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Sent: Tuesday, December 21, 2021 12:10 PM
To: Werner, Leah
Cc: Krueger, Sarah E - DNR; 'staci.goetz@ramboll.com'; Luke, Glenn R; Dan Vachon (Dan.Vachon@ramboll.com); 'adrienne.korpela@jacobs.com'
Subject: Former WPS Green Bay MGP - Supplemental Site Assessment Activities Along Utility Corridor
Attachments: PDI WP Memo Utility Corridor Investigation 12152021.pdf

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Leah,

As discussed during our last project update call, we are performing some supplemental investigation activities along the utility corridor near the shoreline at the former Green Bay MGP site. Attached is a brief description of the planned activities. Please feel free to contact me with any questions.

Thanks,

Frank Dombrowski
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*Serving WEC Energy Group, We Energies, Wisconsin Public Service, Michigan Gas Utilities,
Minnesota Energy Resources, Peoples Gas and North Shore Gas*

MEMO

Project name **Former Green Bay Manufactured Gas Plan**
 Project no. **1940101253**
 Client **Wisconsin Public Service Corporation**
 To **Frank Dombrowski**
 From **Staci Goetz**
 Copy to **Glenn Luke**

Prepared by **Dan Vachon**
 Checked by **Staci Goetz**
 Approved by **Jennifer Hagen**

1 Utility Court Corridor Investigation Work Plan, Pre-Design Investigation Work Plan, Addendum 1

Date December 15, 2021

Ramboll has prepared this Pre-Design Investigation Work Plan, Addendum 1 on behalf of Wisconsin Public Service Corporation (WPSC) for the upland portion of the Green Bay Former Manufactured Gas Plant (MGP) located in Brown County, Wisconsin (Figure 1). This investigation activity is being undertaken to augment information collected under the USEPA-approved August 2020 *Pre-Design Investigation Work Plan*.

Work Plan activities include the subsurface investigation of potential MGP impacted material located in the utility corridor in the upland operable unit (OU) adjacent to the sediment OU. At the end of August 2021, sheen was reported by a Wisconsin Department of Natural Resources (WDNR) contractor at a location upriver of remediated areas in the East River, adjacent to the Site. Sediment samples and surface water sheen samples determined that the source of the sheen was likely MGP-related. No known upland MGP source areas are adjacent to the August sheen observation. An adjacent utility corridor is a potential migration pathway, with water flowing through permeable fill which may have transported MGP residuals to the river. Visual observations of utility corridor backfill are proposed to evaluate this potential pathway.

Four soil borings (SB602, SB603, SB604 and SB605) are proposed to be advanced approximately 15 feet below the ground surface (bgs) using direct push technology in the primary investigation area shown on Figure 2. Six contingent step out borings, in a secondary and tertiary investigation area are also identified, dependent on visual observations of non-aqueous phase liquid (NAPL) or MGP residual (e.g. stain or sheen) in the field (Figure 2). Figure 3 shows the proposed boring locations and known utilities at a higher resolution. Due to the proximity to multiple underground utilities, all boring locations will be pre-cleared to approximately 5-feet bgs by use of soft dig methods (i.e., hydrovac, air knife, or hand auger). Actual boring locations will be dependent on utility markings,

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safety buffers, and property access. Field activities will be performed in accordance with the approved *Pre-design Investigation Work Plan, Revision 1* (August 2020).

2 Utility Clearance

Consideration was given to the known utilities when selecting the proposed investigation locations identified in Figure 2. Prior to initiation of any drilling or other intrusive work, underground and overhead utilities, including electric lines, gas lines, storm and sanitary sewers, and communication lines, will be identified. The process for conducting utility clearance is outlined below:

- Locate all investigation borings with flagging, survey stakes, and/or marking paint prior to the utility locate.
- Submit a request to Wisconsin's Diggers Hotline (Diggers), the utility one-call system, to initiate the utility-locating activities. Wisconsin state law requires that Diggers be notified at least three working days, and not more than 10 working days, before subsurface work is conducted.
- Subcontract a third-party utility location service to support identification of private subsurface utility infrastructure.
- Coordinate with participating utility-owning companies to locate and mark all respective subsurface utility lines within the Approximate Extent of Upland Site boundary presented on Figure 2.
- Precautions regarding safe distance from the overhead electrical lines will be reviewed and equipment offset distances flagged and marked, in accordance with the required clearances.
- All locations will be pre-cleared to approximately 5-feet bgs to depth identified by the utility owner with soft dig methods such as a hydrovac, air knife, or by hand using a shovel or hand auger or.
- Drilling and other intrusive activities will proceed with due caution for the top 10 feet of each investigation location.
- Proposed sampling locations identified on Figure 2 may be relocated to avoid subsurface and overhead utilities, as appropriate.

3 Sampling and Observations

The boring pre-clearing process may remove impacted backfill material; therefore, an observation procedure has been developed:

- Every ~2 feet bgs the hydrovac nozzle will be removed from the hole and if water is present, the water surface will be inspected for the presence of sheen. The visual inspections will continue to 5 feet bgs or until the utility is cleared.
 - If sheen is present on the water surface just above the utility, a sheen sample will be collected using a sheen net and analyzed for Alkylated PAHs and TPH w/PHI narration.

- Also, a grab water sample will be collected and analyzed for site PAHs¹, PVOCs², and metals³.
- Only one sheen net or grab water sample will be collected per sample area shown on Figure 2.

Soil borings will be advanced once utilities have been cleared. Borings will be advanced by direct push technology to 15-ft below ground surface or a minimum of 5-ft into native clay. Recovered soil will be characterized for soil texture (grain size), visual indication of DNAPL, color, odor, bedding features, secondary porosity features (e.g., fractures), or notable inclusions (e.g., wood, peat). Based on previous site characterization, native soil material in this area is not expected to be impacted so soil samples are not anticipated.

However, subsurface soil samples may be collected from all borings as follows:

- For borings that indicate the presence of contamination in native clay (through visual, olfactory, or PID indication), a sample of impacted material will be collected. A second sample will also be collected below the interval(s) of potential MGP residuals, to document vertical extent.

Soil logging guidance developed specifically for MGP investigations will be used to assist the field team in describing NAPL in borings is listed on below (Table A). If observations or field screening results suggest soil or utility backfill is impacted by a potentially unrelated source, it will be noted on the drilling logs.

Table A: Standard Descriptors for NAPL Observations

Descriptive Term	Standard Descriptors for Visual Observations of NAPL
No Visible Evidence	No visible evidence of oil on soil or sediment sample
Sheen	Any visible sheen in the water on soil or sediment particles or the core
Staining	Visible brown or black staining in soil or sediment; can be visible as mottling or in bands; typically associated with fine grained soil or sediment
Coating	Visible brown or black oil coating soil/sediment particles; typically associated with coarse grained soil or sediment (i.e. coarse sand, gravels, and cobbles).
Oil Wetted	Visible brown or black oil wetting the soil or sediment sample; oil appears as a liquid and is not held by soil or sediment grains

Based on field observations from the four primary soil borings and downhole inspections, the field team will determine which investigation area to sample next. If the visual evidence is observed within the Primary Investigation Area, the field team will move to collect borings in the Secondary Investigation Area and will continue into the Tertiary Investigation Area if the presence of contamination is observed. If no presence of contamination is observed in the Primary Investigation Area, the field team will move to collect borings in the Tertiary Investigation Area to determine if any potential contamination is observed at the western extent of the utility corridor. The field team will move to the Secondary Investigation Area if the presence of contamination is observed in the Tertiary Investigation Area.

¹ 2-Methylphenol (o-cresol), 2,4-Dimethylphenol, 3&4-Methylphenol (m&p-cresol), Phenol, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene

² 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, Toluene, Xylenes

³ Aluminum, Antimony, Arsenic, Barium, Cadmium, Chromium, Copper, Cyanide, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Vanadium, Zinc

Quality control (QC) samples will be collected as required by Multi-Site FSP SOP SAS-04-03. Samples will be labeled and packaged in accordance with Multi-Site FSP SOP SAS-03-01 and shipped using chain-of-custody procedures described in Multi-Site FSP SOP SAS-03-02. Equipment will be decontaminated after use in accordance with Multi-Site FSP SOP SAS-04-04.

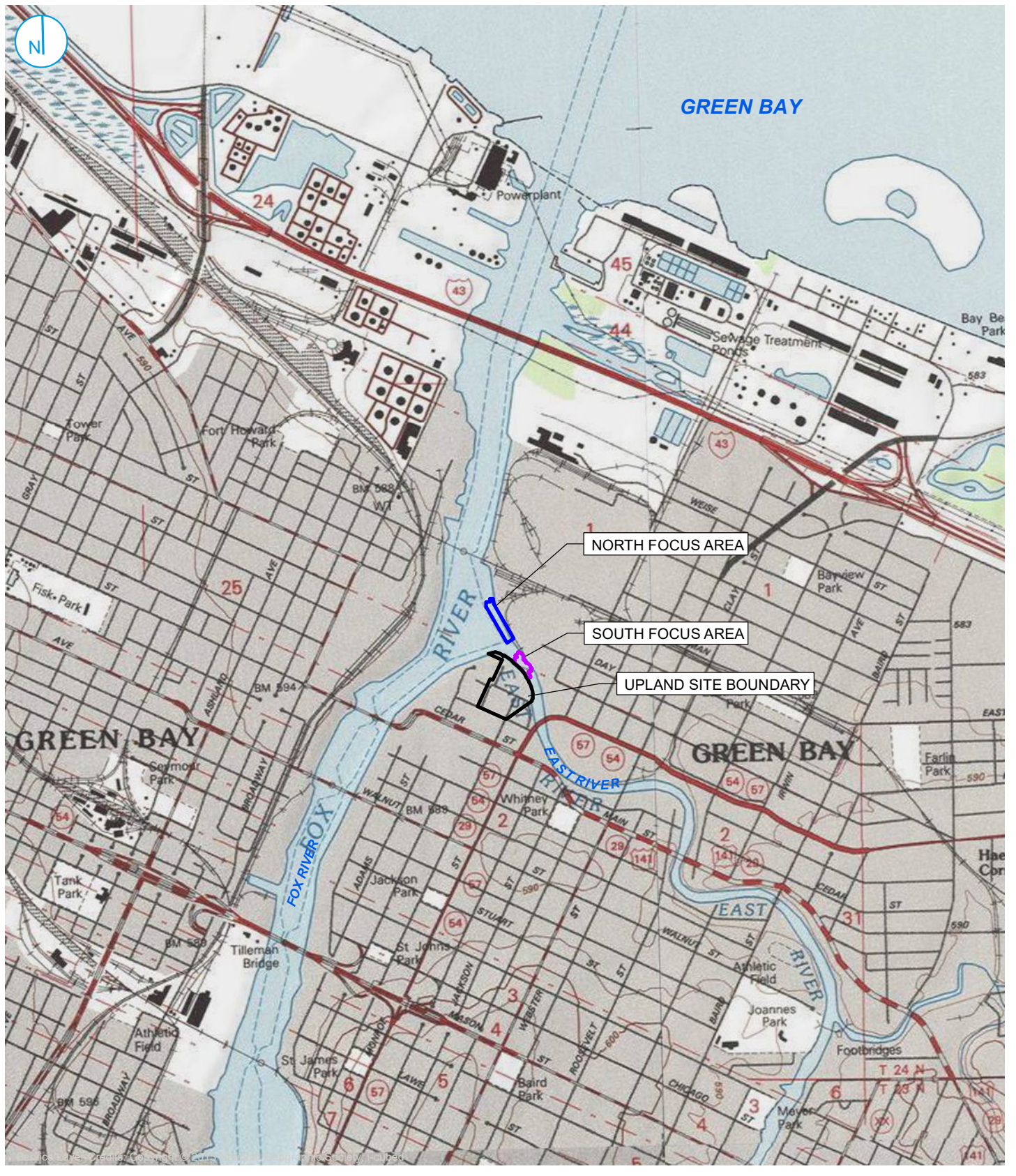
All investigation-derived waste (IDW) generated during the PDI activities will be collected and disposed using the on-site hydrovac truck. Any IDW generated during the PDI that cannot be collected using the hydrovac will be temporarily stored in properly labeled, 55-gallon drums and secured at a WPSC Service Center. IDW includes soil cuttings, decontamination pad and plastic sheeting, personal protective equipment (PPE), decontamination water, and pumped utility corridor contact/groundwater.

4 Attachments

Figure 1 – Site Location

Figure 2 – Proposed Utility Corridor Investigation Areas

Figure 3 – Proposed Investigation Locations



SITE LOCATION MAP

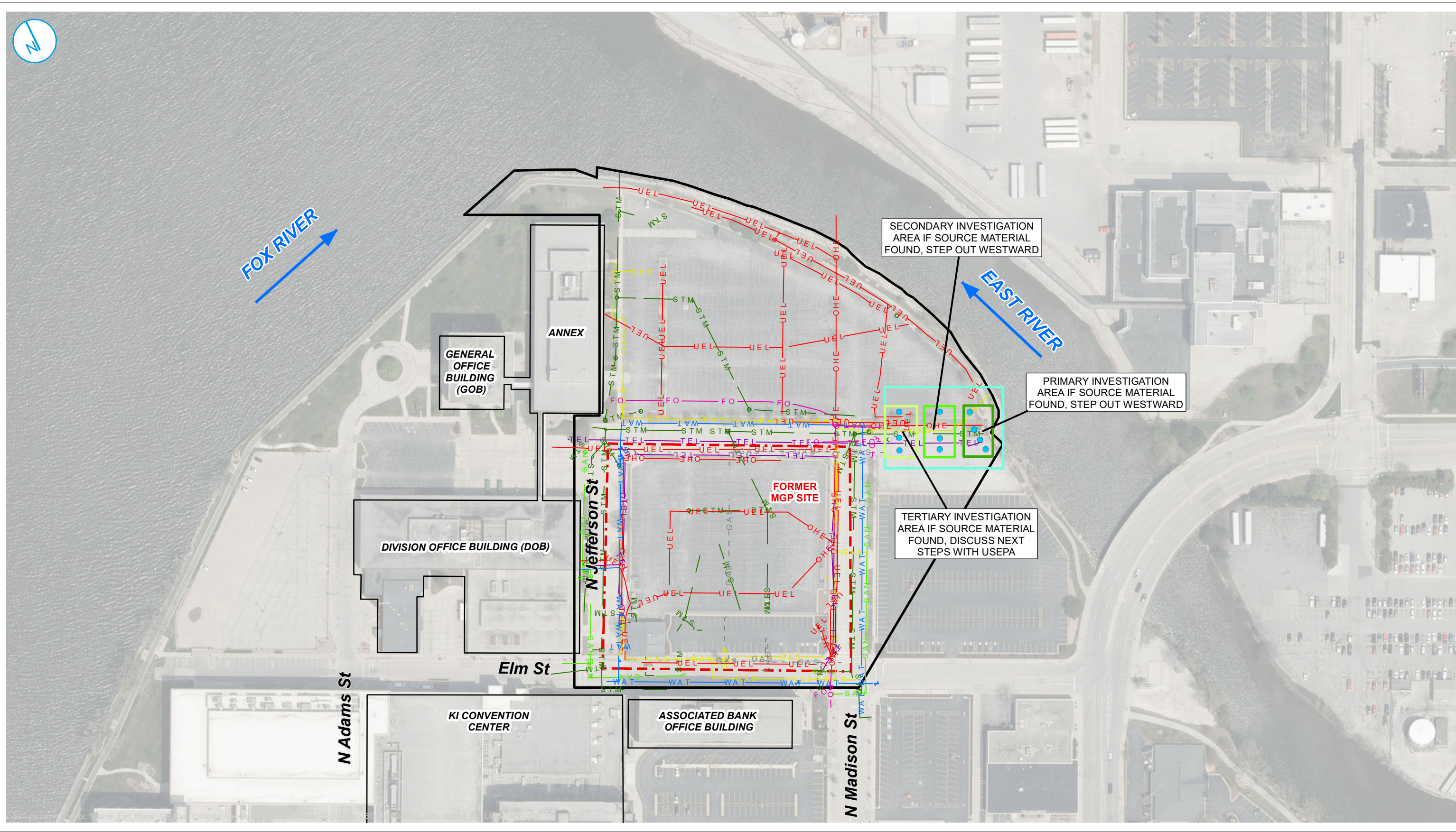
FIGURE 1

Map Scale: 1:1,24,000;
Map Center: 88°0'30"W 44°31'23"N

PRE-DESIGN INVESTIGATION WORK PLAN
FORMER GREEN BAY MANUFACTURED GAS PLANT
WISCONSIN PUBLIC SERVICE CORPORATION
CITY OF GREEN BAY, WISCONSIN

RAMBOLL US CORPORATION
A RAMBOLL COMPANY





- PROPOSED SAMPLE LOCATIONS
- INVESTIGATION AREA
- PRIMARY INVESTIGATION AREA
- SECONDARY INVESTIGATION AREA
- TERTIARY INVESTIGATION AREA
- UPLAND SITE BOUNDARY
- FORMER MGP SITE
- BUILDING FOOTPRINT
- UTILITIES
- FIBER OPTIC LINE
- GAS LINE
- SANITARY SEWER LINE
- STORM SEWER LINE
- TELEPHONE LINE
- WATER LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD ELECTRIC LINE
- ABANDONED GAS LINE

PROPOSED UTILITY CORRIDOR INVESTIGATION AREAS

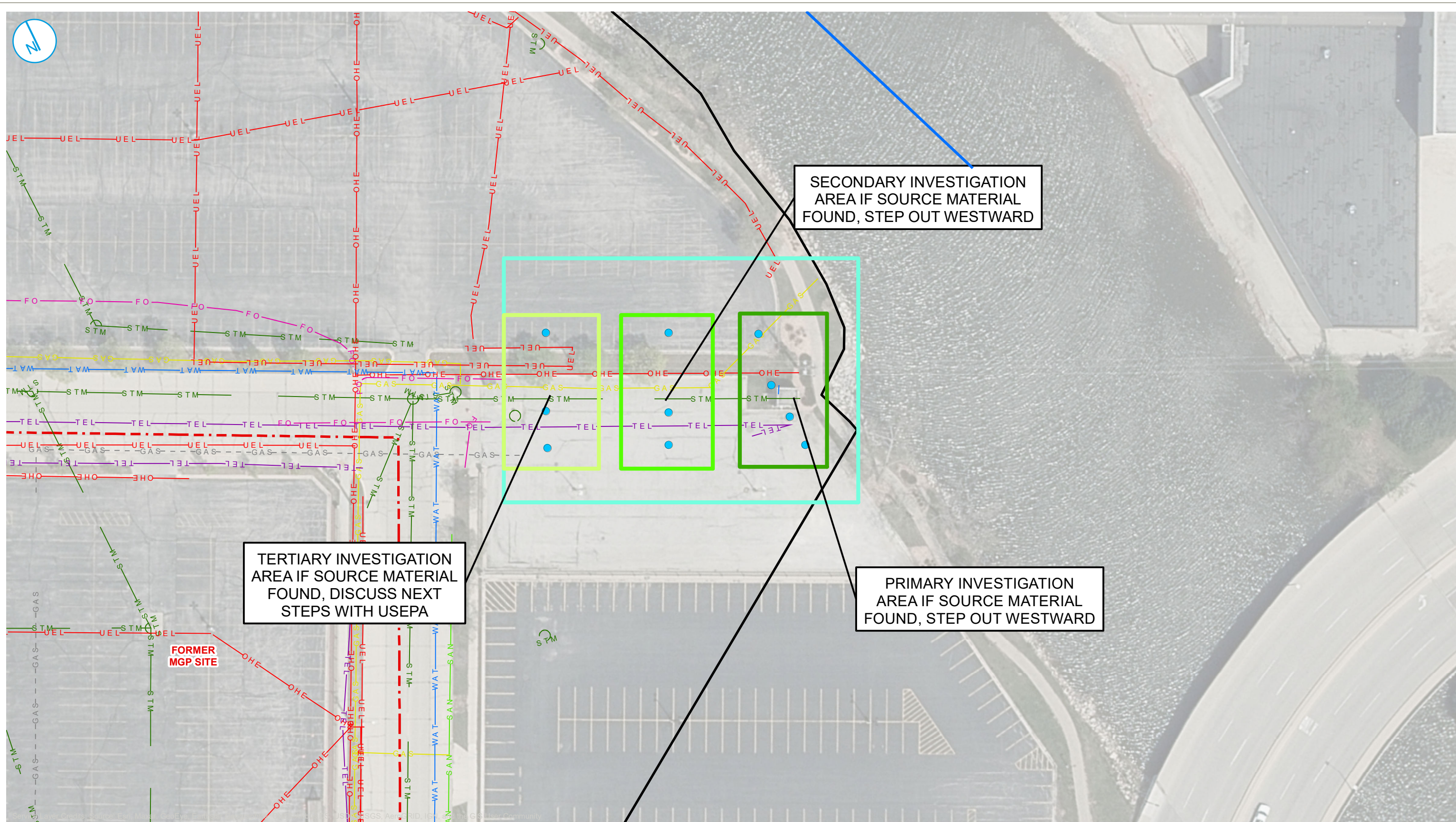


PRE-DESIGN INVESTIGATION WORK PLAN
FORMER GREEN BAY MANUFACTURED GAS PLANT
 WISCONSIN PUBLIC SERVICE CORPORATION
 GREEN BAY, WISCONSIN

FIGURE 2



PROJECT: 169000XXXXX | DATED: 11/9/2021 | DESIGNER: COOKEDT
 Y:\GIS\Projects\1511584\MXD\PD\I_EvaluationReport\Figure 6B_Existing Utility_Location_Map.mxd



TERTIARY INVESTIGATION AREA IF SOURCE MATERIAL FOUND, DISCUSS NEXT STEPS WITH USEPA

SECONDARY INVESTIGATION AREA IF SOURCE MATERIAL FOUND, STEP OUT WESTWARD

PRIMARY INVESTIGATION AREA IF SOURCE MATERIAL FOUND, STEP OUT WESTWARD

- PROPOSED SAMPLE LOCATIONS
- INVESTIGATION AREA
- PRIMARY INVESTIGATION AREA
- SECONDARY INVESTIGATION AREA
- TERTIARY INVESTIGATION AREA
- UPLAND SITE BOUNDARY
- FORMER MGP SITE
- BUILDING FOOTPRINT
- UTILITIES
- FO — FIBER OPTIC LINE
- GAS — GAS LINE
- SAN — SANITARY SEWER LINE
- STM — STORM SEWER LINE
- TEL — TELEPHONE LINE
- WAT — WATER LINE
- UEL — UNDERGROUND ELECTRIC LINE
- OHE — OVERHEAD ELECTRIC LINE
- GAS — ABANDONED GAS LINE



PROPOSED INVESTIGATION LOCATIONS

PRE-DESIGN INVESTIGATION WORK PLAN
FORMER GREEN BAY MANUFACTURED GAS PLANT
 WISCONSIN PUBLIC SERVICE CORPORATION
 GREEN BAY, WISCONSIN

FIGURE 3

RAMBOLL US CORPORATION
 A RAMBOLL COMPANY

