

## Lauridsen, Keld B - DNR

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**From:** Beaulieu, Jacquelyn Marie <jacquelyn.beaulieu@gapac.com>  
**Sent:** Monday, June 5, 2023 11:41 AM  
**To:** Lauridsen, Keld B - DNR  
**Cc:** Savale, Michael; Schultz, Josie M - DNR; Bonniwell, Chris; Mrotek, Melissa A  
**Subject:** RE: GP Broadway Mill Expansion - PFAS (BRRTS # 02-05-586429)  
**Attachments:** Figure 1\_Site Details\_05-31-23.pdf

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Keld

Please see below for GP's responses to the requested follow up the facility received from the WDNR regarding the Groundwater Evaluation Summary Report GP submitted to the department on March 28, 2023.

### 1) Potential for Vapor Intrusion

*Based on the available soil sampling results, it appears that buildings 99 and 125, at a minimum, may be at risk for vapor intrusion based on the screening guidelines in DNR guidance document RR-800, Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin. Please provide additional information on building use and occupancy, any air exchange and any utility lines leading to the buildings from the areas of known VOC contamination.*

Correction – The previously submitted documents incorrectly identified Building 125, which should have been noted as Building 129.

#### **Building 99**

WDNR identified that Building 99 potentially screens in for VI due to its proximity to soil boring SB-21, which contained low-level concentrations of tetrachloroethene (PCE) [0.0785 mg/kg]; 1,1,1-trichloroethane (1,1,1-TCA) [0.1402 mg/kg]; 1,1-dichloroethane (1,1-DCA) [0.4834 mg/kg]; and methylene chloride [0.0026 mg/kg]. However, a review of the soil investigative records shows the GPS location of SB-21 (N44°29'25.62266", W88°01'55.30203") to be greater than 100 ft from the nearest (southeast) corner of Building 99 (108 ft). Per RR 800, structures within 100 ft. of chlorinated volatile organic compound (CVOC) soils impacts are required to be evaluated.

Although GP does not believe Building 99 screens in for VI based on proximity, GP is providing Building 99 usage details as follows.

- The building operation is related to pulp paper production and is in continuous operation with a technical staff of 2-4 full-time and 3-4 part-time personnel performing operations on 24/7 timeframe.
- There are no offices, break rooms, or control rooms within the building. Two open-air desk spaces are utilized by technicians while not performing operational activities.
- The building has high ceilings (not measured) and has no HVAC operating units. Summer operations typically include open-door operations, while winter operations are typically closed-door.

Tetra Tech reviewed the facility utility maps to identify potential VI preferential pathways in the vicinity of SB-21. No utility structures transect the SB-21 vicinity with connection to nearby structures.

Based upon the low-level soil concentrations at SB-21, its location greater than 100 ft from the structure, the high ceiling industrial operation, lack of contained operating spaces (e.g., offices), and lack of preferential pathways connecting to the building, Tetra Tech considers the building to be unlikely at risk for VI.

#### **Building 129**

The building potentially screens in for VI due to its proximity to the adjacent sludge press area excavation. Analytical results from spoil pile samples SP-01 through SP-12 originating from that excavation identified low-level concentrations of CVOCs including 1,1,1-trichloroethane (1,1,1-TCA) [max 0.105 mg/kg]; 1,1-dichloroethane (1,1-DCA) [max 0.131 mg/kg]; PCE [max 0.0596 mg/kg]; trichloroethene (TCE) [max 0.0535 mg/kg]; and methylene chloride [max 0.0026 mg/kg]. While these soils originated within the 100 ft screening criteria of RR-800 from Building 129, the soils were excavated and removed from the area.

Building usage details are as follows.

- The building operation is related to sludge press operations that are continuous on a 24/7 schedule. There are no permanent staff in the location. Occupancy is generally limited to technicians inspecting the operating equipment every two hours, which typically takes 5 – 10 minutes. Longer technician presence may occur during equipment shutdowns.
- There are no offices, break rooms, or control rooms within the building.
- The building has high ceilings (not measured).
- The HVAC continuously maintains positive pressure within the structure, and building doors remain closed year-round.

Tetra Tech reviewed the facility utility maps to identify potential VI preferential pathways in the vicinity of the sludge press excavation area. While there are several types of utilities in the immediate area of the sludge press excavation, the majority are sealed process lines that are unlikely to serve as preferential pathway conduits and/or connect to structures located a considerable distance away.

Based upon the low-level soil concentrations from excavation soil samples, the subsequent removal of excavated soils, lack of continuous occupancy, continuous state of positive pressure (which minimizes the potential for sub-slab vapor to migrate upward into the building), and lack of preferential pathways connecting the excavation area to the building, Tetra Tech considers the building to be unlikely at risk for VI.

## 2) Delineation of VOC Soil Impacts

*Residual metal, PAH and PCB contamination in soil will likely be delineated as property-wide or within portions of the property having contaminated historic soil fill present. It may be possible to delineate areas of VOCs in soil as this type of contaminant is less likely to be present property-wide. Any available soil data from other contamination cases on the property may potentially be used to better delineate residual contamination.*

Tetra Tech has reviewed historical investigative activities associated with the facility, specifically closed BRRTS incidents #02-05-583452, #02-05-563707, #02-05-584460, and #02-05-000627 to determine if additional VOC soil data are available to refine delineation of the low-level VOC soil detections identified in the Groundwater Evaluation Summary Report. A summary of the evaluation is as follows:

### *#02-05-583452 – GPO Broadway Mill Expansion*

The identified BRRTS incident was limited to analysis of per- and polyfluorinated substances (PFAS) and thus included no VOC soil data.

### *#02-05-563707 Buth Oil Facility (Former)*

The BRRTS incident is associated with investigation and remediation of petroleum impacts located in the northwest parking lot of the GP Broadway facility, which is not proximal to the soil characterization activities in question. However, documents associated with the BRRTS incident identify the re-use of excavated soils along the northeast perimeter of the property (see Figure) that are generally coincident with soil boring locations SB-9 through SB-15 as visible in site maps as landscapes lobes. While the documentation of re-used soils does not refine delineation of VOCs, it supports a conclusion of historic contaminated fill including VOCs.

### *#02-05-584460 – GP Broadway Mill – Boiler 6 Area*

The identified BRRTS incident was limited to analysis of metals and thus included no VOC soil data.

### *#02-05-000627 – Wisconsin/Michigan Auto Salvage*

The identified BRRTS incident is associated with investigation and remediation of chlorinated VOC impacts located in the northwest parking lot area of the property, which is not proximal to the soil characterization activities in question.

Based on a review of previous investigative activities associated with the larger GP Broadway property extent, no additional soil data was identified to further refine the soil data compiled in the Groundwater Investigation Summary

Report. On-site re-use of soils associated with BRRTS #02-05-563707 along the northeast perimeter are coincident with several soil boring locations. Based on the low-level concentrations of VOCs identified in soil borings, the re-use of impacted soils on the property, the industrial nature of the property area in question, and no detectable VOC concentrations in groundwater, Tetra Tech believes that no additional delineation of VOCs is warranted.

### 3) Characterization of the Wet Well

*Provide further explanation of the purpose and construction of the “wet well” referenced in the report.*

The “wet well” terminology refers to an engineering structure that will serve as a stormwater retention basin and lift station. The structure is concrete lined, and engineering drawings of the structure are available for further clarification if needed.

Please let me know if you have any additional questions or comments.

Thank you,

## Jacquelyn Beaulieu (Pomerville)

### **Environmental Manager**

Georgia-Pacific Consumer Operations LLC  
Green Bay Operations  
Office #: 920-438-4243  
Cell #: 920-606-3228  
[jacquelyn.beaulieu@gapac.com](mailto:jacquelyn.beaulieu@gapac.com)

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**From:** Lauridsen, Keld B - DNR <Keld.Lauridsen@wisconsin.gov>  
**Sent:** Tuesday, April 18, 2023 4:42 PM  
**To:** Beaulieu, Jacquelyn Marie <jacquelyn.beaulieu@gapac.com>; Mrotek, Melissa A <MELISSA.MROTEK@GAPAC.com>  
**Cc:** Savale, Michael <Michael.Savale@tetrattech.com>; Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>  
**Subject:** RE: GP Broadway Mill Expansion - PFAS (BRRTS # 02-05-586429)

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Jacquelyn and Melissa,

DNR has reviewed the *Groundwater Evaluation Summary Report* received on March 28, 2023, and provides the following comments:

- Based on the limited groundwater data available, it does not appear that groundwater has been significantly impacted by the metals, PAHs, VOCs, and PCBs found in soil.
- Based on the available soil sampling results, it appears that buildings 99 and 125, at a minimum, may be at risk for vapor intrusion based on the screening guidelines in DNR guidance document RR-800, *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*. Please provide additional information on building use and occupancy, any air exchange and any utility lines leading to the buildings from the areas of know VOC contamination.
- Residual metal, PAH and PCB contamination in soil will likely be delineated as property-wide or within portions of the property having contaminated historic soil fill present. It may be possible to delineate areas of VOCs in soil as this type of contaminant is less likely to be present property-wide. Any available soil data from other contamination cases on the property may potentially be used to better delineate residual contamination.
- Provide further explanation of the purpose and construction of the “wet well” referenced in the report.

Let me know if you would like to discuss anything in more detail.

Thanks,

-Keld

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**Keld B. Lauridsen**

Phone: (920) 510 8294

[Keld.Lauridsen@wisconsin.gov](mailto:Keld.Lauridsen@wisconsin.gov)

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**From:** Beaulieu, Jacquelyn Marie <[jacquelyn.beaulieu@gapac.com](mailto:jacquelyn.beaulieu@gapac.com)>

**Sent:** Tuesday, March 28, 2023 1:19 PM

**To:** Lauridsen, Keld B - DNR <[Keld.Lauridsen@wisconsin.gov](mailto:Keld.Lauridsen@wisconsin.gov)>

**Cc:** Savale, Michael <[Michael.Savale@tetrattech.com](mailto:Michael.Savale@tetrattech.com)>; Mrotek, Melissa A <[MELISSA.MROTEK@GAPAC.com](mailto:MELISSA.MROTEK@GAPAC.com)>

**Subject:** RE: GP Broadway Mill Expansion - PFAS (BRRTS # 02-05-586429)

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Keld

Attached is the groundwater evaluation report for the other contaminants found in the soil during the May and June 2022 soil characterization events that were above the groundwater pathway RCLs that were part of the Georgia-Pacific Broadway LLC PFAS Site Investigation (BRRTS # 02-05-586429).

Samples for this evaluation were taken January 19, 2023 and the results are summarized in this report. This report also provides an evaluation of potential VOC vapor intrusion (VI) into occupied buildings on site and includes a summary and conclusions.

Please let me know if you want this also uploaded into BRRTs under BRRTS # 02-05-586429.

Thank you,

**Jacquelyn Beaulieu (Pomerville)**

***Environmental Manager***

Georgia-Pacific Consumer Operations LLC

Green Bay Operations

Office #: 920-438-4243

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**From:** Mrotek, Melissa A <[MELISSA.MROTEK@GAPAC.com](mailto:MELISSA.MROTEK@GAPAC.com)>  
**Sent:** Monday, January 23, 2023 7:52 AM  
**To:** Lauridsen, Keld B - DNR <[Keld.Lauridsen@wisconsin.gov](mailto:Keld.Lauridsen@wisconsin.gov)>  
**Cc:** Beaulieu, Jacquelyn Marie <[jacquelyn.beaulieu@gapac.com](mailto:jacquelyn.beaulieu@gapac.com)>; Savale, Michael <[Michael.Savale@tetrattech.com](mailto:Michael.Savale@tetrattech.com)>; Nobile, Trevor W - DNR <[Trevor.Nobile@wisconsin.gov](mailto:Trevor.Nobile@wisconsin.gov)>  
**Subject:** RE: GP Broadway Mill Expansion - PFAS (BRRTS # 02-05-586429)

Keld – Please see our responses to your comments below in red.

Thanks,  
Melissa

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**From:** Lauridsen, Keld B - DNR <[Keld.Lauridsen@wisconsin.gov](mailto:Keld.Lauridsen@wisconsin.gov)>  
**Sent:** Tuesday, November 22, 2022 10:37 AM  
**To:** Mrotek, Melissa A <[MELISSA.MROTEK@GAPAC.com](mailto:MELISSA.MROTEK@GAPAC.com)>  
**Cc:** Beaulieu, Jacquelyn Marie <[jacquelyn.beaulieu@gapac.com](mailto:jacquelyn.beaulieu@gapac.com)>; Savale, Michael <[Michael.Savale@tetrattech.com](mailto:Michael.Savale@tetrattech.com)>; Nobile, Trevor W - DNR <[Trevor.Nobile@wisconsin.gov](mailto:Trevor.Nobile@wisconsin.gov)>  
**Subject:** GP Broadway Mill Expansion - PFAS (BRRTS # 02-05-586429)

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Melissa,

DNR has completed a cursory review of the Summary Report for the recent soil and groundwater sampling at the above referenced site and the following comments are provided:

PFAS investigation:

- Groundwater analytical results should be compared to the proposed ESs/PALs (Cycle 11).  
**The facility will include this comparison for future submittal of groundwater analytical results.**
- The proposed additional round of groundwater sampling for PFAS is acceptable at this time.  
**The facility proposes to follow previous groundwater sampling site investigation work plans for the 2023 sampling event.**
- It is helpful if a delineation of groundwater contamination is provided. It is understood that degree and extent may not be fully defined at this point in time. It is acceptable to depict an incomplete delineation by a dashed line.  
**The facility will provide an estimated delineation of the groundwater contamination to the extent possible after additional groundwater monitoring events occur.**
- The potential for a discharge to surface water and sediment in the Fox River should be evaluated.  
**The facility will take this into consideration as the investigation continues.**

Other contaminants (VOCs, PAHs, metals & PCBs):

- The proposed round of groundwater sampling from select wells for any contaminant found in soil above groundwater pathway RCLs is acceptable at this time.  
**The facility completed this round of groundwater sampling on January 19<sup>th</sup>.**
- It is helpful if a delineation of soil contamination is provided. It is understood that degree and extent may not be fully defined at this point in time. It is acceptable to depict an incomplete delineation by a dashed line.  
**The facility will provide an estimated delineation of the soil contamination to the extent possible with the submission of the groundwater sample results from the January 19<sup>th</sup> sampling event.**
- Based on the VOCs found, it should be evaluated if vapor intrusion into any occupied buildings could be a concern per DNR guidance document RR-800.

The facility will conduct this evaluation and will include the results with the submission of the groundwater sample results from the January 19<sup>th</sup> sampling event.

- It is anticipated that cap maintenance for direct contact and groundwater pathway protection will be required as part of case closure requirements at some point in the future.

**Noted.**

- The potential for a discharge to surface water or sediment in the Fox River should be evaluated.

The facility will take this into consideration as the investigation continues.

Depending on future findings, additional soil and groundwater sampling will likely be needed to fully define degree and extent of all contaminants found during this ongoing soil and groundwater investigation.

Let me know if you would like to discuss any of the above in more detail.

Thanks,

-Keld

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**Keld B. Lauridsen**

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**From:** Mrotek, Melissa A <[MELISSA.MROTEK@GAPAC.com](mailto:MELISSA.MROTEK@GAPAC.com)>

**Sent:** Friday, November 11, 2022 9:56 AM

**To:** Lauridsen, Keld B - DNR <[Keld.Lauridsen@wisconsin.gov](mailto:Keld.Lauridsen@wisconsin.gov)>

**Cc:** Beaulieu, Jacquelyn Marie <[jacquelyn.beaulieu@gapac.com](mailto:jacquelyn.beaulieu@gapac.com)>; Savale, Michael <[Michael.Savale@tetrattech.com](mailto:Michael.Savale@tetrattech.com)>

**Subject:** GP Green Bay - PFAS Site Investigation Summary Report

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Keld – please see attached GP Green Bay – PFAS Site Investigation Report (BRRTS #: 02-05-586429). This has also been uploaded to the BRRTS Site. The file is rather large so hopefully it makes it through. Please advise if you will need a hard copy sent.

Thanks,

*Melissa Mrotek*

Senior Environmental Engineer

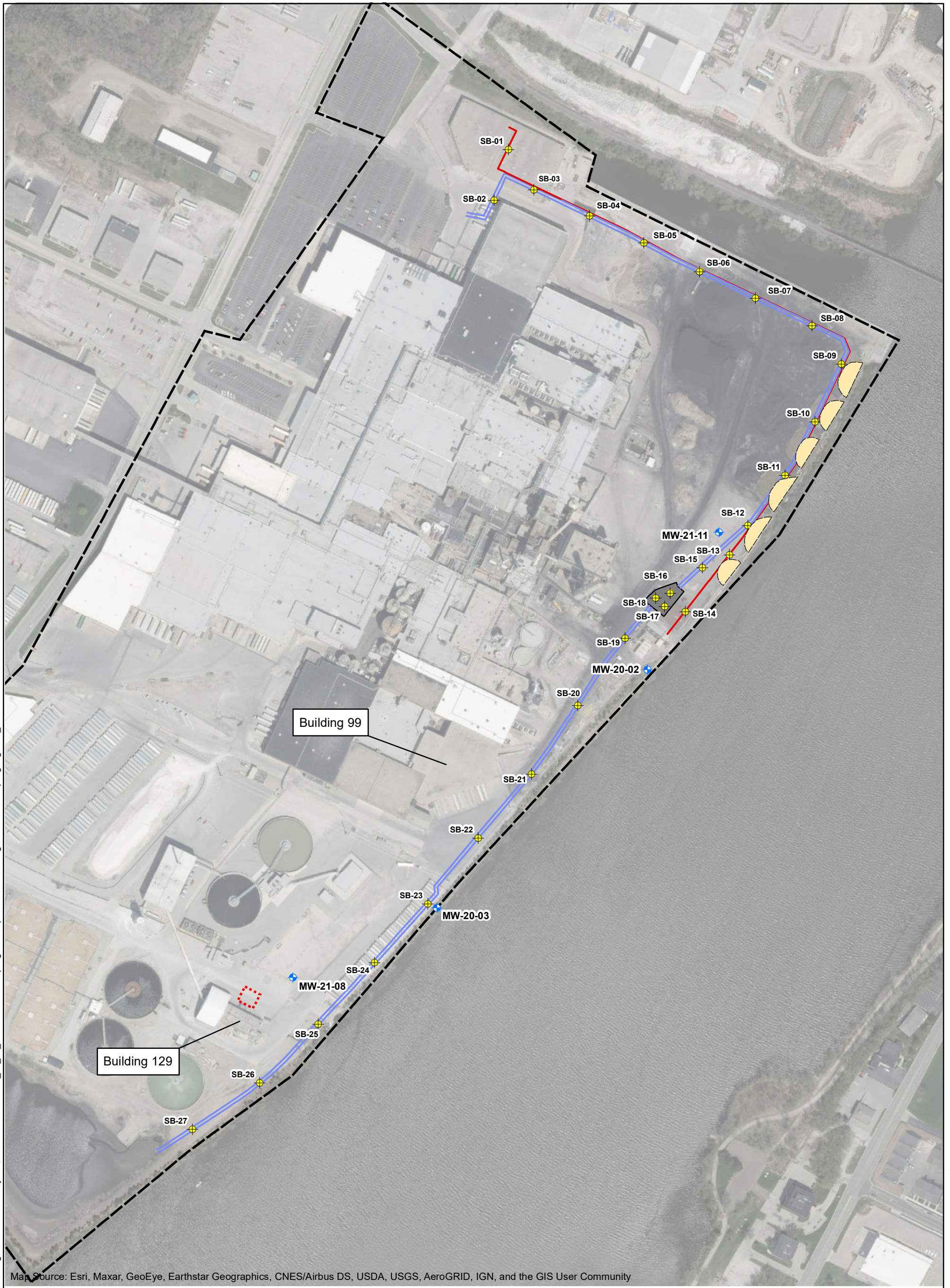
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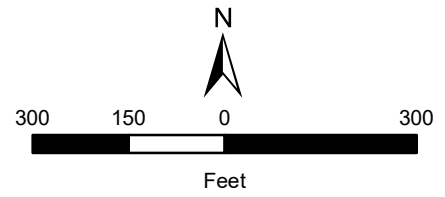


5/31/2023 - 10:37:32 PM - P:\Projects-ECA\Projects\Georgia-Pacific\Broadway Mill, W\Documents\2023\_03\_08\_Groundwater Sampling and Report Revisions\3. Figures - GW Sampling\Figure 1\_Site Details.mxd



Map Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

- Approximate Site Boundary
- Approximate Sludge Press Excavation Area
- Wet Well
- + May 2022 Soil Sample Location
- Storm Sewer Excavation
- + Monitoring Well
- Cinco FP Pipe
- Soil Re-Use Locations from BRRTS #02-05-563707



Notes:  
 Figure depicts analytes detected above the Method Detection Limit.  
 (J) = The amount detected is greater than the Method Detection Limit, but less than the Reporting Limit.  
 Results are in micrograms per liter

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GEORGIA-PACIFIC BROADWAY MILL  
 GREEN BAY, WISCONSIN

**SITE DETAILS**

Designed by:	MC
Date:	5/31/2023
FIGURE	
1	