

Lauridsen, Keld B - DNR

From: Lauridsen, Keld B - DNR
Sent: Wednesday, September 18, 2019 3:12 PM
To: Miller, Roger
Cc: POMERVILLE, JACQUELYN; 'Michael T. Moore'; Mrotek, Melissa (GBY); Killian, Paul; Chronert, Roxanne N - DNR; Kelly, Bridget B - DNR; Nobile, Trevor W - DNR
Subject: RE: G-P Broadway Mill Boiler 6 Area Sampling Approach

Roger,

I have reviewed the additional work proposed below in order to define the degree and extent of remaining lead contaminated soil at the above referenced location. This email serves as your notice to proceed with the additional soil sampling activities. Depending on the soil sampling results, it needs to be evaluated if groundwater sampling for lead will be necessary.

Now that total lead above the groundwater pathway and non-industrial direct contact RCLs has been confirmed in soil, a release to the environment should be reported to DNR using the document in the link below:

<https://dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf>

As outlined in my email dated August 29, 2019, for the GP Broadway Mill Expansion site (BRRS # 02-05-583452), it is anticipated that PFAS sampling will be completed at Georgia-Pacific Broadway facility at some point in the near future. A separate letter for the PFAS sampling related to the GP Broadway Mill Expansion case is in the process of being drafted.

Let me know if we need to discuss anything further.

Thanks,

-Keld

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Keld B. Lauridsen

Phone: (920) 662-5420

Keld.Lauridsen@wisconsin.gov

From: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>
Sent: Tuesday, September 3, 2019 1:55 PM
To: Miller, Roger <rmiller@geiconsultants.com>
Cc: POMERVILLE, JACQUELYN <JACQUELYN.POMERVILLE@GAPAC.COM>; 'Michael T. Moore' <Michael.Moore@gapac.com>; Mrotek, Melissa (GBY) <MELISSA.MROTEK@GAPAC.com>; Killian, Paul <pkillian@geiconsultants.com>; Lauridsen, Keld B - DNR <Keld.Lauridsen@wisconsin.gov>
Subject: RE: G-P Broadway Mill Boiler 6 Area Sampling Approach

Hi Roger,

Now that Keld is back, he will take over from here since he is the DNR project manager. I have included him on this email. After he got back from vacation, I provided him the information for this site that we had discussed while he was gone.

Regards,

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Tauren R. Beggs

Phone: (920) 662-5178

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From: Miller, Roger <rmiller@geiconsultants.com>

Sent: Tuesday, September 3, 2019 1:44 PM

To: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>

Cc: POMERVILLE, JACQUELYN <JACQUELYN.POMERVILLE@GAPAC.COM>; 'Michael T. Moore' <Michael.Moore@gapac.com>; Mrotek, Melissa (GBY) <MELISSA.MROTEK@GAPAC.com>; Killian, Paul <pkillian@geiconsultants.com>

Subject: G-P Broadway Mill Boiler 6 Area Sampling Approach

Tauren,

As a follow-up to our recent communications and on behalf of Georgia-Pacific Consumer Operations LLC (G-P), GEI Consultants, Inc. (GEI) is providing you with information on existing sampling results and the planned sampling approach to further characterize conditions in the Boiler 6 area (Figure 1) to support material management planning for the upcoming new boiler installation.

Project Background and Understanding

The Boiler 6 area occupies an approximately 3,000-square-foot portion along the central eastern side of the Broadway Mill. Contractors are currently removing the old boiler and associated equipment and structural elements as necessary to facilitate installation of a new boiler in the same area and potentially utilizing portions of the existing foundations. Planned construction will include excavating below the current footings to a depth of approximately 3.5 feet below top of the existing floor slab and backfilling with structural fill to install a 2-foot concrete mat foundation. Accordingly, material removed to this depth range including fill/soil likely would be excess material for proper management based on its waste characterization. The excavation would be backfilled with engineered fill and a new concrete slab installed in the boiler room.

To support demolition planning for the Boiler 6 removal and material management, G-P environmental staff collected samples of fill beneath the floor slab for waste characterization testing. Samples were collected at depths of approximately 2 to 3 feet below the floor slab using hand tools at six locations (Sample IDs 1 through 6) at the approximate locations shown on the attached Figure 2. Sandy/clayey soil fill with occasional gravel was encountered beneath the building floor slab.

Fill samples were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compounds (VOCs), semi-VOCs (SVOCs), Resource Conservation and Recovery Act (RCRA) metals; polychlorinated biphenyls (PCBs); and flashpoint. Sample 2 was also tested for total RCRA metals (see attached analytical laboratory reports). Significant testing results (TCLP lead and total lead), and fill descriptions are summarized in the following table:

Sample ID	TCLP Lead (mg/L)	Total Lead (mg/kg)	Fill Comments
1	<0.043	--	Reddish brown sandy fill, moist.

2	6.4	640	Reddish brown sandy fill, moist.
3	<0.043	--	Reddish brown sandy fill, moist.
4	0.044	--	Reddish brown sandy fill, some gravel, moist to wet.
5	<0.043	--	Reddish brown fill with black/dark brown/gray gravel, moist.
6	2.0	--	Black gravelly fill, moist to wet. Possible coal residues.

No PCBs or TCLP VOCs or SVOCs were detected in the samples.

TCLP lead was detected in Sample 2 (6.4 milligrams per liter [mg/L]) at a concentration exceeding its toxicity characteristic threshold of 5.0 mg/L. TCLP lead was detected in Samples 4 and 6 below the toxicity characteristic threshold.

In addition to lead, low-level barium (Samples 1 to 6) and cadmium (Sample 5) were detected in the TCLP extracts at concentrations three or more orders of magnitude below their respective toxicity characteristic thresholds.

To further assess the significance of the TCLP lead concentration in Sample 2, this sample was also analyzed for total RCRA metals. Total lead was detected in the sample at a concentration of 640 milligrams (mg/kg), which exceeds the WDNR’s published background threshold value (BTV) for lead of 52 mg/kg, but is less than the NR 720, Wisconsin Administrative Code, industrial direct contact Residual Contaminant Level (RCL) of 800 mg/kg. Total barium (13 mg/kg), cadmium (0.089 mg/kg), and chromium (7.0 mg/kg) were detected at concentrations substantially less than their BTVs of 364, 1.07, and 43.5 mg/kg, respectively.

Lead was detected in the TCLP extract of one soil fill sample (Sample 2) at a concentration exceeding the RCRA toxicity characteristic. Accordingly, fill that is excavated and represented by the analytical results for Sample 2 would be classified as characteristic hazardous waste when removed/generated. Fill that is excavated and represented by the analytical results for the other samples would be classified as non-hazardous solid waste when removed/generated. Based on our review of the analytical data, including total metals data for Sample 2, lead is the only substance that has exceeded an applicable standard or waste management threshold. Accordingly, the proposed further subsurface assessment focuses on defining the extent of lead in fill/soil beneath the boiler room.

Sampling Approach and Schedule

Planned sample locations are depicted on Figure 2. The number and locations of soil probes will be determined during a walk-through of the Boiler 6 area. A contractor hired by G-P will core 3-inch diameter holes through the floor slab at the selected probe locations to facilitate advancing approximately 2-inch-diameter, 4-foot-long core tubes into the subsurface for sample collection.

Based on current information, probes may be located adjacent to original Sample 2 for vertical definition and in 3 step-out probes located 5 feet away from and around Sample 2 (“inner ring” probes). Depending on accessibility, additional probes may be advanced approximately 10 feet from Sample 2 (“outer ring” probes). Probes will be advanced to depths ranging up to approximately 16 feet below surrounding grade to collect samples at 2- to 4-foot intervals for potential laboratory testing and to assess the depth of native soil if present at a reasonably shallow depth beneath the Boiler 6 area.

Initial testing will include TCLP lead for the sample interval below the original Sample 2 and in samples from the surrounding step-out probes collected at an approximate depth of 3 feet. Additional soil samples would be held for TCLP testing, as needed, to define the zone beneath and laterally around Sample 2 that would be classified as characteristic hazardous waste when excavated. After the zone of elevated TCLP lead is defined, additional samples would be analyzed for total lead to document anticipated post-construction conditions (construction depth of approximately 3.5 feet) and/or conditions in underlying or surrounding native clay, if encountered.

A written letter report will be prepared to document soil sampling activities. The report will include a summary of procedures and results, soil boring logs, tabular summary of TCLP and total lead data, and figures to illustrate sampling locations. We would also plan to coordinate a call or meeting with you to discuss the results and options for addressing the residual lead condition including potentially through a NR 708 No Further Action process and/or placing the site on the WDNR's Geographic Information System (GIS) registry (e.g., for reliance on the industrial direct contact RCL for lead).

Geoprobe sampling is scheduled for September 23, 2019. The sampling documentation report will be provided after receipt of additional laboratory analytical results.

Please contact us with any questions.

Thank you,

GEI

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