



May 5, 2020

Mr. Mike Slenska
Beazer East, Inc.
c/o Three Rivers Management, Inc.
600 River Avenue, Suite 200
Pittsburgh, PA 15212

Subject: Response to Beazer's March 6, 2020 Letter

Former Koppers Tar Plant and Wabash Alloys Site
9100 South 5th Avenue, Oak Creek, WI 53154
FID #: 241379050; BRRTS #: 02-41-553761
VPLE BRRTS #: 06-41-561509

City of Oak Creek Utility Corridor Lot 1
9170 South 5th Avenue, Oak Creek, WI 53154
FID #: 341074470; BRRTS #: 02-41-561425
VPLE BRRTS #: 06-41-561426

Dear Mr. Slenska:

The Wisconsin Department of Natural Resources (DNR) has reviewed Beazer's March 6, 2020 letter that addressed the DNR's requests for additional work to 1) complete the site investigation and 2) conduct an interim remedial action to address on-going discharges, expanding groundwater contaminant plumes, and off-site migration of source materials. The DNR requested additional work in a letter to Beazer, dated January 8, 2020. To date, Beazer has not conducted the additional work requested in the DNR's January 8, 2020 letter, therefore those same issues remain outstanding and are repeated in this letter.

The DNR has reviewed all the site investigation information submitted to date and contained within the case file for compliance with Wis. Admin. Code ch. NR 716. Based on the review, the DNR has determined that the site investigation is not complete, which the DNR has previously communicated to you. An interim remedial action is needed to halt the migration of the contamination. There is enough site-specific information to move forward with an interim remedial action. Collection of additional data during completion of the interim action will likely provide the information necessary to finalize the site investigation. Submittal of a work plan for completion of the interim remedial action, including collection of remaining site investigation information is required for DNR review. Detailed comments regarding the site investigation and interim remedial action components and are provided below.

Completion of the Site Investigation

As previously communicated, the DNR has determined that additional work is necessary because the site investigation is incomplete. The degree and extent of contamination identified at the site has not been adequately evaluated and documented per Wis. Admin. Code ch. NR 716. The findings and interpretations by the DNR regarding the site investigation are summarized below:

Degree and extent of contamination in all affected media

Wis. Admin. Code § NR 716.11(3)(a) requires the field investigation to determine the nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media.

The vertical extent of tar, identified as the contaminant source material, remains undefined in specific areas after the additional site investigation. Further delineation of the contaminant mass can occur during the pre-design sampling phase for the interim remedial action. The following areas (Refer to Figure 7, Observed Tar, dated December 12, 2018) are identified for further tar assessment and/or verification of the vertical extent of tar:

- B-01-18 located between previous borings B-74 and B-05 near the former naphthalene ASTs
- B-02-18 located in the area of previous borings B-81, MW-122 and SB713 near the former Tar Barrel Platform
- B-03-18 located near previous boring B-38
- B-04-18 located in the area of previous B-92 and MW-123 near the former Pitch Bay

These four areas were identified because naphthalene odor was noted at the deepest depths in the boring logs for B-01-18, B-03-18, and B-04-18 and tar was observed at/near the bottom of the borehole for B-02-18. The vertical extent of tar remains unknown in these locations, therefore additional information to delineate the contamination is required. Wis. Admin. Code § NR 716.05 requires responsible parties to use the factors in NR 708.09(1)(a) to (n) during the site investigation. This includes the presence of visual and olfactory evidence of contamination, per NR 708.09(1)(i). The DNR considers the naphthalene odor noted and tar observed at depth in these four areas to be visual and olfactory evidence of contamination that requires further delineation. Beazer may be able to provide multiple lines of evidence to vertically define the source material, including updated figures, specifically isoconcentration maps and cross sections with all data collected to-date.

Interim Action

There are indications of an ongoing discharge that is migrating off-site. Interim remedial action is required per Wis. Admin. Code chs. NR 708 and NR724, to address on-going discharges, expanding groundwater plumes, and off-site migration of source materials. The findings and interpretations by the DNR regarding an interim action are summarized below:

Immediate Actions to halt a discharge

Wis. Admin. Code § NR 708.05(3) requires responsible parties to take all necessary, non-emergency immediate actions to halt the discharge of a hazardous substance, and to contain, treat, or remove discharged hazardous substances environmental media or both, in order to minimize the harmful effects of the discharge to the air, lands, or waters of the state and to restore the environment to the extent practicable.

When comparing past and current data and figures, monitoring wells MW-130 and MW-134 (located in the utility corridor) show increasing concentrations of PAHs in an expanding plume. The DNR requires interim remedial

action at the following areas (Refer to Figure 2, Site Layout - Former Koppers Tar Plant and Wabash Alloys Site, Oak Creek, WI, dated November 7, 2014 and amended on May 14, 2018) to contain the DNAPL tar from reaching the utility trench and continuing to migrate off-site: B1/E2 Area and C1/F2 Area.

Furthermore, following receipt of Beazer's March 6 response letter, the DNR received Beazer's "Q1 2020 Groundwater Sampling Event" report on March 19, 2020. The data collected in January 2020 identify the following notable differences in the groundwater plume that are indicative of mobile tar continuing to migrate, both horizontally and vertically:

- Monitoring wells MW-130 and MW-134 were not sampled in 2020 due to the presence of DNAPL in the wells. In the preceding years, from 2016 through 2018, the wells were successfully sampled. This is the first time that DNAPL has been noted at these sampling locations.
- In January 2020, piezometer P-110 had increasing concentrations above enforcement standards, where previously, from 2015-2018, reported concentrations were below detection levels.
- Piezometer P-120 now has detections of PAHs above enforcement standards, where previously no regulatory exceedances were identified.

The groundwater plume is expanding vertically and horizontally. Therefore, an interim action is required. Continued groundwater monitoring will be required after an interim action to determine groundwater plume stability. Groundwater monitoring should be included in the requested work plan.

Schedule

DNR considers Beazer to be in ongoing non-compliance with Wisconsin's hazardous substances spill law. However, per Wis. Admin. Code § NR 708.11(3), the DNR requires a work plan to be submitted for an interim remedial action, within 60 days, by July 5, 2020. This work plan must include activities to address the data gaps in the site investigation and continue monitoring groundwater conditions. The work plan should incorporate pre-design sampling to determine the vertical extent of tar if not previously delineated. The extent of the contaminant source material must be defined, both horizontally and vertically. The work plan must include updated figures, specifically isoconcentration maps and cross sections with all data collected to date, to justify the interim action and remedial design plan.

Beazer's "Q1 2020 Groundwater Sampling Event" report states that piezometer P-110 has been compromised and will be abandoned and replaced. P-110 is nested with MW-109. The DNR understands that Beazer plans to submit a work plan for the well abandonment and replacement for DNR review. The DNR recommends the additional work described in this letter be included within the work plan to replace MW-109 and P-110 for time and cost efficiency.

The DNR also recommends that remedial actions undertaken by Beazer occur in coordination with remedial actions undertaken by Connell. Connell is moving forward with their plans to remediate the site. On March 16, 2020, the DNR received an "Addendum to the Remedial Action Options Report (RAOR) and Pre-Design Sampling Work Plan" from Connell that incorporates previous DNR comments. The action planned by Connell may increase the difficulty of future remedies required of Beazer. Connell intends to excavate in some areas and cap others, which could most effectively be completed in cooperation with the cleanup actions required of Beazer for the NAPL remedy in the source areas.

If you have any questions regarding this letter, please contact me at 414.263.8639 or at eric.amadi@wisconsin.gov.

Sincerely,



Eric Amadi - Hydrogeologist
Remediation & Redevelopment Program
SER - Milwaukee Service Center

Attachment:

Figure 7: Former Koppers Tar Plant and Wabash Alloys Site, Observed Tar (16' - 20'), 12/12/2018

Figure 2: Former Koppers Tar Plant and Wabash Alloys Site Layout, dated 11/7/14, amended 5/14/2018

cc: Mike Kellogg - Connell Aluminum Properties, LLC
Mike Noel - Tetra Tech (electronic)
Julie Zimdars - Ramboll (electronic)
Larry Haskin - City of Oak Creek (electronic)
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