



June 29, 2018

Mr. Mike Slenska  
Beazer East, Inc.  
c/o Three Rivers Management, Inc.  
1910 Cochran Road  
Manor Oak One, Suite 200  
Pittsburg, PA 15220

Subject: Approval of Work Plan - Revised Supplemental Site Investigation

Former Koppers Tar Plant and Wabash Alloys Site  
9100 South 5<sup>th</sup> Avenue, Oak Creek, WI 53154  
FID #: 241379050; BRRTS #: 02-41-553761  
Connell VPLE BRRTS #: 06-41-560068  
Beazer VPLE BRRTS #: 06-41-561509

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

Dear Mr. Slenska:

The Wisconsin Department of Natural Resources (DNR) has reviewed and approves the submittal, *Work Plan, Revised Supplemental Site Investigation, Former Koppers Tar Plant And Wabash Alloys Site, Oak Creek, WI* (revised Report), dated June 4, 2018, prepared by Tetra Tech, Inc. (Tetra Tech) on behalf of Beazer East, Inc. (Beazer) with the comments listed below. A version of the revised Report with corrected figures was submitted on June 15, 2018. The purpose of the revised Report is to incorporate changes requested in the DNR's letter to you, dated May 15, 2018.

The revised Report proposes four work items:

- A. Installing additional soil borings to confirm the vertical extent of potentially mobile tar at selected locations.
- B. Installing an additional monitoring well in the City of Oak Creek utility corridor to evaluate hydraulic flow conditions.
- C. Conducting test pit sampling to determine the waste characteristics of soil containing observed tar.
- D. Collecting soil gas samples to evaluate the vapor intrusion pathway.

Based on the information provided in the revised Report, the DNR approves work items A, B, and C with the following comments:

- Work item A - relocate the soil boring on the south side of the Naphthalene Building between borings B-05 and B-74.
- Work item C - the material from 0-2 feet bgs that will be excavated from the test pits should be segregated and removed from the waste characterization to eliminate the PCB-impacted material. Refer to the DNR's May 15, 2018 letter.

### DNR Vapor-Related Comments

The DNR did not request Work Item D, however the DNR provides the following comments regarding the proposed vapor intrusion evaluation at the site:

1. Describe the purpose of collecting the vapor samples. Explain how the sub-slab and soil gas sampling results will be used and interpreted. Vapor sampling performed on a vacant property cannot be used alone to rule out the potential vapor risk to new building construction.

Per RR-800, *Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin*, dated January 2018: Section 5.0; page 20: Investigation for Vapor Intrusion - Future Development at Properties:

Since "the effect a future building will have on the migration of vapors cannot be determined until the building is in place, soil gas samples alone cannot be used to rule out the vapor pathway when other vapor screening criteria are exceeded (e.g. residual TCE contamination above the NR 140 ES is present at the groundwater table). For these situations, vapor control technologies will be required for future occupied buildings, unless remediation of the vapor source is completed, and/or a vapor investigation is completed after the building is constructed and the DNR agrees that vapor control technologies are not needed."

2. The four sub-slab samples that are proposed below the former building's concrete floor are in locations that do not reflect the highest naphthalene concentrations and therefore, the highest potential vapor risk. The sample collection should occur at a time when the water table is not at the surface or in contact with the building foundation, based on previous reported water level measurements.
3. The eight soil gas samples that are proposed outside the footprint of the former building foundation may not be representative of soil vapor conditions, because the shallow water table (historically reported to be between 1-3 feet bgs) will limit the sampling depth to less than 3-4 feet, thereby possibly introducing ambient air to the sample. The revised Report states that the shallow water table is approximately 4-6 feet bgs, however historical data indicates shallower depths.

Per RR-800, *Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin*, dated January 2018: Section 5.4.2; page 26: Depth for Soil Gas Samples:

The sample depth will depend on site conditions, and multiple depth intervals may be needed. Soil gas samples must be set at least 3 to 4 feet below the ground surface.

DNR approves the plan to conduct the proposed vapor screening, taking into consideration the recommendations noted above. Vapor sampling performed on a vacant property cannot be used alone to rule out the potential vapor risk to new building construction. Additional assessment will be required in conjunction with future redevelopment.

### Incomplete Site Investigation

In the DNR's July 14, 2017 letter, the site investigation was determined to be incomplete. One of the remaining items that has not been addressed in a work plan proposed by Beazer is the DNAPL migration. Following completion of the site investigation, the RAOR must be revised to present a more comprehensive understanding of the degree and extent of contamination in all environmental media per NR 716.11 (3) (a) including DNAPL tar migration.

We appreciate the efforts you are taking to investigate and restore the environment at this site. If you have any questions regarding this letter, please contact me at 414.263.8639 or at [eric.amadi@wisconsin.gov](mailto:eric.amadi@wisconsin.gov)

Sincerely,



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

cc: Mike Noel - Tetra Tech (electronic)  
Julie Zimdars - NRT (electronic)  
Attorney Larry Haskins - City of Oak Creek (electronic)  
Attorney Philip Bower - Husch Blackwell (electronic)  
Attorney Jess Kramer - Dept. of Justice (electronic)  
Kody Hansen - DNR (electronic)  
SER Case File #: FID #: 241379050; BRRTS #s: 02-41-553761 / 06-41-560068 & 06-41-561509  
SER Case File #: FID #: 341074470; BRRTS #s: 02-41-561425 / 06-41-561426