

March 6, 2020

Eric Amadi, Hydrologist
Remediation & Redevelopment Program
SER-Milwaukee Service Center
Wisconsin Department of Natural Resources
2300 N Dr Martin Luther King, Jr. Drive
Milwaukee, WI 53212-3128

Re: 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. Amadi:

The purpose of this correspondence is to address matters contained in your January 8, 2020 letter to Mike Slenska. That letter addressed the *Supplemental Site Investigation, Former Koppers Tar Plant and Wabash Alloys Site, Oak Creek, WI* (“Report”) dated January 18, 2019, which was prepared by Tetra Tech, Inc. (“Tetra Tech”) on behalf of Beazer East, Inc. (“Beazer”), along with the earlier submittals, *Work Plan, Supplemental Site Investigation*, dated August 30, 2017, and *Revised Work Plan, Supplemental Site Investigation*, dated June 15, 2018, and informed Beazer that DNR has determined the investigation for the above-referenced site (the “Site”) is not complete.

I should first note that Beazer has consistently been forthcoming and proactive in its approach to seeking a resolution in this matter. Beazer has done everything that DNR has requested of it in a timely manner and has repeatedly indicated its willingness to meet with DNR to discuss the Site and appropriate remedy. I offer the following historical timeline in order to help frame the discussion moving forward.

On January 6, 2014 the Site was entered into the Voluntary Party Liability Exemption Program (“VPLE”). As part of the VPLE, Beazer and Connell Aluminum Properties, LLC (“Connell”), the other responsible party at the Site, jointly submitted a Site Investigation (“SI”) Report to DNR on January 13, 2014, which was approved by DNR in a letter dated September 22, 2014. Beazer continued to collect groundwater samples on a quarterly basis from 2014 and into 2017 until each well had at least 8 rounds

of groundwater sampling completed, and Beazer has made timely submittals of such groundwater sampling results to DNR.

Beazer and Connell then jointly submitted a Remedial Actions Options Report (“RAOR”) to DNR in December 2014. On October 1, 2015, DNR held a technical meeting with Beazer and Connell to discuss the RAOR. As part of that meeting, DNR agreed to provide Beazer with a letter containing DNR’s detailed review of the RAOR.

However, DNR did not send the parties this review letter until December 21, 2016—well over a year after the October 1, 2015 meeting and two years after the submission of the RAOR. Moreover, DNR’s December 21, 2016 review letter disapproved the RAOR yet contained little to no specifics concerning DNR’s reasoning for doing so, and certainly not enough to justify the extensive delay. Beazer responded to DNR’s December 21, 2016, letter on March 30, 2017. In Beazer’s response it requested additional information regarding DNR’s rationale and requested a technical meeting with DNR to discuss practical, cost-effective and technically justifiable adjustments to the remediation approach outlined in the RAOR in order to determine if a mutually agreed upon remedial approach for the Site could be developed. However, DNR did not respond to Beazer’s request for a technical meeting.

Instead, on July 14, 2017, DNR disapproved the SI Report (which had previously been approved in 2014) and provided supplemental information for its disapproval of the RAOR. That same day, despite Beazer and Connell being jointly enrolled in a voluntary cleanup program to address Site conditions, DNR took enforcement action and issued a Notice of Violation (“NOV”), and – surprisingly – issued that NOV solely to Beazer. An Enforcement Conference was subsequently held on July 26, 2017 (the “Enforcement Conference”), to discuss the NOV. Notably, during the Enforcement Conference, DNR expressed surprise at Beazer’s statement that its March 30, 2017, letter included a request for a technical meeting, so Beazer produced a copy of said letter, which clearly indicated Beazer’s request for a technical meeting. The Enforcement Conference concluded with DNR’s agreement to have the technical meeting Beazer had requested many months before. That technical meeting occurred on August 17, 2017. Based on the discussion at that technical meeting, and in an effort to resolve DNR’s concerns with the SI Report, Beazer agreed to perform additional investigation. Beazer submitted a Supplemental Site Investigation Work Plan to DNR just two weeks later, on September 1, 2017.

Instead of reviewing and commenting on this submittal (as it is required to do under the VPLE Program), DNR immediately proceeded on an enforcement, rather than a Site investigation and remediation, path. Indeed, in lieu of a remediation-oriented response from DNR on the Supplemental Site Investigation Workplan, Beazer received notice, on December 18, 2017, that this matter had been referred to the Wisconsin Department of Justice (“DOJ”). This referral came as a complete surprise to Beazer, as Beazer had consistently met all timelines and taken all the actions requested by DNR at the August 17, 2017 meeting, and Beazer was waiting for DNR’s comments on the Work Plan.

On May 15, 2018, Beazer met with DNR and DOJ in Madison, at which time DNR finally provided a response to the Supplemental Site Investigation Work Plan. At that meeting, DNR primarily sought information related to the vertical extent of potentially mobile tar at specific areas and discussed the installation of an additional well in the utility corridor to determine if a hydraulic sink was present. DNR also provided Beazer with a table of potential remedial options for various areas of the Site as part of settlement discussions.

For settlement purposes, Beazer then provided DOJ with a counterproposal on remedial options on June 14, 2018. In the June 14, 2018 counterproposal, Beazer identified areas of the Site where Beazer believed all parties were in agreement on the remedial options. Beazer also agreed to take additional steps in other areas beyond what was initially proposed in the RAOR. Beazer, DOJ, and DNR also held additional discussions on the Revised Supplemental Site Investigation Work Plan in June 2018. DNR approved the Revised Supplemental Site Investigation Work Plan on June 29, 2018 and Beazer then conducted field work, including vapor sampling, in late summer and fall of 2018. Finally, Beazer submitted its Supplemental Site Investigation Report to DOJ on January 18, 2019.

For many months, Beazer did not receive a response from either DNR or DOJ with comments on the Supplemental Site Investigation Report, whether DNR agreed with its conclusions or whether the Site investigation was approved. Nor did Beazer receive any comments on the counterproposal. In the fall of 2019, Beazer was contacted by new representatives from DOJ and DNR for the purpose of scheduling a meeting to discuss the status of the matter. A meeting was held between Beazer, DNR and DOJ on October 22, 2019. At that meeting, DNR and DOJ indicated that they would evaluate the Supplemental Site Investigation Report and provide a written response. The response from DOJ is contained in a letter dated December 23, 2019, which was directed to Beazer's outside counsel. The response from DNR is contained in the January 8, 2020 Letter from Eric Amadi. This letter is intended to respond to the DNR's January 8, 2020 letter (which for unknown reasons was received before the DOJ letter). A separate response will be provided to the DOJ letter.

In order to most efficiently respond to the various points made in your January 8, 2020 letter, I have restated excerpts from that letter followed by Beazer's response in italics.

January 8, 2020 Letter from Eric Amadi

DNR COMMENT

Completion of the Site Investigation

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 depth 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 tar depth:

- 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-04-1 8 located in the area of previous B-92 and MW-123 near the former Pitch Bay

Potentially impacted areas must be delineated where a naphthalene odor is noted.

BEAZER RESPONSE

The Jan 18, 2019 Supplemental Investigation Report does not support the conclusion that “The depth of tar, identified as the contaminant source material, remains undefined in specific areas after the additional site investigation.” To the contrary, the borehole logs and associated borehole photos document that the depth of tar has been defined at B-01-18, B-02-18, B-03-18 and B-04-18 and therefore, further tar assessment and/or verification of tar depth at these locations is not needed. At each location, the depth of tar was defined and a reduction of PID measurements was observed. A summary of the observations is provided below:

Borehole Depth (ft bgs)	B-01-18		B-02-18		B-03-18		B-04-18	
	PID	Tar Observations	PID	Tar Observations	PID	Tar Observations	PID	Tar Observations
2	0.0		0.0		0.0		0.2	
4	0.0		0.0		1.2		1	
6	1.2		0.2		0.3		133.4	
8	123.6	tar in matrix	51.2	tar in matrix	0.2	tar in fractures	397.5	tar in matrix
10	259.8	tar in matrix	45.9	tar in matrix	46.3	tar in fractures	1566	tar in fractures
12	160.6	tar in matrix	5.3	tar in matrix	42.3	tar in fractures	736.1	tar in fractures
14	48		28.3	tar in fractures	256.3	thick hard tar	1299	tar in fractures
16	55.5		32.4	tar in fractures	1159	oily outside sampler	407.8	tar in fractures
18	25.4		24.3	tar in fractures	133	oily outside sampler	129.5	
20	20.5		171.7	tar in fractures	11.8	oily outside sampler	40.1	
22	29.1		8.6	trace hard tar	61.5		3	
24	17.1		0.3		5.2		0.2	

The statement that “[p]otentially impacted areas must be delineated where a naphthalene odor is noted[.]” is contrary to all depth of tar investigations performed to date which were completed in accordance with approved work plans. The work plan that DNR approved on June 29, 2018 stated that the tar delineation would be carried out using visual observations of tar in boreholes. There was no comment or requirement stated that potentially impacted areas must be delineated where a naphthalene odor is noted.

In our July 10, 2018 response to the June 29, 2018 conditional approval we noted that “Past investigations have collected information on the nature, degree and extent of DNAPL tar and the additional soil borings proposed in the revised supplemental work plan are intended to complete this determination, as discussed with the DNR during an August 17, 2017 meeting. We do not want to implement the proposed work plan, only to have the DNR later state that the site investigation is not complete because DNAPL migration has not been addressed. Is it the DNR’s position that DNAPL migration will not have been addressed even after the current work plan is implemented? If so, we request additional information from the DNR regarding what additional investigation it believes may be necessary to address the DNR concerns so that this work plan might possibly incorporate such work.” We never received a response from the DNR, but we proceeded, and the work was completed in good faith in accordance with the work plan.

DNR COMMENT

Interim Action

There are indications of an on-going 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) to contain the DNAPL tar from reaching the utility trench and continuing to migrate off-site:

- Bl/E2 Area
- Cl/F2 Area

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.

BEAZER RESPONSE

The primary reason that there is tar in the utility trench is that the City dug through a former tar lagoon to install the storm sewer and other utilities. The tar is not so much migrating into the trench as much as it was already there and became redistributed within the trench as part of the construction activities.

As part of the RAOR, Beazer proposed a process option that included construction of a low permeability plug around the exterior of the utility pipe to block migration of potentially impacted groundwater along the utility trench. The plug could be constructed of compacted clay, a low permeability flowable fill, jet-grouting, etc. As we noted, approval and coordination with the Oak Creek Sewer and Water Utility and other utility companies would be required to ensure no damage would occur to existing infrastructure.

To gather additional groundwater quality data, a site wide groundwater sampling event has been performed. Upon receipt of all laboratory data and completion of review and compilation of the data, the results will be provided to DNR in a separate submittal.

DNR COMMENT

Schedule

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 March 6, 2020. The DNR recommends that this work plan include activities to complete the site investigation and continue monitoring groundwater conditions. The work plan should incorporate pre-design sampling to determine the depth of tar if not previously identified. The delineation of the contaminant source material, in terms of areal and vertical extent, must be defined. 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 RESPONSE

Per our response to the first comment, Beazer disagrees that more delineation of the contaminant source material, in terms of areal and vertical extent, must be defined. Beazer believes it would be more productive to come to agreement on remedial action. Additional data, if needed, could be collected as part of pre-design activities or during remedy implementation.

DNR COMMENT

The DNR also recommends that a larger remedial action occurs in coordination with both responsible parties (Beazer and Connell). Connell can proceed with shallow excavations to address the PCBs, followed by excavations completed by Beazer to address the deeper tar source material. This type of coordinated remedial work may economically benefit both parties.

BEAZER RESPONSE

Beazer's plan has always been to perform remedial action in coordination with Connell. To that end, Beazer and Connell jointly submitted the RAOR, and Beazer is ready and willing to work with Connell on remedial action implementation, assuming DNR and Beazer can come to agreement on the remedial action path forward. To the extent this comment suggests certain actions on the part of Connell, Beazer asks DNR to update Beazer on whether the DNR has communicated its coordination suggestions to Connell and whether Connell has responded.

DNR COMMENT

The subject site is currently enrolled in Wisconsin's Voluntary Party Liability Exemption (VPLE) process, related to environmental contamination and remediation. Progress is needed to remain in the VPLE program. As such, updates on the progress of the environmental investigation and remediation of this property are required on a regular basis for continuing participation in the VPLE program.

BEAZER RESPONSE

As detailed in the historical timeline and summary at the outset of this letter, Beazer has been very responsive on completing work approved by the DNR and in trying to make progress toward the environmental investigation and remediation of the property. This comment from DNR was not received by Beazer until one year after the Supplemental Site Investigation Report was submitted in January 2019.

Given the challenges that Beazer has faced in obtaining timely responses to its written requests and submissions, we believe that the most efficient path forward in resolving the issues discussed above and in reaching an agreement on a remedy would be to have a meeting with the DNR. At this time, we respectfully request that the DNR agree to this meeting and provide us with potential dates on which it can be conducted.

Sincerely,

Tetra Tech



Michael R. Noel, PG
Vice President, Principal Hydrogeologist

- cc: Mike Bollinger, Beazer
- Mike Slenska, Beazer
- Mike Kellogg - Connell Aluminum Properties, LLC
- Julie Zimdars - Ramboll
- Larry Haskins - City of Oak Creek