State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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August 31, 2021

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

Subject: Review of Revised Interim Action Work Plan and Revised Remedial Action Options Report
Notice of Noncompliance – Wis. Admin. Code chs. NR 708 and 716 Interim Action Requirements
ACTION REQUIRED: Submit Interim Action Work Plan by September 30, 2021

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

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

Dear Mr. Bollinger:

This letter is to notify Beazer East Inc. (Beazer) that it is out of compliance with Wisconsin Statutes (Wis. Stat.) chapter 292 and Wisconsin Administrative Code (Wis. Admin. Code) chapters NR 700-799.

The Wisconsin Department of Natural Resources (DNR) has reviewed the *Revised Interim Action Work Plan (*Work Plan), dated May 3, 2021 and *Revised Remedial Action Options Report* (RAOR), dated July 1, 2021, for the subject site. The Work Plan and RAOR were prepared by Tetra Tech, Inc. (Tetra Tech) on behalf of Beazer to address the DNR's concerns and respond to the direction provided by the DNR in their March 3, 2021 letter regarding DNAPL tar source material migration and expansion of the groundwater contaminant plume.

Interim, Immediate, and Specific Actions at a Remedial Action Site

The DNR has authority to require responsible parties to perform immediate actions to halt a discharge. The general rule concerning immediate actions is Wis. Admin. Code § NR 708.05(3) which states:

> Responsible parties shall 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 and waters of the state and to restore the environment to the extent practicable.

The DNR has authority under Wis. Admin. Code § NR 708.05(4)(h) to require responsible parties to perform specific actions to remove contaminated soil, debris or the hazardous substance that was discharged (in compliance with Wis. Admin. Code § NR 708.11(3)(e)).

The DNR has authority to require responsible parties to perform interim actions. The general rule concerning interim actions is Wis. Admin. Code § NR 708.11(1)(a) which states (emphasis added):

> Responsible parties shall evaluate the need for interim action prior to initiating a site investigation and during a site investigation. **Interim action shall be taken where it is necessary to contain or stabilize a discharge of a hazardous substance or environmental pollution, in order to minimize any threat to public health, safety, or welfare or the environment. When an interim action is warranted, responsible parties shall implement an interim action as soon as facility or site- related information makes it possible to do so**, in compliance with the requirements of this chapter.

For sites where a site investigation is underway, the DNR has authority to require an immediate, interim or remedial action under Wis. Admin. Code § NR 716.17(3) which states:

> When a site investigation conducted under this chapter indicates that an immediate, interim or remedial action is necessary, the responsible parties shall identify, evaluate and select an immediate or interim action in accordance with ch. NR 708 or a remedial action in accordance with ch. NR 722.

Observed environmental contamination, especially tar, at this property is known to the DNR and to Beazer. As both a responsible party under Wis. Stat. § 292.11 and voluntary party under Wis. Stat. § 292.15, Beazer shall not delay implementation of an interim remedial action at this site for known conditions.

<u>DNR Review of the Work Plan and RAOR</u>

In the March 3, 2021 letter, the DNR directed Beazer to complete and incorporate the following actions outlined below, however, Beazer has not followed the DNR's direction, despite many of these requests being included in this and earlier technical response letters:

1. Revise your interim action Work Plan to include free product removal which may be achieved through excavation at areas where there is no dispute to impacted soil and groundwater.

2. (Conduct) immediate DNAPL free product removal.

3. (Perform) quarterly groundwater monitoring.

4. The DNR does not approve the abandonment of piezometer (P-110). The DNR directs this monitoring well to (should) remain as a sampling point within the former lagoon source area where there is known contamination.

5. Monitoring wells must be installed on the upstream and downstream sides of the utility plugs.

6. Wells installed adjacent to the utility plugs must be included in the groundwater sampling plan.

7. In the design, provide justification to support the proposed locations of the utility plugs and confirm whether additional plugs along the utility line would be beneficial.

8. Provide an assessment of how the utility plugs will prevent the migration of contaminated groundwater along the utility backfill.

9. The DNR directs Beazer to consider a remedy that addresses the DNAPL tar source material on the site, rather than engineering structures to merely alter off site migration. The DNR directs Beazer to conduct an interim source control action that permanently addresses the contamination and is a significant component of an overall remedial action plan for the site.

10. In the area of the former tar lagoons adjacent to the utility trench, where the DNAPL is migrating off-site, excavation combined with in-situ stabilization (ISS) or an equally effective permanent remedy must be implemented to prevent further migration.

11. Make reasonable progress toward completion of an environmental investigation and environmental restoration of the property.

12. The DNR directs Beazer to select remedial activities from the array of options previously provided in the remedial option matrix or an alternate remedy that is as effective as the remedial options included in the matrix.

13. Submit a Revised Interim Action Work Plan that results in immediate action by conducting free product removal to abate free product migration. This includes an active removal action on site.

14. Submit a Revised RAOR that presents an overall remedial strategy to address the known contamination at the site. The evaluation must include the remedial actions proposed by the DNR in the matrix of remedial options for each area of the property.

The DNR is directing and has directed you to complete an action that addresses the DNAPL tar source material. This free product removal may be achieved through excavation at areas with impacted soil and groundwater. ISS, as proposed, is not adequate. A removal action is necessary.

Summary

The direction provided by the DNR in the March 3, 2021 letter, listed as the 14 items above, was not addressed nor incorporated into revised documents -- Work Plan, dated May 3, 2021, or the RAOR, dated July 1, 2021. The Work Plan does not include a remedy that adequately addresses the DNAPL tar source material. ISS from 0-6 feet below ground surface (bgs) is proposed in specific areas across the site. The 6-foot-depth will not address the majority of the DNAPL tar source, nor the highest concentrations of contamination, as 4-8 feet of fill material exists above the DNAPL tar source material. A majority of the planned ISS will not be installed deep enough to encounter the DNAPL tar source material. Therefore, the majority of DNAPL tar source material will remain unaddressed. In essence, Beazer's proposal is to use ISS to install a 6-foot cap in limited areas across the site. If Beazer completes the proposed action, the DNAPL tar source material would still be expected to continue to 1) migrate, 2) contaminate the groundwater, and 3) off-gas to create a risk of vapor intrusion for any future redevelopment of the property. The proposed actions are inadequate and not protective of human health and the environment now or in the future.

On the north side of the utility trench, an ISS wall is proposed to a deeper depth, from 0-15 feet bgs, as shown in the Work Plan's Figure 4. The ISS wall is approximately 325 feet in length. The vertical depth of the DNAPL tar source material remains undefined in this area. Although deeper ISS is planned in a limited area, no removal of the DNAPL tar source material is proposed.

The attached figures illustrate the depth of the proposed ISS in relation to the known depth of the DNAPL tar source material. The base maps were provided by Beazer in June 2020. The DNR incorporated Beazer's proposed action to illustrate the proposed completion of ISS from 0-6 feet bgs in relation to the reported DNAPL tar source material.

- Figure B2 – The lateral extent of ISS is shown in pink shading. ISS is proposed to 6 feet bgs, although this figure illustrates the presence of tar from 4-8 feet bgs. Contamination and tar within the pink areas from 6-8 feet bgs and outside the pink areas will remain and not be addressed.

- Figure B3 - This figure illustrates the presence of tar from 8-12 feet bgs. All the indicated contamination and tar at this depth will remain.

- Figure B4 - This figure illustrates the presence of tar from 12-16 feet bgs. All the indicated contamination and tar at this depth will remain.

- Figure B5 - This figure illustrates the presence of tar from 16-20 feet bgs. All the indicated contamination and tar at this depth will remain.

- Figure B9 – This cross-section transects the site from west to east and illustrates the vertical depth of contamination and the presence of tar. The depth of the planned ISS to 6 feet bgs is shown in pink shading. Contamination and tar outside the pink areas will remain and not be addressed.

Schedule

The DNR directs Beazer to conduct an interim action to completely remove the DNAPL tar source material or complete a combination of removal with ISS. This interim action must include free product removal, as an immediate action, to abate free product migration. Per Wis. Admin. Code §§ NR 708.13 and 716.17(3), submit a Revised Interim Action Work Plan that details the planned immediate action. Submittal of this Revised Interim Action Work Plan is required within 30 days, by September 30, 2021.

Additionally, the DNR further directs Beazer to submit a Revised RAOR that incorporates the above Revised Interim Action Work Plan. The Revised RAOR must present an overall remedial strategy to address the known contamination at the site. The evaluation must include the remedial actions proposed by the DNR in the matrix of remedial options for each area of the property. Additional remedial actions may be evaluated that result in a similar restoration of the environment. Proposing ISS alone is not appropriate for the multitude of reasons shared above. The RAOR must include a selected remedial action for each area of the property. The DNR directs this Revised RAOR be submitted within 60 days, by October 30, 2021.

To clarify, Beazer is in noncompliance and will remain in noncompliance until Beazer fulfills applicable remedial action requirements at this site.

The DNR has had recent communications with the City of Oak Creek (City) and the property owner, Connell Aluminum (Connell). Both the City and Connell support DNAPL product removal and have offered to participate in future meetings to discuss proposed remedial actions.

If you have any questions regarding this letter, please contact Eric Amadi, the DNR Project Manager, by calling (414) 405-0752 or by email at eric.amadi@wisconsin.gov.

Sincerely,

Christine Haag - Program Director
Remediation & Redevelopment Program

Attachments:

Figure B2: Total BTEXTM Soil Concentration – 4-8 feet bgs by Tetra Tech, dated 6/10/2020, with addition of ISS areas by DNR
Figure B3: Total BTEXTM Soil Concentration – 8-12 feet bgs by Tetra Tech, dated 6/10/2020
Figure B4: Total BTEXTM Soil Concentration – 12-16 feet bgs by Tetra Tech, dated 6/10/2020
Figure B5: Total BTEXTM Soil Concentration – 16-20 feet bgs by Tetra Tech, dated 6/10/2020
Figure B9: Total BTEXTM Soil Concentrations – Cross Section D-D' by Tetra Tech, dated 1/9/2014, with addition of ISS areas by DNR

cc: Mike Slenska – Beazer, mike.slenska@trmi.biz
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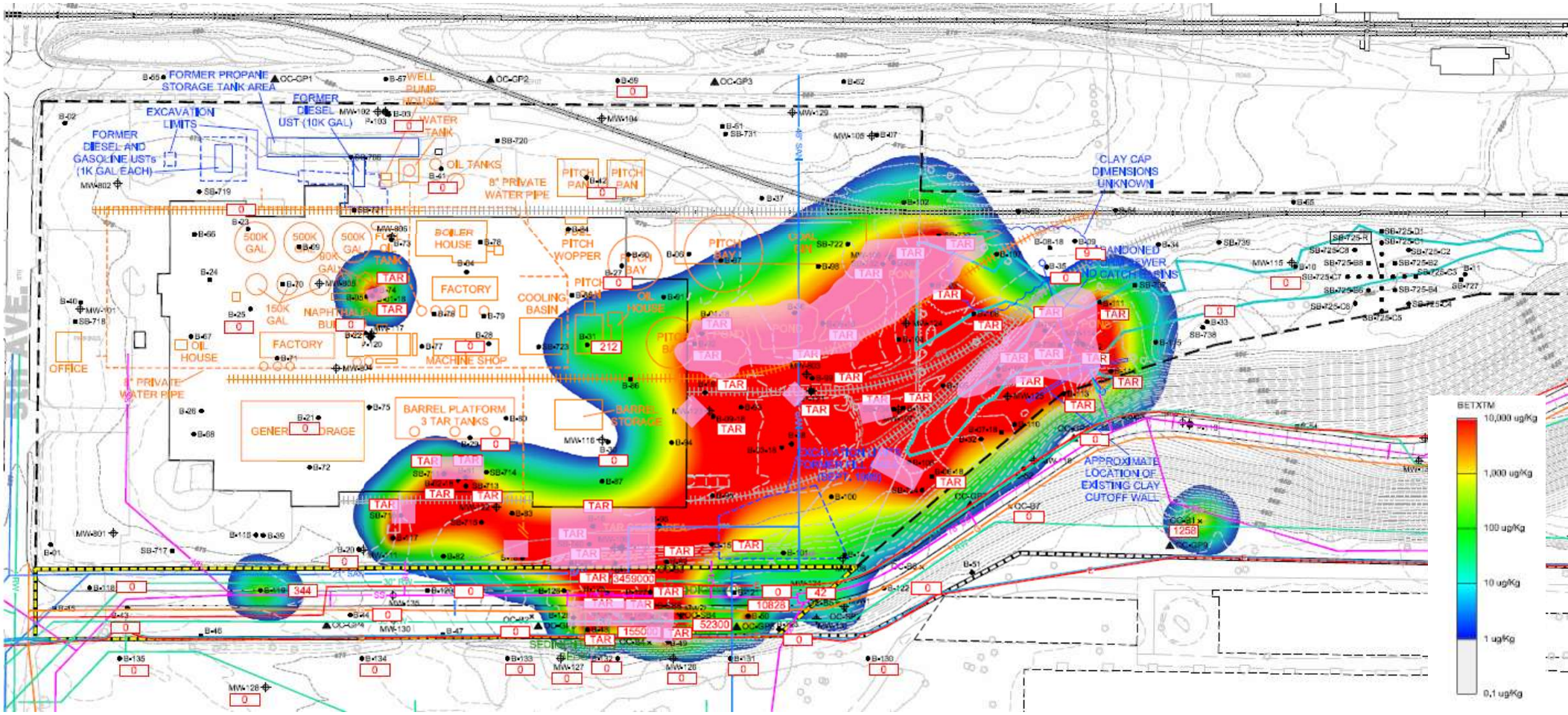
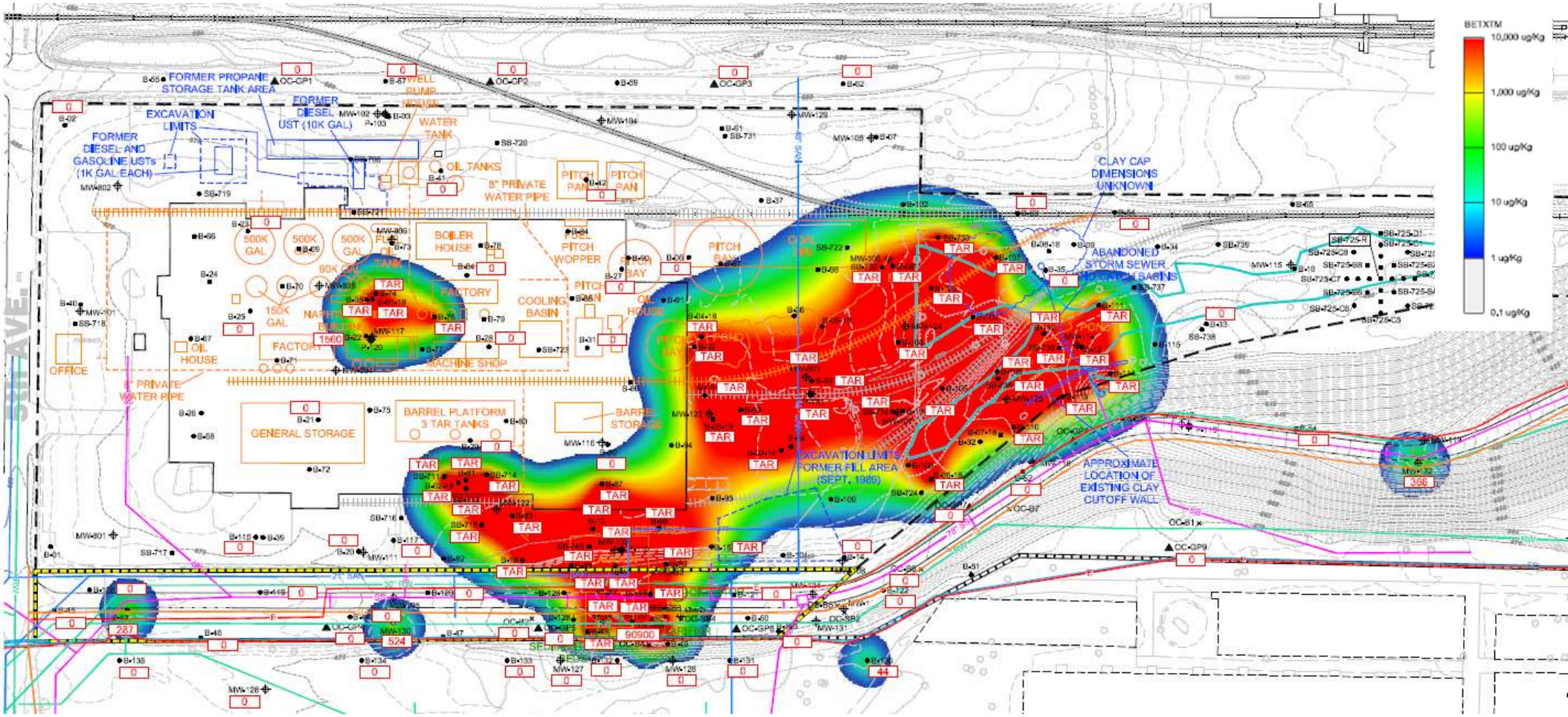
Attorney Larry Haskin, representing the City of Oak Creek, lhaskin@haskinkarls.com
Attorney Mark Thimke, representing Connell, mthimke@foley.com

SER Case File #: FID #: 241379050; BRRTS #s: 02-41-553761 / 06-41-561509
SER Case File #: FID #: 341074470; BRRTS #s: 02-41-561425 / 06-41-561426



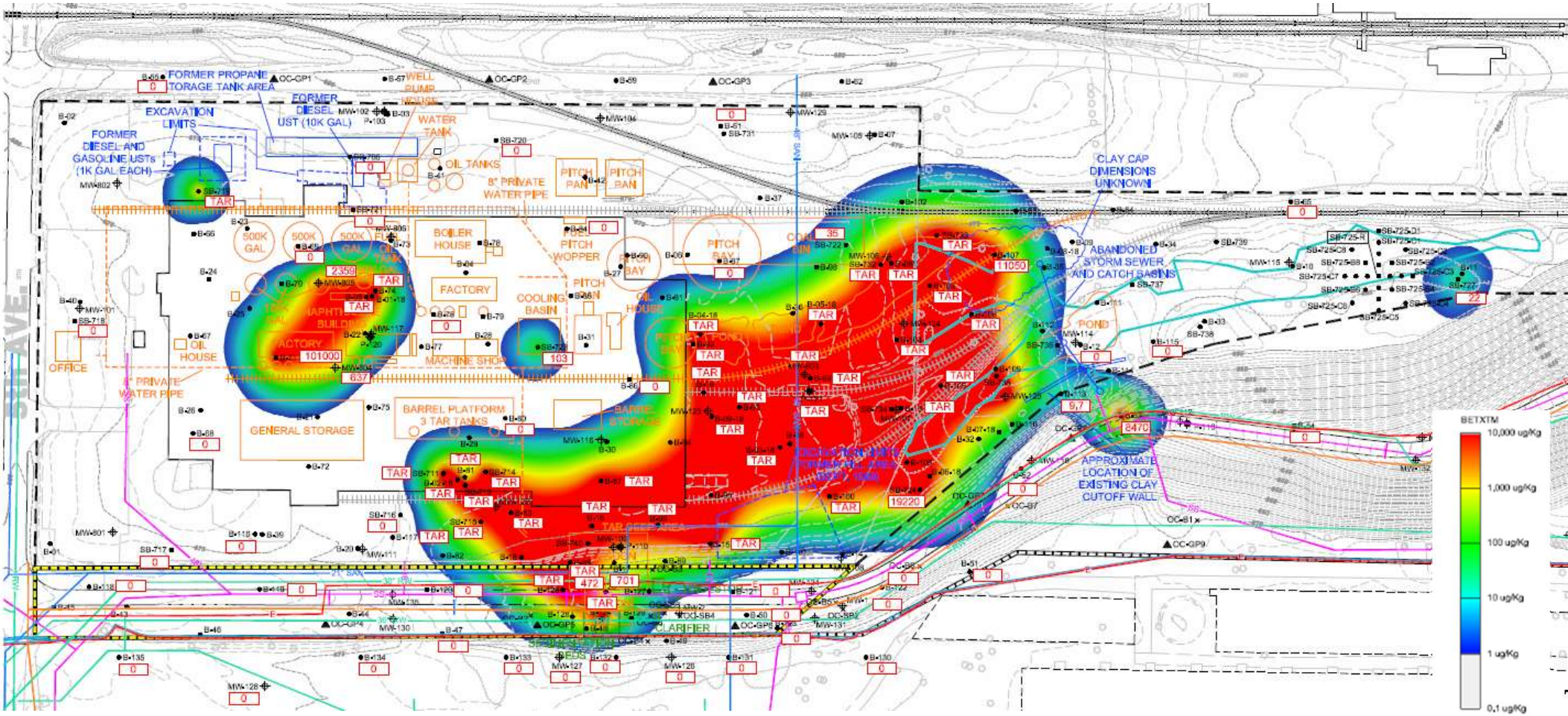
ISS is proposed in pink areas to 6 feet, not 8 feet as indicated on this figure.
Contamination within pink areas from 6-8 feet and outside pink areas will remain.

TITLE:	FORMER KOPPERS TAR PLANT AND WABASH ALLOYS SITE TOTAL BTEXTM SOIL CONCENTRATIONS - 4-8 FEET BGS
LOCATION:	OAK CREEK, WISCONSIN
TETRA TECH	CHECKED: MRN DRAFTED: EBD/CMP PROJECT: 117-2201449 DATE: 06/10/20
FIGURE:	B2



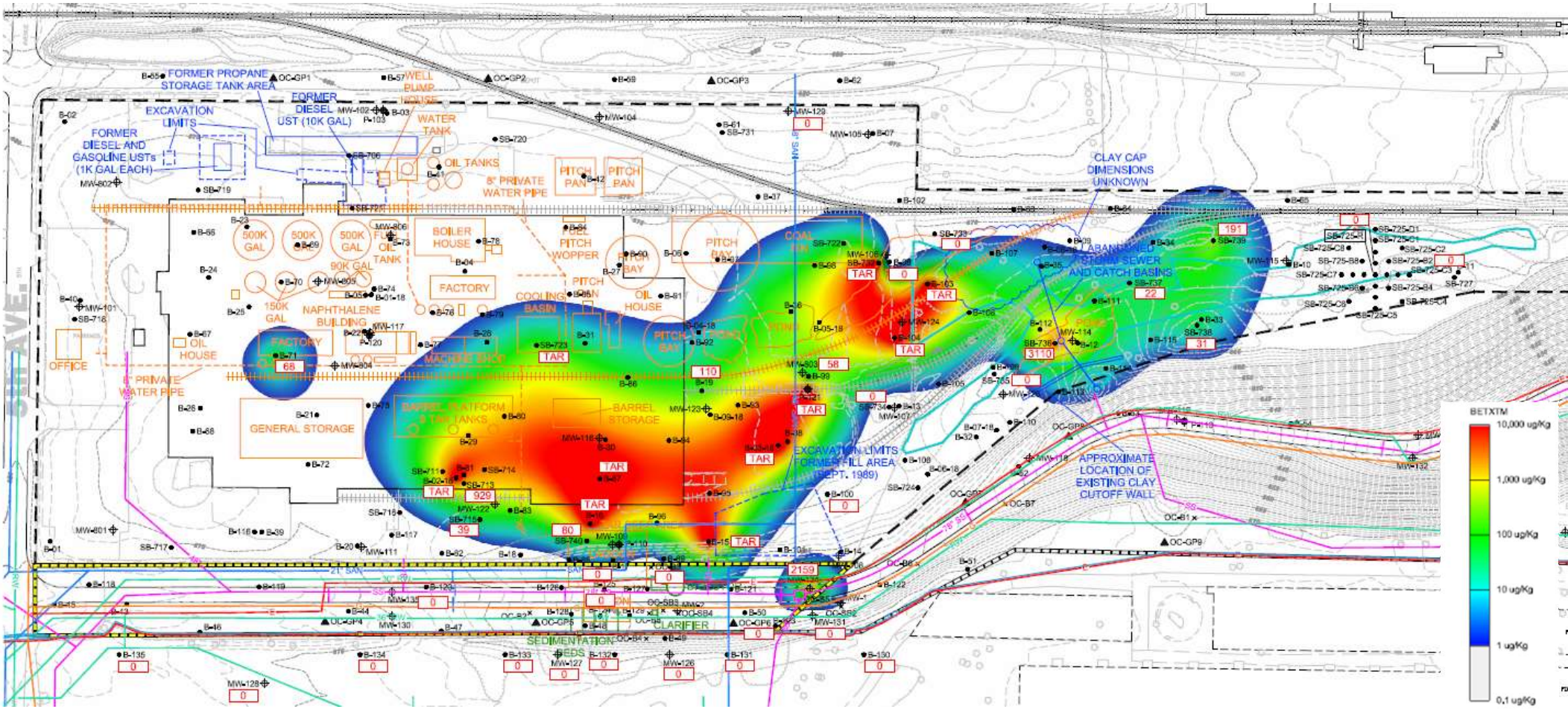
Contamination will remain at this depth.

TITLE:	FORMER KOPPERS TAR PLANT AND WABASH ALLOYS SITE TOTAL BTEXTM SOIL CONCENTRATIONS - 8-12 FEET BGS
LOCATION:	OAK CREEK, WISCONSIN
TETRA TECH	CHECKED: MRN DRAFTED: EBD/CMP PROJECT: 117-2201449 DATE: 06/10/20 FIGURE: B3



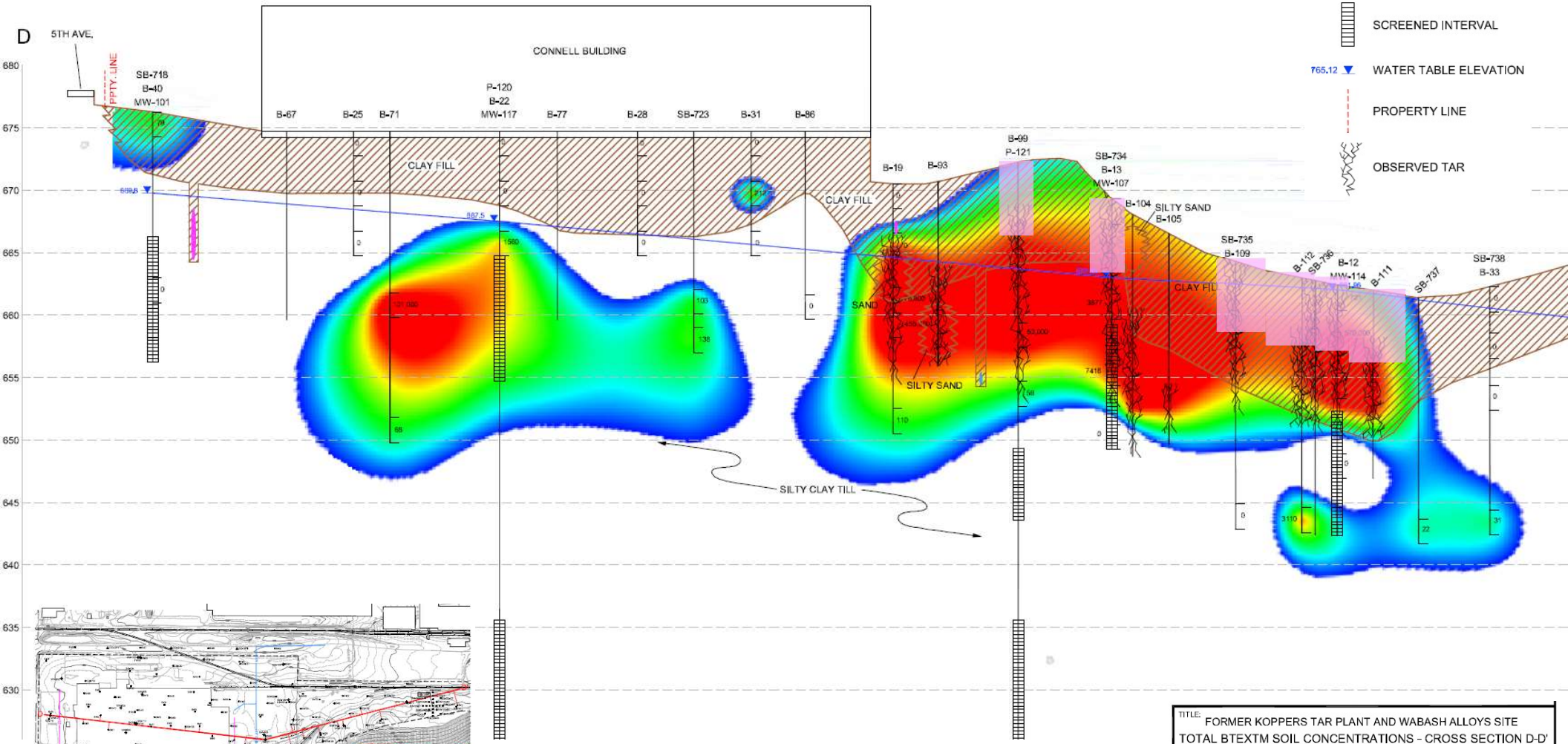
Contamination will remain at this depth.

TITLE:	FORMER KOPPERS TAR PLANT AND WABASH ALLOYS SITE TOTAL BTEXTM SOIL CONCENTRATIONS - 12-16 FEET BGS
LOCATION:	OAK CREEK, WISCONSIN
TETRA TECH	CHECKED: MRN DRAFTED: EBD/CMP PROJECT: 117-2201449 DATE: 06/10/20
FIGURE:	B4



Contamination will remain at this depth.

TITLE:	FORMER KOPPERS TAR PLANT AND WABASH ALLOYS SITE TOTAL BTEXTM SOIL CONCENTRATIONS - 16-20 FEET BGS
LOCATION:	OAK CREEK, WISCONSIN
TETRA TECH	CHECKED: MRN DRAFTED: EBD/CMP PROJECT: 117-2201449 DATE: 06/10/20 FIGURE: B5



ISS will address tar in pink areas from 0-6 ft bgs. Contamination outside pink areas will remain.

TITLE: FORMER KOPPERS TAR PLANT AND WABASH ALLOYS SITE
TOTAL BTEXTM SOIL CONCENTRATIONS - CROSS SECTION D-D'

LOCATION: OAK CREEK, WISCONSIN

TETRA TECH

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2201323
DATE	1/9/14

FIGURE: B9