ten saturated well volumes are removed, or the wells produce sediment-free water. All well development and sampling equipment will be thoroughly cleaned between wells. Development water will be placed in 55-gallon steel drums and temporarily stored on-site, pending the results of the groundwater sampling.
- Following development and after the temporary wells have stabilized, the three (3) newly installed temporary monitoring wells and existing monitoring wells MW-4, MW-5, MW-6, MW-7, MW-17, MW-18, and MW-19; and Piezometers PZ-3, PZ-4, PZ-13, and PZ-16 will be sampled in accordance with WDNR *Groundwater Sampling Procedures (WDNR Publication No. PUBL 037-96 and PUBL 038-96)* and our November 2021 workplan. A sample will also be collected from the groundwater pit Sump 1. Prior to sampling, groundwater elevation data will be measured and recorded at each temporary well. The groundwater samples will be collected using low-flow sampling techniques and submitted to a Pace Analytical Services, LLC for analysis for VOCs and dissolved RCRA metals.
- Groundwater samples collected from the three (3) newly installed temporary wells and existing monitoring wells MW-4, MW-6, MW-7, MW-17, MW-18; Piezometers PZ-4, and PZ-16; and Sump 1 will also be laboratory analyzed for PFAS compounds analysis (WI PFAS List - 33 compounds). The analyses will be performed by PFAS WDNR-certified laboratory Pace Analytical Services, LLC. The WDNR is currently developing sampling guidance, groundwater standards, and other procedures aimed at the regulation of PFAS. Along with the developing WDNR regulatory procedures, there are several existing sampling guidance resources from various agencies such as the State of Michigan Department of Environment, Great Lakes, and Energy, the U.S. Department of Defense, the U.S. Environmental Protection Agency, and the Interstate Technology & Regulatory Council. REL has developed a standard operation procedure (SOP) for PFAS sampling in groundwater based on the procedures and guidance developed to date by these agencies. The groundwater samples will be collected in accordance with REL's *SOP 12 – PFAS Groundwater Sample Collection* included in the previous November 2021 workplan. One (1) field reagent blank will be collected for QA/QC purposes.
- The soil boring and monitoring well installation is currently scheduled for June 2, 2022. Laboratory analytical results are typically available within two weeks of the soil sampling. The temporary monitoring well(s) will be developed one to two weeks after installation, provided they yield water. Groundwater samples will be collected approximately one to two weeks following well development. Laboratory analytical results of the groundwater samples will be available within two weeks of sampling. Data evaluation will occur after receipt of the laboratory analysis from the soil and groundwater sampling, and the results will be tabulated and submitted to the WDNR for review per Ch. NR 716.14, Wis. Adm. Code.

Proposed work for an interim action and/or additional vapor sampling will be submitted under a separate cover. If you have any questions and/or comments, please let me know.

Thank you,

Nicole L. LaPlant
Project Manager/Geologist
920-662-9641 | nlaplant@releeinc.com

From: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>
Sent: Wednesday, April 6, 2022 11:07 AM
To: Nicole L. LaPlant <nlaplant@releeinc.com>
Subject: RE: Jagemann Plating Co Inc, BRRTS # 02-36-555544

Hi Nicole,

Yeah that is fine to just do an email work plan.

Regards,

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Tauren R. Beggs
Phone: (920) 510-3472
Tauren.Beggs@wisconsin.gov (preferred contact method during work at home)

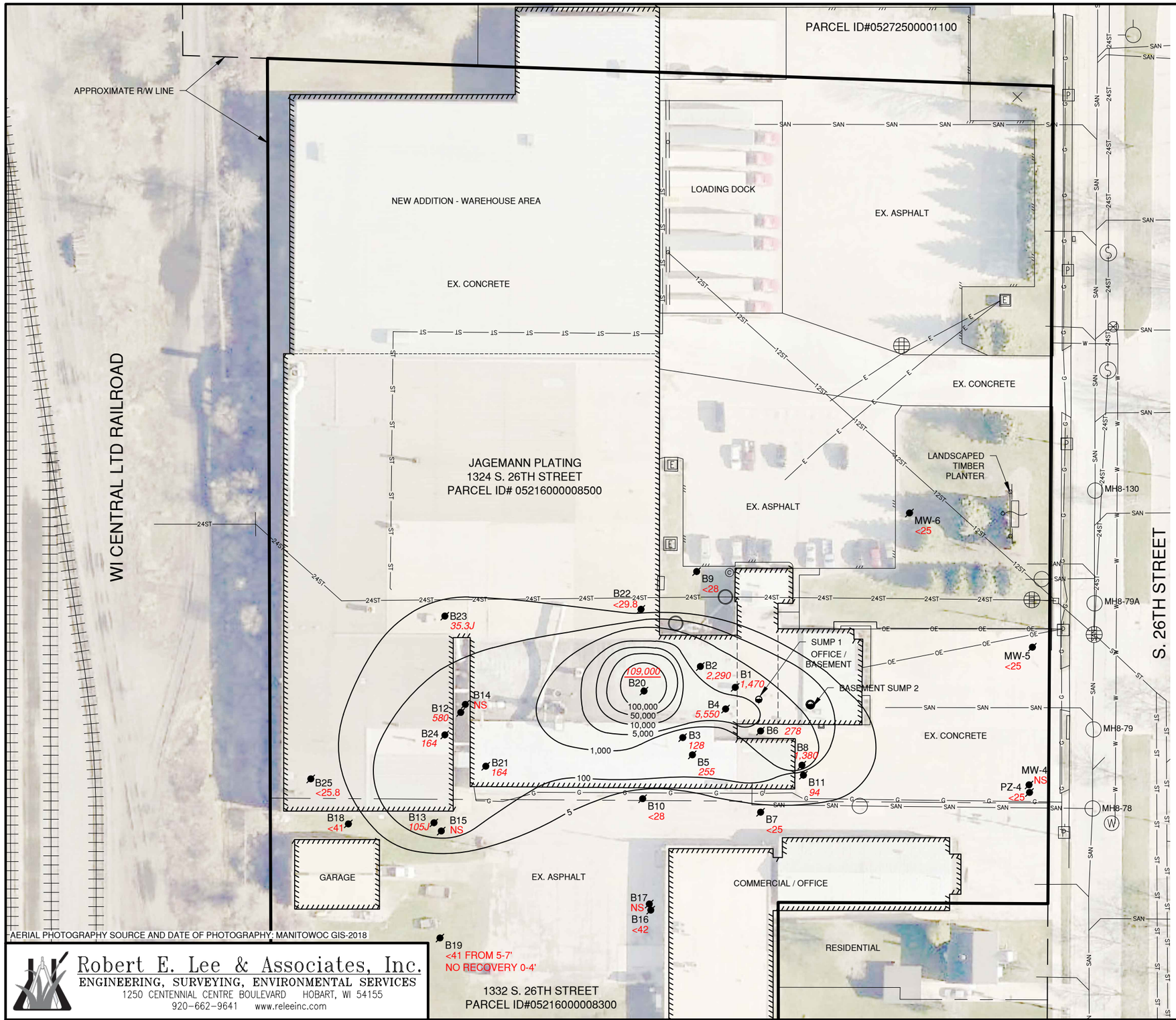
From: Nicole L. LaPlant <nlaplant@releeinc.com>
Sent: Wednesday, April 6, 2022 9:27 AM
To: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>
Subject: Jagemann Plating Co Inc, BRRTS # 02-36-555544

Hi Tauren –

Thank you again for the call last week. Since work plan for the additional site investigation will be brief, can we submit the proposed scope in an email format rather than a formal letter?

Thanks - Nicole

Nicole L. LaPlant
Project Manager/Geologist
920-662-9641 | nlaplant@releeinc.com



Robert E. Lee & Associates, Inc.
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920-662-9641 www.releeinc.com

NORTH

0' 60' 120'

SCALE IN FEET

LEGEND

- B12 — SOIL BORING LOCATION
- SUMP
- EX. SANITARY MANHOLE
- EX. STORM SEWER MANHOLE
- EX. STORM SEWER CATCH BASIN
- EX. FIRE HYDRANT
- EX. WATER VALVE
- EX. WATER MANHOLE
- EX. ELECTRIC PEDESTAL
- EX. POWER POLE
- ST — EX. STORM SEWER
- SAN — EX. SANITARY SEWER
- W — EX. WATERMAIN
- G — EX. GAS LINE
- E — EX. ELECTRIC LINE
- T — EX. TELEPHONE LINE
- F — EX. FIBER OPTICS LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SITE BOUNDARY LINE
- 100 — TCE ISOCONENTRATION LINE (MG/KG)
- 164 — CONCENTRATION (ug/kg) OF TCE IN SOIL FROM 0-4.5 FEET BELOW GRADE
- 8,410 — EXCEEDS INDUSTRIAL DIRECT CONTACT RCL OF 8,410 mg/kg
- NS — NO SAMPLES COLLECTED
- *3.6* — EXCEEDS GROUNDWATER PATHWAY RCL OF 3.6 mg/kg

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ISOCONCENTRATION OF TCE IN SOIL

FIGURE 8.a

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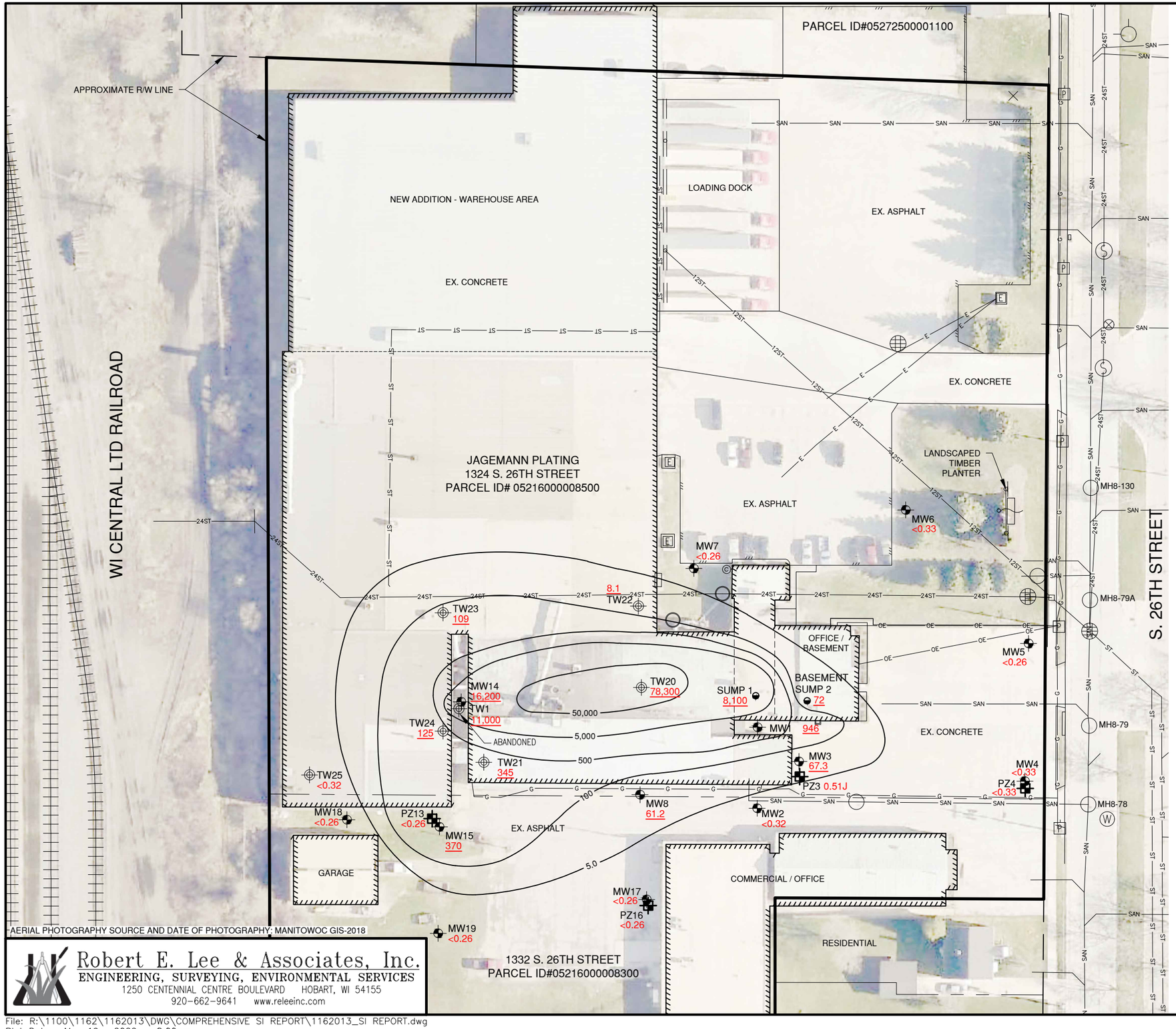
Plot Date: May 19, 2022 – 7:59am



AERIAL PHOTOGRAPHY SOURCE AND DATE OF PHOTOGRAPHY: MANITOWOC GIS-2018

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NORTH

0' 60' 120'

SCALE IN FEET

LEGEND

MW1	MONITORING WELL LOCATION
TW1	TEMPORARY WELL LOCATION
PZ1	PIEZOMETER LOCATION
	SUMP
	EX. SANITARY MANHOLE
S	EX. STORM SEWER MANHOLE
	EX. STORM SEWER CATCH BASIN
	EX. FIRE HYDRANT
	EX. WATER VALVE
W	EX. WATER MANHOLE
E	EX. ELECTRIC PEDESTAL
P	EX. POWER POLE
ST	EX. STORM SEWER
SAN	EX. SANITARY SEWER
W	EX. WATERMAIN
G	EX. GAS LINE
E	EX. ELECTRIC LINE
T	EX. TELEPHONE LINE
F	EX. FIBER OPTICS LINE
	PROPERTY LINE
	RIGHT OF WAY LINE
	SITE BOUNDARY LINE
500	TCE ISOCONENTRATION LINE (ug/L)
109	CONCENTRATION OF TCE (ug/L) IN GROUNDWATER
8,100	EXCEEDS CH. NR140 ENFORCEMENT STANDARD (ES= 5 ug/L)
125	EXCEEDS CH. NR140 PREVENTIVE ACTION LIMIT (PAL= 0.5 mg/L)

NOTE: CONCENTRATIONS LISTED ARE BASED ON THE MOST RECENT DATA COLLECTED.

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ISOCONCENTRATIONS OF TCE IN GROUNDWATER

FIGURE 9.a

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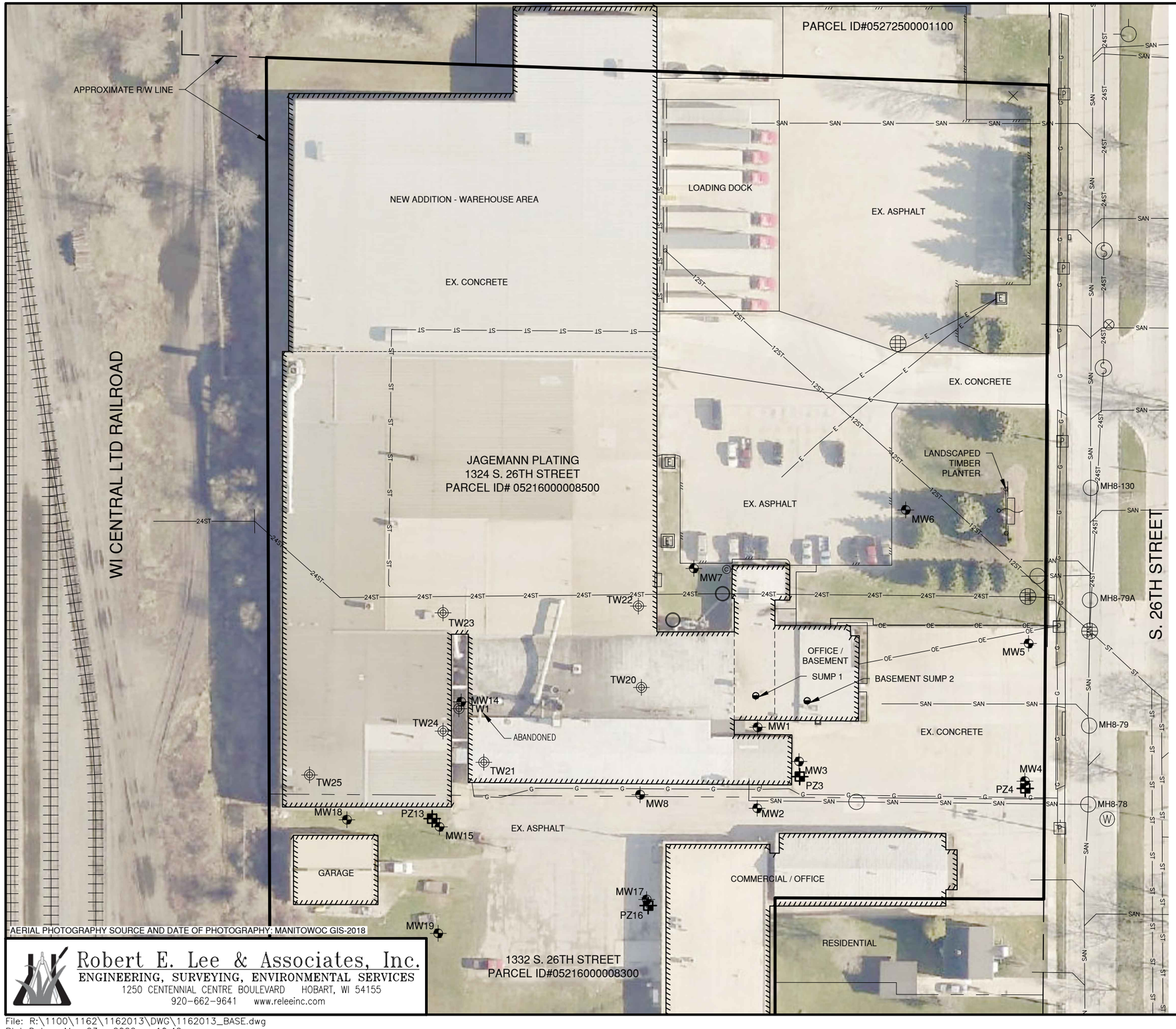

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NORTH

0' 60' 120'

SCALE IN FEET

LEGEND

- MW1 — MONITORING WELL LOCATION
- TW1 — TEMPORARY WELL LOCATION
- PZ1 — PIEZOMETER LOCATION
- SUMP
- EX. SANITARY MANHOLE
- EX. STORM SEWER MANHOLE
- EX. STORM SEWER CATCH BASIN
- EX. FIRE HYDRANT
- EX. WATER VALVE
- EX. WATER MANHOLE
- EX. ELECTRIC PEDESTAL
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- SAN — EX. SANITARY SEWER
- W — EX. WATERMAIN
- G — EX. GAS LINE
- E — EX. ELECTRIC LINE
- T — EX. TELEPHONE LINE
- F — EX. FIBER OPTICS LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SITE BOUNDARY LINE

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MANITOWOC, WI

MONITORING WELL LOCATIONS

FIGURE 5

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