BEAZER EAST, INC.
c/o Three Rivers Management, Inc. (Agent for Beazer East, Inc.)
600 River Avenue, Suite 200, Pittsburgh, PA 15212-5994

October 10, 2022

Douglas W. Coenen, P.E.
Hazardous Waste Engineer
Wisconsin Department of Natural Resources
101 South Webster Street
Madison, WI 53703
Telephone 608-266-2621

Subject: Notice of Incompleteness; Long-Term Care License Application
Beazer East, Inc.
Former Koppers Inc./Beazer East, Inc. Facility – Superior, WI
EPA ID No. WID006179463

Dear Mr. Coenen:

On May 10, 2022, Beazer East, Inc. ("Beazer") received via email from the Wisconsin Department of Natural Resources ("Department") the above-referenced Notice of Incompleteness letter (the "NOI") for the Long-Term Care License Renewal Application (the Application") for the Former Koppers Inc./Beazer East, Inc. facility located in Superior, Wisconsin (the "Site") submitted by Beazer to the Department on November 1, 2021. Via email dated June 28, 2022, the Department extended the recommended deadline for a response to the NOI by 90 days (i.e., October 10, 2022). Please find attached Beazer's written response to the items discussed in the NOI.

As an initial matter, Beazer incorporates by reference all of the objections noted in its February 14, 2020, June 17, 2020, March 1, 2021, and November 1, 2021 submittals (collectively, the "Prior Submittals") to the Department's December 19, 2019 Request for Information, December 9, 2020 Notice of Noncompliance, and May 5, 2021 Conditional Close-Out letter (CCO). Without waiving, limiting, or otherwise prejudicing these objections, and while preserving all rights and defenses that it may have with respect to this matter, Beazer provides its response herein.

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Should you have any additional questions, please feel free to contact me.

Sincerely,

Jane Patarcity
Environmental Manager

Enclosure

cc: Jayne Wade, Wisconsin Department of Natural Resources
John Sager, Wisconsin Department of Natural Resources, w/ enclosures
(original and replicate hard copies w/portable drives)
Dustin Sholly, Wisconsin Department of Natural Resources
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October 10, 2022 Beazer East, Inc. Response to NOI
Former Koppers Inc./Beazer East, Inc. Facility
Superior, Wisconsin

For convenience, the Department's specific comments in the NOI have been set forth below in italics followed by Beazer's responses.

1. <u>Owner Signature and Certification</u>

The Department stated in the NOI:

> *The Application was not signed by the landowner (TRP). Section NR 670.010(2), Wis. Adm. Code, requires that the application also be signed by the site owner. The application should include the landowner signature and certification in accordance with the requirements and details in s. NR 670.011, Wis. Adm. Code.*

Beazer Response to Comment 1: Beazer has provided a copy of the Revised Application to the current landowner, TRP Properties, LLC ("TRP") and has requested that TRP sign the application where appropriate. However, at the time of this submittal, TRP has declined to sign the Revised Application and has communicated to Beazer that they object to the Certification language. It is Beazer's understanding that counsel for TRP has been in communication with the Department regarding this issue.

2. <u>Site Uses and Site-Wide Activities and Controls</u>

The Department stated in the NOI:

> *Use of the site is limited by s. NR 664.0117(3), Wis. Adm. Code. In general, uses that may disturb any cover, containment system, or monitoring system are not allowed unless the department finds that they are necessary and will not increase potential hazards. This standard may be more difficult to continuously achieve at this type of site, where there are multiple parties that use or operate at the site or that may have certain contractual responsibilities. More specifically, it appears that responsibilities such as cover disturbance controls, inspections and maintenance, monitoring, training, preparedness and prevention, contingency planning, and security may involve multiple parties associated with the site.*
>
> *Section A (on page 4) of the Cover Letter states:*
>
> > *"The Application relates only to those solid waste management units managed by Beazer and does not relate in any way to any solid waste*

> *or hazardous waste units and/or activities managed or conducted by TRP Properties, LLC (the current property owner) and Koppers Inc.".*

Section 2.3.2 of the Application refers to Table 2-1 to describe the SWMUs associated with the site, but states:

> *"Table 2-1 provides a summary of the former SWMUs/potential source areas at the site managed by Beazer, and does not relate in any way to any solid waste units managed by and/or activities conducted by TRP (the current property owner) and Koppers, including, but not limited to, those activities related to the drip pad at the site regulated under 40 CFR Subpart W."*

Accordingly, the Application appears to exclude corrective action responsibilities, activities or controls that may involve contractual obligations of parties other than Beazer. As the department has previously communicated to Beazer and TRP, this is unacceptable.

It is unclear which units or activities managed or conducted by TRP or Koppers are being addressed in Section A of the Cover Letter and Section 2.3.2 of the Application, or why this sort of is distinction is considered relevant to the Application. Regarding the drip pad area, in a letter to the department dated July 30, 2020, Koppers asserted that it is not responsible for contamination below the drip pad area because it may pre-date Koppers' purchase of the site. In combination with Section A of the Cover Letter and Section 2.3.2 of the Application, as referenced above, it appears that both Beazer and Koppers deny responsibility for the drip pad area.

The following summary provides additional information regarding responsibilities for the drip pad area. In a transmittal dated January 10, 2019, KU Resources, Inc. (on behalf of Koppers) requested a determination that the drip pad closure "meets the requirements for a RCRA Subpart W closure.", and that this determination be issued "at such time as WDNR provides final approval of Beazer's on-property site-wide RCRA Corrective Action remedy." In an email dated July 10, 2019, KU clarified that the request was to request "approval of clean closure and end to the ongoing obligations under NR 6000 (sic) series hazardous waste rules as the 90-day generator drip pad has been sufficiently cleaned." "Clean closure" has not been demonstrated under ss. NR 662.017(1)(h) and 665.0445, Wis. Adm. Code, and the department discussed further actions in its letter to Koppers dated June 16, 2020. Koppers' response letter dated July 30, 2020 refers to

obligations of other unnamed parties for contamination in the drip pad area from activities that that pre-date Koppers' purchase of the site.
It is noted that several references within the Application describe fencing around the area of closed surface impoundments (depicted on Figure 2-1), which the Application indicates will limit activities in and adequately prevent disturbance to the regulated units' cover system. For site areas outside of this fencing certain items important for proper long-term care and/or corrective action were not addressed in the Application. Specific examples include:

a. *Monitoring Wells: The Application's PPC Plan (Appendix G-1), Section 3.1, and Training Plan (Appendix G-2), Section 2.3. establish that TRP and Koppers (as the owner and tenant, respectively) have been notified of the location of groundwater monitoring wells, which lie outside of the fenced area. The department is concerned that personnel and/or equipment operating at the site or trespassers may inadvertently damage wells, so we recommend that additional physical measures to help protect the wells from inadvertent damage (such as bollards, high-visibility signs, fencing) be implemented.*

b. *Covers/caps: It appears that all non-regulated unit SWMUs and their cover systems lie outside of the fenced area. Personnel and equipment operating at the site (such as railroad tie grinding and railroad tie processing mentioned in Section 2.3.2 of the Application, or other future disturbing activities) may inadvertently damage these cover systems, and unauthorized trespassers could damage these cover systems. The department recommends that additional controls be implemented to minimize this possibility, and the minimum frequency of cover system inspections (currently annual) be reassessed to account for these risks.*

c. *Drainage: Surface water drainage systems outside of the fenced area have been developed to minimize infiltration, erosion, and deleterious effects to cover systems. Other activities or disturbances at the site may inadvertently damage or affect the performance of these systems. The department recommends that additional controls be implemented to minimize this possibility, and the minimum frequency of drainage system inspections (currently annual) be reassessed to account for these risks.*

> *Independent of contractual arrangements and responsibilities, all site-wide long-term care and corrective action systems, controls, and measures should be integrated into applicable parts of the application.*

Beazer Response to Comment 2:

Two issues are raised in Department Comment 2, as follows:

A. The Department finds it unacceptable to exclude corrective action responsibilities, activities or controls that may involve legal or contractual obligations of parties other than Beazer, and the Department requests that independent of contractual arrangements and responsibilities, all site-wide long-term care and corrective action systems, controls, and measures should be integrated into applicable parts of the application.

B. Protection of certain items important for proper long-term care and/or corrective action located outside of the existing fencing around the area of closed surface impoundments were not addressed in the Application, including:

    - Monitoring wells
    - Covers/caps
    - Drainage

Each of these issues are discussed separately in the remainder of this Response to Comment 2.

A. Integrating all site-wide long-term care and corrective action systems, controls, and measures into the application independent of legal responsibility or contractual arrangements

Beazer's Application identifies two other parties that may have legal responsibility with respect to environmental conditions at the Site. With respect to the current landowner, TRP, TRP has indicated that it is not conducting any operations at the Site but is leasing the Site to another entity.

With respect to former Site owner and operator, Koppers Inc. (Koppers), the Application does not address units managed by and/or activities conducted by Koppers. The Department's Comment 2 details certain communications by and between the Department and Koppers in connection with drip pad closure requirements arising under RCRA Subpart W. Beazer makes no comment herein regarding such communication. Further, Beazer does not agree to revise the Application to address any requirements of Subpart W of RCRA, as Subpart W of RCRA is inapplicable to Beazer and Beazer's former operations at the Site.

Beazer sold the wood treating facilities and the property at the Site to Koppers on December 29, 1988. Subpart W of RCRA and its associated regulations governing the design, use, management and closure of drip pads were not enacted until December 6, 1990 (and, as a result of then-pending litigation against the USEPA, the Subpart W regulations did not become effective until well after December 6, 1990). Because it had ceased ownership and operation of the Site prior to the enactment of Subpart W, Beazer never owned or operated at this Site a drip pad or any other hazardous waste management unit subject to RCRA Subpart W. Beazer is unaware of any legal authority pursuant to which Beazer would be required to demonstrate or comply with RCRA Subpart W closure requirements for hazardous waste facilities or units that were never subject to RCRA Subpart W during Beazer's period of ownership or operation. To the extent there exist environmental impacts in the area of the drip pad that pre-existed Koppers' tenure at the Site (and, therefore, pre-date the enactment of Subpart W), those impacts would be subject to RCRA corrective action, not Subpart W, and Beazer has identified and addressed those impacts in the Application as an existing SWMU (see SWMUs 12, 13, 14 [Area F]; Figure 2-2).

B. Protection of long-term care and/or corrective action items around the area of closed surface impoundments and located outside of existing fencing

As an initial matter, it is important to note that institutional controls exist at the property ensuring that the property owner, including both current owner, TRP, and any future owner of the property, is obligated through an irrevocable easement to bear sole responsibility for any damage or interference that they or their invitees might cause to environmental remedy components installed by Beazer. These obligations arise pursuant to the terms of a Post-Closing Access Easement (the "Easement") dated September 19, 2012, which is recorded as Document #853678 with the Douglas County Recorder. Under the Easement, Beazer has the right to enforce these obligations against TRP and any future owner of the property because, pursuant to Paragraph 7 of the Easement, the obligations "shall constitute covenants that run with the Real Property." Therefore, while Beazer appreciates and will address the Department's specific concerns stated in Comment 2 regarding protection of remedy components, it should be understood that an enforceable, non-revocable real property easement guarantees that the owner of the Site will be responsible if it damages or interferes with remedy components installed to address "Environmental Obligations" at the Site, which is a term broadly defined by the Easement to include everything addressed in the Application.

- **Protection of monitoring wells located outside of the existing fencing**

All monitoring wells at the Site are inspected during each semiannual groundwater monitoring event conducted in April and October, in accordance with the Department-approved Sampling and Analysis Plan (RETEC 2002). There has not been a history of inadvertent damage to Site monitoring wells by property owner personnel and/or equipment

or trespassers. Accordingly, there is not currently a need for any additional physical measures to protect the wells from inadvertent damage. However, during the next semiannual groundwater monitoring event, all monitoring wells at the Site will be painted with a high visibility color to be sure the wells are noticeable and to minimize the potential for future inadvertent damage. Additional well protection measures can be considered in the future, should damage to wells become a recurring issue.

- **Protection of covers/caps located outside of the existing fencing**

Annual inspections of the surface covers installed in 2010 and 2011 are being conducted in accordance with the Operation and Maintenance Plan, On-Property Corrective Measures Implementation (O&M Plan; Arcadis 2011), which was submitted to the Department on September 12, 2011 as Appendix J to the On-Property Corrective Measures Implementation Construction Documentation Report (CMI Construction Documentation Report; Arcadis 2011). The Department approved the CMI Construction Documentation Report in a letter to Beazer dated October 21, 2011[1]. While some damage to the surface covers has occurred over the years, such damage has been relatively minor, and repairs have been completed as documented in annual reports submitted to the Department such that the surface covers continuously protect human health and the environment. Beazer does not believe that any additional controls are necessary to minimize the potential for inadvertent damage to the surface covers. The property owner's legal responsibility for damages, continued annual inspections by Beazer, and as-needed maintenance/repairs in accordance with the Department-approved O&M Plan are appropriate and protective of human health and the environment.

- **Protection of drainage systems located outside of the existing fencing**

It is unclear what specific "water drainage systems" this comment is referring to. Drainage ditches outside the fencing at the Site that were remediated in 2010 and 2011 include "Area F1" and the "Outfall 001 Drainage Ditch." Both of these areas are currently inspected annually in accordance with the Department-approved O&M Plan. Beazer does not believe that any additional controls are necessary to minimize the potential for inadvertent damage to these areas. The property owner's legal responsibility for damages, continued annual inspections by Beazer, and as-needed maintenance/repairs in accordance with the Department-approved O&M Plan is appropriate and protective of human health and the environment.

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[1] The Department "conditionally approved" the CMI Construction Documentation Report, subject to Beazer's submittal of a notification of continuing obligations to TRP and submittal of a GIS registry package to the Department. Beazer submitted the notification of continuing obligations to TRP (with copy to the Department) on June 16, 2014, and a GIS registry package to the Department on August 5, 2015. Accordingly, Beazer deems to CMI Construction Documentation Report, and appended O&M Plan, to be approved by the Department.

3. <u>Preparedness and Prevention</u>

The Department stated in the NOI:

Section 4.2 of the Application states:

"There is no possibility of fire, explosion, or immediate release of hazardous waste constituents from the closed RCRA-regulated unit that would constitute a threat to human health or the environment. In general, this performance standard was achieved by removing all K001 hazardous waste from the former RCRA-regulated surface impoundments as described in Section 2.3.1. The performance standard is being ensured through inspection and maintenance of the closed RCRA regulated unit and groundwater monitoring. Pursuant to NR 670.014(2)(f) and the preceding justification, it is therefore requested that the Post-Closure Preparedness and Prevention Plan requirements be waived for this Site.

Even though a waiver has been requested, the most recent Preparedness, Prevention and Contingency (PPC) Plan (FTS), February 2021) is provided herein as Appendix G.1 to demonstrate compliance with historical requirements".

To better justify a waiver request, the application should be clarified, and improved in the following ways:

a) While some hazardous waste may have been removed from the surface impoundments, it disagrees that "all" hazardous waste was removed. This should be corrected (both here and in Application Section 3.1, first paragraph). The application should better describe the waste and waste residues that were left in place at closure and the associated risks for a fire, explosion, or release identified in s. NR 664.0031, Wis. Adm. Code.

b) The application should better describe how inspection, maintenance and monitoring activities adequately address these risks.

c) It is not clear what is meant by "Post-Closure Preparedness and Prevention Plan." This should be clarified.

d) It is not clear how or why the PPC Plan is being referenced here to "demonstrate compliance with historical requirements", and how this supports a waiver request. This should be clarified.

Beazer Response to Comment 3:

a) Section 3.1 of the Revised Application was clarified to include the following statements:

All K001 material (which includes only the actual "bottom sediment sludges," not all impacted soils near or adjacent to such sludges) and visibly contaminated soils near or adjacent to such K001 material were removed from the RCRA-regulated surface impoundments during closure in 1988/1989, and no wastes have since been treated, stored, or disposed of in the closed RCRA-regulated unit.

As documented in the Closure Report (Appendix B.4), residual constituents of potential concern (COPCs) were detected in several subgrade soil samples collected from the uppermost stratigraphic unit (A/B-zones) following excavation of the K001 material / visibly contaminated soils from the RCRA-regulated surface impoundments. Due to the low permeability of the clay where the COPCs were detected, residual COPCs have remained localized in the A-zone as evidenced by the consistency of groundwater data collected over the past 30 years.

b) The closed RCRA-regulated unit was constructed in a manner such that there is no possibility of fire, explosion, or immediate release of hazardous waste constituents that would constitute a threat to human health or the environment, therefore; a waiver from pollution and prevention requirements was requested in Section 4.2 of the Initial Application (November 21, 2021) (Initial Application). Inspection and maintenance plans for the closed RCRA-regulated unit, groundwater monitoring wells, and on-property corrective measures are provided in Section 4.5 of the Application.

c) The PPC Plan was developed specifically to address the closed RCRA-regulated unit which is in post-closure care. To avoid confusion, the words "Post-Closure" have been removed from the title of the PPC Plan in Appendix G of the Revised Application.

d) An updated PPC Plan was provided to demonstrate compliance with the requirements of NR 664 Subchapter C pending the Department's approval of the waiver request. The Revised Application text has been updated to provide clarification and the re-named PPC Plan is provided in Appendix G of the Revised Application.

4. Contingency Plan

The Department stated in the NOI:

> *Section 4.3 of the Application asserts that a Contingency Plan in accordance with the requirements of s. NR 670.014, Wis. Adm. Code, is not required for the closed surface impoundment units.*
>
> *There is no variance or waiver provision in Wisconsin's regulations that allows the department to waive the requirement for a contingency plan. The application should include a Contingency Plan. You may want to propose that the PPC Plan (included in Appendix G.1 of the Application) serve as the site's contingency plan, provided it meets the requirements of s. NR 664.0051(1), Wis. Adm. Code. Additional comments regarding the PPC Plan are provided in other sections of this letter (e.g., sections 4, 14, 15, 16, and 17).*

Beazer Response to Comment 4:

It appears that Beazer did not explain its position as clearly as may have been possible, and will attempt to do so in this response. Beazer did not request a variance or waiver in Section 4.3 of the Application. Beazer acknowledges that there is no specific variance or waiver provision in Wisconsin's regulations that allows the Department to waive the requirement for a contingency plan. However, the existing regulations exempt long-term care licenses from the contingency plan requirement unless the Department expressly requires it, and Beazer was seeking the Department's express concurrence that the Department was not requiring it here.

Specifically, the last sentence in NR 670.014(1) states that "*For long-term care licenses, only the information specified in s. NR 670.028 is required in the feasibility and plan of operation report.*" NR 670.028 does not specify that a copy of the contingency plan [NR 670.014(g)(2)] is required unless the Department determines that this additional information is necessary. As stated in Section 4.2 of the Initial Application and the attached Revised Application, there is no possibility of fire, explosion, or immediate release of hazardous waste constituents from the closed RCRA-regulated unit that would constitute a threat to human health or the environment. Therefore, Beazer believes that it would be reasonable and appropriate for there to be no contingency plan for the closed RCRA-regulated unit. Beazer is requesting the Department's concurrence that the Department is not expressly requiring a contingency plan; however, should the Department expressly determine that a contingency plan is required, Beazer proposes that the PPC Plan will serve as the Site's contingency plan.

5. Off-Property Corrective Action

The Department stated in the NOI:

> *Item B.1 of the CCO established that the application should include a detailed description of all corrective action work. On page 6 of the Cover Letter, Beazer states, "The attached Application addresses both long-term care and corrective action requirements, including references to various existing plans, as appropriate". These plans appear to only address on-property activities. The Application does not describe corrective actions for off-property contamination.*
>
> *The application should address corrective action for all areas of off-property contamination in sufficient detail to support a proper cost estimate and proper financial assurance. This may be accomplished by adding off-property areas to Table 2-1 of the Application, and by describing off-property corrective actions (perhaps as an additional Section 4.1.3).*
>
> *Please also refer to related discussions in this letter involving topics that involve or are affected by off-property corrective action (for example sections 3 and 4, 6 through 11, and sections 14 through 16).*
>
> *Since U.S. EPA transferred corrective action regulatory lead authority to the department in 1997, some work regarding off-property corrective action has been performed by Beazer and its consultants. However, more recently, movement towards completion of the focused Feasibility Study (FFS) and remedy selection and implementation has been delayed further. The department is increasingly concerned that progress on off-property corrective action has been slow.*

Beazer Response to Comment 5:

A new Section 4.1.3 (Off-Property Corrective Actions) has been added to the Revised Application. Table 2-1 of the Revised Application presents a summary of former SWMUs/potential source areas and associated completed corrective measures. Because the off-property portion of the Site is not a SWMU and corrective measures have not yet been completed, off-property areas have not been added to Table 2-1. In addition, as discussed in Previous Submittals, off-property corrective actions have been added to the Cost Estimate for Financial Assurance (Appendix H of the Revised Application).

6. Off-Property Corrective Action Cost Estimate

The Department stated in the NOI:

> *As background, Item 2.f of the department's Notice or Noncompliance (NON) dated December 9, 2020, alleged non-compliance with financial assurance requirements regarding off-property corrective action and required that this cost estimate be developed and provided to demonstrate compliance. Beazer responded on March 1, 2021, that it was impossible to estimate the cost for this because a remedy had not yet been selected. In the CCO, the department disagreed with this position; the department reminded Beazer that cost-related information had been previously developed in Arcadis' 2014 report, and could, along with other information, be used in developing the cost estimate, and that the cost estimate could always be updated as more information becomes available. Accordingly, sections B.2 and B.6 of the CCO established that the application include estimated corrective action costs for off-property remediation activities.*
> *The Application did not include estimated corrective action costs for off-property remediation activities. In fact, Table 1-1 of the Application asserts that this information is "Not Applicable." The department disagrees, based in part on the following requirements:*
>
> - *Section 291.37(2)(a), Wis, Stats., requires proof of financial responsibility for the cost of corrective action. This cannot be accomplished without proper cost estimates.*
>
> - *Section NR 670.014(4)(a)6., Wis. Adm. Code, requires the application to include a description of the corrective action, the anticipated time period for achieving compliance and the basis for its length, and a cost estimate for completion of corrective action.*
>
> *In the Cover Letter (page 12), Beazer suggests that cost estimates from Arcadis' 2014 report cannot and should not be used because the report has not been approved by the department. The department disagrees that its approval or non-approval of a report renders the report's information unusable, particularly when the report was certified by a professional engineer.*
>
> *Beazer goes on to also state, "In the absence of a selected remedy, it is impossible to estimate the financial assurance required by the regulations." The department disagrees. The department understands that Beazer is close to completing a Great Lakes Legacy Act (GLLA) focused feasibility study*

(FFS) and believes that Beazer and its consultants can develop a reasonable cost estimate based on the amount of site-specific information available and the work completed to date.

Also note that a basic purpose of this financial assurance is to assure that funds are available for corrective action activities in the event that the owner or operator will not, or cannot, accomplish the activities. At present, no cost estimate or financial assurance has been established for off-property corrective action, and thus the State would be left to fund any corrective action should it became necessary. This is not acceptable.

The application should include the estimated corrective action costs for off-property remediation activities, including but not limited to additional investigations, remedy detailed design and implementation, post-remedy maintenance and monitoring, and completion date. This off-property corrective action cost estimate should present the supportive information identified in section B.2 of the CCO, including but not limited to estimated costs by task for each year until corrective action is no longer necessary and an explanation of the basis for the estimate's quantities and unit costs.

The department acknowledges that in some cases it may be more difficult to develop a cost estimate prior to the formal selection/approval of a remedy, because certain assumptions are needed. We recommend that you develop and describe these assumptions in presenting its cost estimate. Please note that as more information becomes available in the future, the cost estimate and its assumptions can and should be updated.

In any case, the cost estimate should be based on completion of corrective action work that can be reasonably expected to meet the standards of chs. NR 700-799, Wis. Adm. Code.

Beazer Response to Comment 6:

As requested, the Cost Estimate for Financial Assurance in Appendix H of the Revised Application has been updated to include estimated costs for off-property corrective actions. As recommended by the Department, the estimated off-property corrective action costs are based on the total estimated costs included in Appendix B of the 2014 Focused Corrective Measures Study. Specifically, costs are included for 2014 Focused Corrective Measures Study Alternatives A2, B1, and C2. The estimated costs include pre-design investigation; remedial design; remedial construction and oversight; reporting; and long-term inspection, maintenance and monitoring. The following modifications have been made to adjust the

2014 cost estimates to 2022 dollars (refer to updated detailed cost estimates provided in Appendix H):

- The unit price for off-Site transportation and disposal of excavated materials assumes $78/ton for non-hazardous waste disposal at a Subtitle D landfill to align with the unit pricing being used in the GLLA FFS (the $78/ton is based on the average pricing of seven landfills obtained in 2020/2021); and

- The Indirect Costs, Total Construction Costs, and Total Operation and Maintenance Costs were increased by 22% to adjust for inflation from 2014 to 2022 (based on the U.S. Bureau of Labor Statistics Consumer Price Index Inflation Calculator).

Based on the assumption that the off-property corrective actions will be completed as part of a GLLA project, the off-property corrective action cost estimate reflects that Beazer will be responsible for the 50% of the costs contributed by a non-federal GLLA participant (except for long-term inspection, maintenance, and monitoring costs, which do not involve GLLA federal funding, and for which Beazer will be 100% responsible).

7. Long Term Care (LTC) and Corrective Action (CA) Period (Completion Dates/Duration)

The Department stated in the NOI:

> *Section B.5 of the CCO established that the application was to include the estimated time period (i.e., the completion date or duration) for long-term care and corrective action, for use in developing the cost estimates for these activities. Also note that s. NR 670.014(4)(a)6., Wis. Adm. Code, requires the application to include the anticipated time period for completing corrective actions for each unit and the basis for its length, in a manner that is consistent with the long-term care cost estimate.*
>
> *The Cover Letter and Application were unclear regarding the estimated completion date(s). For example:*
>
> - *The Cover Letter (page 10) states, "Beazer proposed a 40-year LTC time period in the Application in accordance with NR 664.0117(a)(a)". We assume this meant to refer to s. NR 664.0117(1)(a), Wis. Adm. Code (which establishes that long-term care must continue for a minimum of 40 years after completion of closure of the unit), which may mean that for the purposes of computing financial assurance requirements, a 40-year period that*

would end in 2029 (i.e., 40 years after the approved 1989 closure certification) is proposed. This appears to be inconsistent with the Cover Letter (page 11) which states, "Financial assurance cost estimates are included in Appendix H of the Application." Appendix H of the Application shows 40 years of costs as of June 3, 2021, which may mean that a period that would end in 2061 (i.e., 2021 plus 40 years) is proposed.

- *Appendix I of the Application is cited (in the Table 1-1 "crosswalk" table) as addressing the completion date/duration-related questions raised in the CCO. This appendix only includes a copy of a 2012 amendment to an irrevocable standby letter of credit. It is unclear how this document relates to or explains the estimated completion dates/duration for its cost estimates.*

- *The submittal did not address the schedule and completion date/duration for off-property corrective action work, which should be addressed.*

The application should provide a clear description of the basis for and the estimated schedule and completion date(s) and resultant duration(s) of the LTC and CA period(s) for use, among other things, in supporting the associated cost estimates and establishing financial assurance. These dates should reflect when you believe LTC and CA work will no longer be needed for each unit. Additional discussion regarding financial assurance is included in other sections of this letter (for example, sections 8 through 10).

Since U.S. EPA transferred corrective action regulatory lead authority to the department in 1997, some work regarding off-property corrective action has been performed by Beazer and its consultants. However, more recent movement towards completion of the FFS, and the remedy selection and implementation, has been delayed further. The schedule should reflect completion of off-property corrective actions no later than five years from present, or by 2027.

Beazer Response to Comment 7:

Beazer has assumed a 40-year period (2022 – 2062) for RCRA surface impoundment post-closure care activities, consistent with NR 664.0117(1)(a). Beazer has also assumed a 40-year period (2022 – 2062) for on-property corrective measures inspection/monitoring/ maintenance activities. For financial assurance cost estimating purposes, we have assumed a rolling 40-year period for both the RCRA surface impoundment post-closure care and the on-property corrective measures inspection/maintenance/monitoring activities.

As discussed above in Beazer's response to Department Comment 6, Beazer has revised the Cost Estimate for Financial Assurance in Appendix H of the Revised Application to include estimated costs for corrective actions for the off-property portion of the Site. However, because an actual remedy for the off-property area has not yet been selected/approved, it is not feasible to determine when such corrective actions will occur or how long they will take. For now, the Cost Estimate for Financial Assurance includes a single line item for off-property corrective actions (with reference provided to the 2014 FCMS cost estimate tables for additional details/assumptions) and assumes they would be a "one time cost."

8. Basis for Estimated Costs

The Department stated in the NOI:

> *Item B.2.c of the CCO established that cost estimates include a clear description of the source of and/or basis for the cost estimates' quantities and unit costs. More specifically, CCO items B.2.a through B.2.c established that the cost estimates identify each task and subtask (as included in the LTC and CA work descriptions) and the quantity, unit, unit cost and extended total for each task/subtask. Items B.2.c requires the cost estimates to include a description of the source and/or basis for the quantities and costs. Item B.2.b requires the inclusion of costs needed to procure and manage a third party to perform the work.*
>
> *Cost information is presented in Table 1 in Appendix H of the Application. This table is incomplete and/or unclear. The following clarifications and improvements are needed for Appendix H of the Application:*
>
> *a. A footnote in Table 1 states, "Costs are based on actual costing from Operations and Maintenance Subcontractor."*
>
> - *The term "Operations and Maintenance Subcontractor" is unclear. Please clarify if this is referring to Field & Technical Services. LLC (FTS) as this "Subcontractor", whose duties are summarized in Section 1.0 of Appendix G.2 (and include the use of FTS' "appointed subcontractor").*
> - *Regarding the term "costs", it is not clear if this is referring to units cost only, or to the quantities as well. Please clarify the source (or basis) of units and unit costs.*
>
> *b. In Table 1's "Post-Closure Care" and "Corrective Measures" sections, there are entries for erosion repairs and well repairs. This*

sort of work may or may not be needed in any given year, but when needed could be substantial. Clarification is needed, such as:

- *Do these values represent an average over some previous period of time of the costs actually experienced, or a previous year's costs, or forecasted costs independent of previous actual costs?*

- *What is the repair/replacement work is assumed to occur, how often?*

c. *In Table 1's "Post-Closure Care" and "Corrective Measures" sections, there are entries totaling $1,000 per year for project management/administration. A footnote says, "Costs are based on actual costing from Operations and Maintenance Subcontractor," which suggests that these are costs as experienced by a vendor or vendors. Therefore, it appears that there are no costs included for the procurement and management of the vendor(s). Item B.2.d of the CCO indicated that the cost estimate "should be based on utilizing a third party to complete the estimated remaining work, including costs to manage and administer the work." The cost estimate should be amended to include these project management costs.*

The application should include additional information and details regarding these items necessary to clarify and support the cost estimate for this work.

Beazer Response to Comment 8:

a. The reference in the footnote to Table 1 of Appendix H to "Operations and Maintenance Contractor" is referring to Field & Technical Services LLC (FTS), Beazer's current contractor. Beazer retains the right to change contractors in the future and, therefore, does not specifically identify a contractor in the Revised Application.

   Regarding the request to better define the term "costs" as used in Table 1 of Appendix H, Beazer is unclear as to what this question is referring to and requests further clarification. However, please note that in Table 1 of Appendix H, the listed quantity multiplied by the stated unit cost equals the identified total cost.

b. There has not been a history of inadvertent damage to Site monitoring wells. There is no reasonable basis to anticipate significant repairs to monitoring wells being required at the Site. The costs therefore include minor well pad and casing repairs and are assumed to occur once per year over a 40-year period.

c. The costs for procurement and management of the vendor(s) is absorbed by Beazer. The project management/administration costs are for the contractors' project manager to interact with Beazer.

9. Monitoring Costs

The Department stated in the NOI:

> *Appendix H of the Application appears to include all groundwater monitoring costs under Activity 1 (for surface impoundment LTC) and no monitoring costs for Activity 2 (for on-property corrective measures). It is the department's understanding that the groundwater monitoring described in Section 5.3.1 of the Application is intended to comply with both sets of requirements. If this is the case, please add a clarifying footnote to the cost estimate table. If this is not the case, you should add estimated costs for are missing groundwater monitoring activities to Activity 2.*
>
> *Appendix H shows one lump sum total of $12,790 for laboratory analysis. Two sampling rounds per year are performed with slightly different parameter lists. You should break this out into two line items, one for each annual event.*
>
> *The application should address these recommendations.*

Beazer Response to Comment 9:

The current groundwater monitoring program being implemented at the Site is solely associated with the RCRA surface impoundment post-closure care and is being conducted in accordance with NR 664 requirements. In a letter to Beazer dated November 18, 2014, the Department approved natural attenuation as the groundwater remedy for the Site. Accordingly, there is no ongoing groundwater monitoring required as part of the on-property corrective actions.

As requested, the groundwater monitoring laboratory analytical costs in Appendix H of the Revised Application have been broken out into two line items, one for each semiannual event.

10. <u>Financial Assurance Amount</u>

The Department stated in the NOI:

> *The cost estimate in Table 2 of Appendix H shows a total combined estimated cost of $2,208,000 for longterm care and corrective action. The financial assurance documentation in Appendix I includes a copy of a 2012 amendment to an irrevocable letter of credit showing a total of $600,100. It is unclear why letter of credit amount is significantly lower that the Application's cost estimate.*
>
> *The application should include documentation required to demonstrate financial assurance for long-term care and corrective action in the proper amount. For additional information, please refer to section B.5.b of the CCO that discusses the use of a "rolling window" for financial assurance; we recommend that financial assurance be demonstrated and maintained for a 30-year rolling window unless and until a successful demonstration that a period of less than 30 years is justified based on site-specific conditions regarding protection of human health and the environment.*
>
> *Also note that the financial assurance instrument(s) needs to be properly worded. For example:*
>
> - *Required wording for a LTC letter of credit is established in ss. NR 664.0145(4) and NR 664.0151(4), Wis. Adm. Code. Specific wording for corrective action is not specified by code but must be acceptable to the department. If a single instrument is used for both long-term care and corrective action, both types of expenditures should be addressed in the financial assurance instrument. Please contact the department's Dustin Sholly at dustin.sholly@wisconsin.gov for more information regarding detailed wording requirements.*

Beazer Response to Comment 10:

NR 664.0145(4)(g) requires that the LTC letter of credit be updated within 60 days following an increase in the LTC cost estimate. The existing letter of credit is in an amount equal to the cost estimate most-recently approved by the Department. Upon the Department's approval of the proposed long-term care cost estimate included in Beazer's Revised Application, Beazer will, in accordance with NR 664.0145(4)(g), update the financial assurance instrument to match the Department-approved cost estimate.

11. <u>Groundwater Monitoring Program</u>

The Department stated in the NOI:

a. The proposed groundwater monitoring plan need further clarification. According to Section 5.3.1, of the Application, monitoring is conducted in accordance with the April 2002 Sampling and Analysis Plan (SAP) and refers to Appendix M. Appendix M includes a one-page table purported to represent the currently approved SAP. However, it appears that revisions since 2002 have been implemented.

- *Section 5.4 states:*

  "There are no proposed revisions to the current groundwater monitoring program (as described in Section 5.3.1) at this time, however; an addendum to the approved SAP (The RETEC Group, Inc., April 2002) has been provided as Appendix M to incorporate groundwater monitoring network modifications that have been made since WNDR-approval of the existing SAP in 2002."

- *However, item 10 (page 13) of the Cover Letter states, "Minor modifications to the Sampling and Analysis Plan ("SAP") are provided in the SAP Addendum, which is included in Appendix M of the Application."*

This appears to reflect a desire to modify the currently-approved groundwater monitoring plan, but it is not evident what these proposed modifications are. The application should include a clear description of the proposed SAP. If changes have been implemented or are proposed, this should include:

- *The 2002 approved SAP and the approval.*

- *Copies of requests for approval of any subsequent modifications, and associated approvals. This could include, for example, copies of the documents (or key excerpts therefrom) that are referenced in footnote #2 of Attachment C of Beazer's March 1, 2021 submittal (as referenced in item 9 of the Cover Letter).*

- *Any proposed modifications that have not been previously proposed and approved, along with the rational or justification for the change.*

- *An updated version of its proposed SAP that the department should consider for technical review, and to facilitate development of the license requirements of s. NR 664.0091(2), Wis. Adm. Code.*

b. The groundwater monitoring plan should demonstrate compliance with the applicable monitoring requirements of ss. NR 664.0090 through NR 664.0100, Wis, Adm. Code. The application should describe how all of these requirements are met.

Please note that s. NR 664.0090(6), Wis. Adm. Code, allows the department to approve alternatives to these prescribed requirements in certain circumstances. If you desire that the proposed SAP be approved under this provision, please describe:

- *How the regulated unit is situated among solid waste management units (or areas of concern), a release has occurred, and both the regulated unit and one or more solid waste management units (or areas of concern) are likely to have contributed to the release, as required by s. NR 664.0090(6)(a), Wis. Adm. Code, and*

- *How the alternative requirements (as represented in the proposed SAP) will protect human health and the environment, as required in s. NR 664.0090(6)(b), Wis. Adm. Code.*

Beazer Response to Comment 11:

a. It is not Beazer's intent to modify the approved April 2002 Sampling and Analysis Plan (SAP). The April 2002 SAP had de minimis updates made over the years. These updates are summarized in the SAP Addendum (Appendix M) and are not being retransmitted to the Department as they have already been provided in the March 1, 2021 response to the Department's December 9, 2020 Notice of Noncompliance.

b. The April 2002 SAP, and any prior de minimis updates modifications thereto, complies with the requirements of ss. NR 664.0090 through 664.0100 for its intended purpose as it relates to the closed RCRA-regulated surface impoundment. The April 2002 has already been approved by the Department.

12. <u>Deed Notation</u>

The Department stated in the NOI:

> *The "crosswalk" in in Table 1-1 of the Application indicates that documentation of the deed notation, as required in s. NR 664.0119(2), Wis. Adm. Code, was contained in Section 4.1 and in Appendix B.4.*
>
> - *Section 4.1 of the Application does not discuss or contain this deed notation documentation.*
> - *Appendix B.4. of the Application includes a closure construction documentation report from Keystone from November, 1989. Section 6.0 of this report appears to discuss a future plan to establish the required deed notation, but does not provide the required documentation.*
> - *It is noted that Section 4.7 of the Application discusses notices required by ch. NR 725, Wis. Adm. Code. However, this does not address the deed notation documentation required in s. NR 664.0119(2), Wis. Adm. Code.*
>
> *The application should include documentation demonstrating that the deed notation required by s. NR 664.0119(2), Wis. Adm. Code, has been properly recorded.*

Beazer Response to Comment 12:

Beazer is having a title company conduct the research necessary to confirm that the deed notation was properly filed with the Douglas County Recorder's Office. If the title company cannot locate a filed deed notation, then Beazer will ensure that a deed notation is properly recorded with the Douglas County Recorder's Office.

Further, Beazer notes that a deed notice/restriction was filed by Koppers on September 20, 2012. A copy of that document is provided in Appendix N.23.

13. **<u>Map Information</u>**

The Department stated in the NOI:

> *a. Section NR 670.014(2)(s), Wis. Adm. Code, specifies mapping requirements for the application. Based on the Table 1-1 "crosswalk," and a review of the Application's figures, the Application appears to be*

missing the following required information in ch. NR 670, Wis. Adm. Code:

b. NR 670.014(2)(s)3., Surface waters including intermittent streams. (Note that intermittent streams do not appear to be shown).

c. NR 670.014(2)(s)4., Surrounding land uses (residential, commercial, agricultural, recreational).

d. NR 670.014(2)(s)9. Injection and withdrawal wells both on-site and off-site. (Note that wells within 1,000 feet of the site are do not appear to be shown).

e. The following information from NR 670.014(2)(s)10.: Run-off control systems; storm, sanitary and process sewerage systems.

f. NR 670.014(2)(s)11. Barriers for drainage or flood control.

g. NR 670.013(12) (Contents of Part A) also requires a topographic map depicting "wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within ¼ mile of the site property boundary".

The application should address this information. If certain features do not exist or are not applicable, the application should clearly explain this

Beazer Response to Comment 13:

Figure 2-2 of the Revised Application has been updated to address this information. Please note that surrounding land uses (Department Comment 12.c) were previously presented on Figure 2-2. Additional notes have been added to the figure to address the other items included in this Department comment.

14. <u>Inspections</u>

The Department stated in the NOI:

a. Section 4.5.3 of the Application proposes to continue annual inspections of certain on-property features related to SWMUs (e.g., surface covers and the Outfall 001 drainage ditch). Because the site has limited perimeter security controls to restrict access, and because there are multiple parties that use or operate at the site, the department

recommends that inspections be performed more frequently than annually (see item 1), and suggests quarterly inspections of these features. Please evaluate the proposed inspection frequency and explain in the application how it is based on the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections.

b. *The most recent inspection report (FTS, December 10, 2021) did not include inspection results for all SWMU cover systems. For example, the documentation included for the drip pad area (Area F) appears to be limited to two smaller areas (F-1 and F-2). Inspections of the entire cover system for all SWMUs should be addressed in the application and more clearly on the inspection log/form, including the entire Area F drip pad SWMU.*

c. *Section 4.5 of the Application should be revised to include the entire monitoring well network, not just wells associated with the "Closed RCRA-regulated unit".*

d. *Regarding the line item for run-on/run-off in the "Post-Closure Inspection Form" in Appendix F.1 (also contained in Appendix G's PPC Plan), the only example "type of problem" is shown as "Watering Pond".*

   - *It is unclear what sort of problem this is meant to describe. The department recommends this be better described in the LTC Plan or on the log sheet.*

   - *It is unclear which particular run-off controls are intended to be inspected. This be better described in the LTC Plan or on the log sheet.*

   - *Section NR 664.0015(2)(c), Wis. Adm. Code, requires the inspection schedule to identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection. The application and forms should more clearly identify and identify these problems for use in inspections of the regulated units and SWMUs.*

e. *The inspection program should address inspections needed for off-property remediation and corrective action activities.*

The application should address these concerns and recommendations.

Beazer Response to Comment 14:

a. As noted above in Beazer Response to Comment 2, the Department-approved O&M Plan calls for annual inspections and as-needed maintenance of the on-property surface covers and Outfall 001 drainage ditch. While some damage to the surface covers has occurred over the years, such damage has been relatively minor, and repairs have been completed as documented in annual reports submitted to the Department such that the surface covers continuously protect human health and the environment. Beazer does not believe that any additional controls are necessary to minimize the potential for inadvertent damage to the surface covers. The property owner's legal responsibility for damages under the Easement, continued annual inspections by Beazer, and as-needed maintenance/repairs in accordance with the Department-approved O&M Plan are appropriate and protective of human health and the environment.

b. Beazer conducts annual inspections of the on-property surface covers and Outfall 001 Drainage Ditch in accordance with the Department -approved O&M Plan (refer to Beazer Response to Comment 2 for additional information). The O&M Plan only requires Beazer to inspect the portion of the Drip Pad SWMU where surface covers were constructed, and Beazer has been complying with the terms of the Department-approved O&M Plan with respect to this area of the Site.

c. The Application already includes a requirement for inspection of the entire monitoring well network. Specifically, Section 4.5.2 of the Initial and Revised Applications states "All groundwater monitoring wells included in the current groundwater monitoring program (as described in Section 5.4) are inspected semi-annually during sampling activities for physical integrity and security in accordance with Section IX 2.0 of the Closure and Post-Closure Care Plan (Appendix B.1)."

d. The term "Watering Pond" refers to the presence of ponded/standing water on the RCRA-regulated unit or in the associated drainage channels, and is described in the Post-Closure Inspection Log Sheet, previously approved by the Department as part of the Long-Term Care Plan. For more detail regarding the presence of this water, drainage details for the RCRA-regulated unit are provided in Section 4.12 of the Department -approved Construction Documentation Report.

e. As discussed above in Beazer's responses to other Comments above, a remedy for the off-property portion of the Site has not yet been selected or approved. It is therefore for not possible to describe whether inspections would or would not be necessary, or if necessary, what such inspections would consist of, given the variety of potential off-property remedy options. While Beazer has agreed to add estimated costs for the off-property remedy (including assumed costs for long-term inspection and maintenance activities) to the Cost Estimate for Financial Assurance (Appendix H of the Revised Application), because an actual remedy has not yet been selected or approved, it is not

feasible to add a section to the Application discussing the details of future inspections associated with yet-to-be-selected off-property corrective actions.

15. PPC Plan (Contingency Plan)

The Department stated in the NOI:

a. Section 8 of the PPC Plan (in Appendix G.1 of the Application) refers to training "on proper monitoring, inspection, reporting and emergency response equipment replacement procedures." It states this training will be provided to "employees who perform work at the Facility" and will include "Facility personnel hazardous waste management procedures." The topics covered in the PPC plan are likely to involve actions to be executed by employees of multiple employers. It is not known what is meant by "facility personnel;" again, execution is likely to involve personnel that are located both at the facility and off-site. The application should provide a clear identification and of all personnel and their employer that are required to be trained for each PPC Plan topic.

b. Section 9.1.2 of the PPC plan describes notifications to State and County Agencies (in its Appendix E "Emergency Release Notification" form) only for certain releases that result in "exposure to persons outside the site boundaries." The application should also identify and describe the reporting and notification requirements for hazardous substance discharges established by ch. NR 706, Wis. Adm. Code, and the 15-day reporting requirement described in s. NR 664.0056(9), Wis. Adm. Code.

c. The evacuation route depicted on Figure 3 appears to show routes that are not on the site or property. The application should depict evacuation routes that would be used by personnel and vehicles on the property, and show property/site egress locations.

The application should address these recommendations.

Beazer Response to Comment 15:

a. As previously stated, TRP has indicated that it does not conduct any operations at the Site and leases the Site to another entity. Beazer agrees to provide a copy of the PPC Plan to TRP so that TRP may ensure that any workers at the Site are aware of the elements of the PPC Plan, and will revise the Application to state that Beazer will do so.

b. The PPC Plan has been updated to include the reporting and notification requirements for hazardous substance discharges established by NR 706, Wis. Adm. Code, and the 15-day reporting requirement as described in s. NR 664.0056(9), Wis. Adm. Code.

c. Figure 3 of the PPC Plan (Appendix G of the Revised Application) has been updated to show the property/site egress locations as requested.

16. <u>Training</u>

The Department stated in the NOI:

> *a. Section 4.6 of the Application (as well as Appendix G.2's training plan) only addresses activities associated with the "closed RCRA-regulated unit". The training program and plan should also address corrective action activities.*
>
> *b. Regarding section 2 of the Application's training plan in Appendix G.2, the application should address training for the Emergency Coordinator(s) and any other emergency response personnel identified in the PPC Plan.*
>
> *c. Section 2.3 of the Application's training plan in Appendix G.2 states, "All affected employees are briefed on the emergency procedures for the Site." The training topics and tasks regarding emergency procedures involve "employees" of multiple employers. The application should provide a clear identification and of all personnel and their employer that are required to be trained.*
>
> *d. The last paragraph of section 1.0 of the Application's training plan in Appendix G.2 identifies the tasks to be conducted by FTS. It appears that this should also identify the Emergency Coordinator personnel, described in the training plan's section 3.3 as the "Site Inspector" and "the OM&M Program Manager."*
>
> *The application should address these recommendations.*

Beazer Response to Comment 16:

a. Section 4.6 and Appendix G.2 of the Application are not limited to the closed RCRA-regulated unit. Both Section 4.6 of the Application and Appendix G.2 of the Revised Application address personnel training for the inspection and maintenance of the closed RCRA-regulated unit (and associated groundwater monitoring well network), semi-

annual groundwater monitoring, and the annual on-property corrective measures surface cover inspections and maintenance.

b. Appendix G.2 of the Revised Application has been updated to include training for the Primary Emergency Coordinator and Alternate Emergency Coordinators identified in the PPC Plan.

c. As stated in Section 2.3 of Appendix G.2 of the Revised Application, copies of the Training Outline, along with a Site Plan depicting the location of the RCRA-regulated unit and Site monitoring wells, have been provided to representatives from both TRP (the current property owner) and Koppers (a current property tenant) to familiarize these entities of the training protocols in place for the RCRA activities associated with the closed RCRA-regulated unit and corrective measures performed by Beazer at the Site. TRP and Koppers personnel have been notified by Beazer that they are not to enter into the confines of the closed regulated unit (which is capped and enclosed by security fencing) and that Site monitoring wells should not be disturbed.

d. The last paragraph of Section 1.0 of Appendix G.2 of the Revised Application has been updated to include Emergency Coordinator responsibilities as requested.

17. <u>Detailed Corrections</u>

The Department stated in the NOI:

> *The department noted the following editorial items in the Application that appeared to be incorrect or unclear, and should be corrected.*
>
> *a. The "crosswalk" (Table 1-1) includes a reference to Figure 2-2d near the bottom of page 1. This figure could not be found.*
>
> *b. The cover sheet for Appendix G (which included two sections, G.1 and G.2) of the Application should refer to the PPC Plan included in G.1.*
>
> *c. On pages 9 and 13 of the PPC Plan, regarding the 15-day notice, change "EPA Region 5 Administrator" to the Wisconsin DNR's hazardous waste program.*
>
> *d. The example letter in Appendix D of the PPC Plan refers to "NR 665.053." This should be corrected to "NR 664.053."*

Beazer Response to Comment 17:

a. Reference to Figure 2-2d is simply a typographical error and has been corrected to refer to Figure 2-2 in the Revised Application.

b. Additional cover sheets for Appendix G have been added to the Revised Application (i.e., G.1 and G.2) as requested.

c. The "EPA Region 5 Administrator" reference was updated to the Wisconsin DNR's hazardous waste program as requested.

d. The regulatory reference has been corrected in the example letter in Appendix D of the PPC Plan in the Revised Application as requested.

WISCONSIN LONG-TERM CARE LICENSE RENEWAL APPLICATION

CLOSED RCRA-REGULATED SURFACE IMPOUNDMENTS
FORMER KOPPERS INC. WOOD TREATING FACILITY
SUPERIOR, WISCONSIN

EPA FACILITY ID NO. WID006179493

Prepared for:

Beazer East, Inc.

Prepared by:

Field & Technical Services, LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

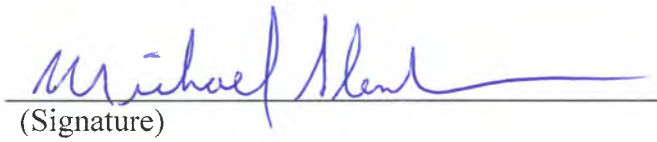
October 10, 2022
(Revision 01)

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Document: Wisconsin Long-Term Care License Renewal Application
Former Koppers Inc. Wood Treating Facility
Superior, Wisconsin
EPA ID No. WID006176493

Michael Slenska
(Name)


(Signature)

President
(Title)

Beazer East, Inc.
(Company Name)

10/10/22
(Date)

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Document: Wisconsin Long-Term Care License Renewal Application
Former Koppers Inc. Wood Treating Facility
Superior, Wisconsin
EPA ID No. WID006176493

_____
(Name)

_____
(Signature)

_____
(Title)

_____
(Company Name)

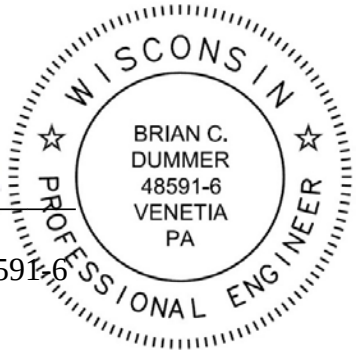
_____
(Date)

Beazer has provided a copy of the Revised Application to the current landowner, TRP Properties, LLC ("TRP") and has requested that TRP sign the application where appropriate. However, at the time of this submittal, TRP has declined to sign the Revised Application and has communicated to Beazer that they object to the Certification language. It is Beazer's understanding that counsel for TRP has been in communication with the Department regarding this issue.

CERTIFICATION

"I, Brian Dummer, P.E., hereby certify that to the best of my knowledge, all information contained in this document is correct, and I have personally examined this report, and I am familiar with the information and all attachments herein. Furthermore, based on my inquiry of those persons immediately responsible for obtaining the information contained in this report, I believe that the information is true, accurate, and complete."

Document: Wisconsin Long-Term Care License Renewal Application
Former Koppers Inc. Wood Treating Facility
Superior, Wisconsin
EPA ID No. WID006176493



Brian Dummer, P.E.
Professional Engineer Registration, No. 48591-6

October 10, 2022
(Date)

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ABBREVIATIONS/ACRONYMS

Application	Long-Term Care License Renewal Application
BBL	Blasland, Bouck, & Lee, Inc.
Beazer	Beazer East, Inc.
CFR	Code of Federal Regulations
COPCs	Contaminants of Potential Concern
DNAPL	Dense Non-Aqueous Phase Liquid
ES	Enforcement Standard
FEMA	Federal Emergency Management Agency
Focused CMS	Focused Corrective Measures Study
ft-bgs	Feet Below Ground Surface
ft/year	Feet per Year
FTS	Field & Technical Services, LLC
HDPE	High Density Polyethylene
IDW	Investigative Derived Waste
Keystone	Keystone Environmental Resources
Koppers	Koppers Inc.
MCL	Maximum Contaminant Level
NR	Natural Resources
PAH	Polycyclic Aromatic Hydrocarbon
PAL	Preventative Action Limit
Part A	Part A Permit Application
Part B	Part B Permit Application
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SAP	Sampling and Analysis Plan
Site	Former Superior, WI Koppers Inc. Wood Treating Site
SVOCs	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TRP	TRP Properties, LLC
µg/L	Micrograms per liter
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WDNR	Wisconsin Department of Natural Resources

1.0 INTRODUCTION

This long-term care license renewal application (Application) for the Resource Conservation and Recovery Act (RCRA)-regulated unit at the Former Koppers Inc. (Koppers) Wood Treating Facility (Site) located in Superior, Wisconsin has been prepared by Field & Technical Services, LLC (FTS) on behalf of Beazer East, Inc. (Beazer). The information provided in this Application has been prepared to address all applicable portions of relevant State of Wisconsin Department of Natural Resources (WDNR) and Federal regulations, specifically the following:

- Wisconsin Administrative Code, Department of Natural Resources (NR) Chapters NR 664 (Hazardous Waste Treatment, Storage and Disposal Facility Standards) and NR 670 Subchapter B (License Application); and
- Title 40 Code of Federal Regulations (CFR) Sections 270.14 (Contents of Part B: General Requirements) and 270.28 (Part B Information Requirements for Post-Closure Permits).

This Application relates only to those former solid waste management units (SWMUs) and the RCRA -regulated unit (former surface impoundments) managed by Beazer and does not relate in any way to the any SWMUs managed by and/or activities conducted by TRP Properties, LLC (the current property owner) and their lessees and Koppers Inc., including, but not limited to, those activities related to the drip pad at the Site regulated under 40 CFR Subpart W.

This Application consists of two primary components, Part A and Part B. The Part A Application (Part A) includes the information required by NR 670.013 and is provided as Appendix A of this Application. The Part A reflects the conditions of the Site as of the submittal date of this Application.

The Part B Application (Part B) is a narrative description addressing the Site environmental setting and physical conditions, regulated units, waste characteristics, groundwater quality, corrective action, and long-term care. This document and supporting information, provided as figures, tables, and appendices, constitutes the Part B Application. The Part B Application constitutes the Site's feasibility and plan of operation report in accordance with NR 670.014(1). To facilitate WDNR's review of this Application, a Part B "crosswalk" is provided as Table 1-1. The "crosswalk" summarizes the specific requirements of NR 670.028 and required components of NR 670.014 and lists the specific section, figure, table, or attachment to this document where the required information is located.

The WDNR Hazardous Waste Facility Operation License (License No. 03157) governs long-term care for the closed RCRA-regulated surface impoundments (closed RCRA-regulated unit) and Site-related corrective actions. WDNR License No. 03157 took effect on December 21, 1990 and expired on September 30, 2020.

Long-term Care activities (i.e., routine inspection/maintenance and groundwater monitoring) for the closed RCRA-regulated unit are conducted in accordance with the following documents:

- Closure and Post-Closure Care Plan (Keystone Environmental Resources [Keystone], August 27, 1987);
- The Conditional Closure and Long-Term Care Plan Approval (WDNR, October 1, 1987);
- Hazardous Waste Closure and Long-Term Care Plan Condition Clarification (WDNR; October 21, 1987);
- The Site Sampling Analysis Plan (SAP - The RETEC Group, Inc., April 2002), with subsequent well network modifications; and
- Closure and Long-Term Care Plan Approval, Groundwater Monitoring Sampling and Analysis Plan (WDNR, October 29, 2002).

The current RCRA-regulated unit long-term care activities conducted at the Site consist of the following:

- Monthly closed RCRA-regulated unit inspections;
- Semi-annual inspection and maintenance of all monitoring wells;
- Semi-annual gauging of thirty-seven (37) wells;
- Semi-annual sampling of two (2) upgradient (background) monitoring wells and seven (7) side-gradient or downgradient monitoring wells for field parameters, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs); and
- Annual sampling of two (2) upgradient (background) monitoring wells and seven (7) side-gradient or downgradient monitoring wells for dioxins and furans.

To date, all long-term care activities have been conducted in accordance with the requirements of WDNR License No. 03157 and associated documents (i.e., the Closure and Post-Closure Care Plan, The Conditional Closure and Long-Term Care Plan Approvals, the SAP (with subsequent well network modifications), and the Conditional Closure and Long-Term Care Plan Approval of the SAP). Minor modifications to the approved maintenance and monitoring schedules provided in Section 4.1.1 of this Application are intended to supplement the long-term care component of the conditionally approved October 1987 Closure and Post-Closure Care Plan.

The RCRA regulated unit is located among numerous other former Solid Waste Management Units (SWMUs). Brief descriptions of the completed corrective measures associated with the SWMUs are provided in Sections 2.1.4 and 2.3.2 of this Application. All corrective measures have been

implemented in accordance with the WDNR-approved *Focused Corrective Measures Study* (Focused CMS; Arcadis, Revised July 2007) and the WDNR conditionally approved *On-Property Corrective Measures Implementation Design Report* (Arcadis, December 2009). A summary of the ongoing long-term care activities (i.e., inspections/maintenance) associated with the completed corrective measures is provided in Sections 4.1.2 and 4.5.3.

This Application consists of the text, figures, tables, and various appendices. The remainder of this Application is organized as follows:

- **Section 2** provides a summary of general site background information including a discussion of former SWMUs and potential source areas;
- **Section 3** provides a discussion of waste characteristics and waste analysis (not applicable given the long-term care status of the Site);
- **Section 4** discusses long-term requirements such as certifications, points of contact, inspections, maintenance, security, monitoring, training, and financial assurance;
- **Section 5** provides a summary of groundwater information including recent groundwater quality data; and
- **Section 6** is a list of various guidance documents or historical site-specific documents referenced in this Application.

2.0 SITE DESCRIPTION

This section contains general descriptive information regarding the Site as it relates to the closed RCRA-regulated unit (two closed former RCRA-regulated surface impoundments). Information regarding the Site location, operational history, investigation history, remediation history, and physical conditions is provided.

2.1 GENERAL DESCRIPTION, LOCATION, AND HISTORY

2.1.1 General Description and Location

The 112-acre Site is located in northwestern Wisconsin (at the junction of County Roads A and Z), approximately five miles southeast of the town of Superior, in Douglas County. The area immediately surrounding the Site is sparsely populated and consists primarily of brush, woodland, and marshy areas. The physical address for the Site is 3185 County Road A, Superior, Wisconsin. The Site is located at 92°04'10.70"W longitude, 46°38'47.91"N latitude. Site boundaries are shown on the Site location map provided as Figure 2-1.

The entire Site is zoned industrial and land use around the Site is primarily agricultural or resource conservation areas. Some sparse residential areas are located along County Roads A and Z to the north and southeast of the Site.

Figure 2-2 is a detailed map which includes the location of the RCRA-regulated unit and former SWMUs at the Site, a tabular description of the RCRA-regulated unit and former SWMUs, Site security features, surrounding land use information, the locations of surface water bodies, topographic information, and a wind rose. Figure 2-3 is a Site map which displays the locations of all existing monitoring wells.

2.1.2 Owner / Operational History

The National Lumber and Creosote Company began wood treating operations at the Site in 1928. Railroad cross ties, bridge timbers, switch ties, and crossing panels were pressure-treated primarily with creosote. In 1938, the Wood Preserving Corporation purchased the Site and maintained similar wood treating operations. On November 1, 1944 the deed for the Site property was transferred to Koppers Company, Inc. In addition to creosote, pentachlorophenol was reportedly used at the Site from 1955 through 1979. In June 1988, BNS Acquisitions, Inc. (a wholly-owned subsidiary of Beazer PLC) acquired 90 percent of the stock of Koppers Company Inc. On December 28, 1988, the Site was sold to Koppers Industries, Inc., and on January 26, 1989 the name Koppers Company Inc. was changed to Beazer Materials and Services, Inc. On April 16, 1990, the name Beazer Materials and Services, Inc. was changed to Beazer East, Inc. The name Koppers Industries, Inc. was changed to Koppers Inc. in February 2003. Koppers discontinued all wood treating operations at the Site in 2006. The former process facilities were subsequently dismantled and removed from the Site by Koppers.

Koppers sold the property to TRP Properties, LLC (TRP) in September 2012. The Site is currently used as a railroad tie grinding facility with Koppers leasing portions of the property for storage and transfer of untreated railroad ties. Beazer retains certain environmental responsibilities at the Site, including monitoring and maintenance associated with the closed RCRA-regulated unit.

2.1.3 Investigation and Regulatory History

Multiple potential source areas have been subjected to numerous investigations since the 1980s. The first reported investigations completed focused on an interim status groundwater monitoring program and hydrogeologic investigations for two RCRA-regulated surface impoundments (the surface impoundments were closed in 1989 as a single RCRA-regulated unit).

In 1987/1988, a RCRA Facility Assessment (RFA) was completed under the direction of United States Environmental Protection Agency (USEPA) Region V. Several of the former SWMUs were grouped by the USEPA into six (6) potential source areas (Areas A through F). Two additional areas, Areas G and H, were not included in the RFA, but were later added to the USEPA's list by Koppers Company, Inc. and Beazer, respectively. The former spray irrigation field was investigated as part of the 1987/1988 RFA, however; the USEPA recommended no further action at that time. The former sprayfield area was later added and referred to as Area S.

Between 1990 and 1996, Beazer conducted two phases of investigation and groundwater quality assessment activities for the Site. Phase II RCRA Facility Investigation (RFI) activities were conducted between July 1990 and October 1990, and included soil, sediment, surface-water and groundwater sampling, while Phase III RFI activities (conducted between October 1996 and December 1996) were focused on soil and groundwater. The results of the Phase II and Phase III RFIs were reported in the *Phase II RCRA Facility Investigation Report of Findings* (Keystone, June 1991) and the *RCRA Facility Investigation Report* (Fluor Daniel GTI, June 1997), respectively. Additional bedrock investigative activities (including installation of bedrock monitoring wells and supplemental sampling) were completed in response to WDNR comments on the June 1997 *RCRA Facility Investigation Report.* Results of the bedrock investigative activities were submitted to WNDR in *the RFI Bedrock Monitoring Wells Report* (Blasland, Bouck & Lee, Inc. [BBL], July 2000).

A *Post-Remediation Human Health Risk Assessment* (AMEC, July 2007) for onsite soils was submitted to WDNR as an attachment to the *Focused Corrective Measures Study* (Arcadis, July 2007). Addenda to this report were submitted in January 2008 and December 2009.

Investigation of offsite surface water and streambed sediments along Crawford Creek and an unnamed tributary to Crawford Creek has also been completed. Summaries of the investigation of the offsite surface water and sediments are provided in the following documents previously submitted to WDNR:

- *Preliminary Characterization Report, Surface Water and Streambed Sediment* (Fluor Daniel GTI, March 1997).

- *Supplemental Surface Water and Streambed Sediment Investigation Report* (BBL, July 2000);
- *Crawford Creek Floodplain Investigation Results* (BBL, June 2003);
- *Summary of May 2003 Outfall 001 Drainage Ditch Investigation Letter Report* (BBL, October 2003);
- *Off-Property Investigation Data Summary Report* (BBL, February 2006); and
- *Supplemental Off-Property Investigation Summary Report* (Arcadis, April 2014).
- *Off-Property Focused Corrective Measures Study* (Arcadis, August 2014).

Since 2018, Beazer and the USEPA have been working in conjunction with WDNR to develop a Focused Feasibility Study for the off-property portion of the Site, as part of a Great Lakes Legacy Act project. These ongoing efforts are not governed by WDNR License No. 03157 and are not addressed in this Application.

WDNR Hazardous Waste Facility Operation License No. 03157 governs long-term care for the closed RCRA-regulated unit and corrective measures at the Site (routine inspection/maintenance and groundwater monitoring as described in Sections 4 and 5). WDNR License No. 03157 was effective on December 21, 1990 and expired on September 30, 2020. The USEPA I.D. Number for the Site is WID006179493. Beazer has conducted groundwater monitoring in accordance with WDNR License No. 03157 and associated documents (i.e., the Closure and Post-Closure Care Plan, The Conditional Closure and Long-Term Care Plan Approval, Hazardous Waste Closure and Long-Term Care Plan Condition Clarification, the SAP (with subsequent well network modifications), and the Conditional Closure and Long-Term Care Plan Approval of the SAP) requirements for more than 30 years.

2.1.4 Remediation History

Closure activities for the RCRA-regulated surface impoundments were initiated in 1988. Sludge and bottom sediment were removed and taken off-site for disposal prior to closure. The RCRA impoundments were closed in 1989. The closure activities were conducted in accordance with the *Closure and Post-Closure Care Plan* [Keystone, 1987 (provided as Appendix B.1)] and associated *Conditional Closure and Long-Term Care Plan Approval* [WDNR, 1987 (provided as Appendix B.2)] with subsequent *Hazardous Waste Closure and Long-Term Care Plan Condition Clarification* [WDNR, 1987 (provided as Appendix B.3)]. Closure and certification information for the closed RCRA-regulated unit is provided in the *Construction Documentation Report Surface Impoundment Closure* [Closure Report; Keystone, 1989 (provided as Appendix B.4)].

In addition to the closure of the surface impoundments, four non-RCRA surface impoundments have been closed (Area C) and Beazer has conducted corrective measures to address the impacted media for various former on-Site SWMUs, including the placement of clean soil covers (minimum

1-foot thick) over impacted soils in Area A (Former Unlined Landfill/Landfarm Area), Area B (Treatment Area), Area F (Drip Track Area), Area G (Pentachlorophenol Straw Bales Area), Area H (Lead Track Landfill Area), and Area S (Former Sprayfield Area). In addition, the on-property portion of the "Outfall 001 Drainage Ditch" (Area D) was remediated by removing soil materials from the channel bottom and banks (materials were placed in Area A, prior to installation of the soil cover), and installing an engineered liner system within the ditch. The corrective measures were conducted in accordance with the *On-Property Corrective Measures Implementation Design Report* (Arcadis, December 2009)[1]. Details regarding the completed corrective measures are provided in the WDNR-conditionally approved *On-Property Corrective Measures Implementation Construction Documentation Report* (Construction Documentation Report; Arcadis, September 2011). A copy of the Construction Documentation Report is provided as Appendix C. As a required component of the on-property corrective actions, Beazer submitted a *Notification of Continuing Obligations and Residual Contamination* (Beazer, June 2014) to the property owner (TRP) and a *GIS Registry Submittal* to WDNR (Beazer, August 2015) to mitigate potential disturbance of the features of the final remedy (surface covers and engineered liner system) at the Site. This notification and submittal (which are posted on the WDNR Remediation and Redevelopment Program's GIS Registry of Closed Remediation Sites) provide a mechanism for notifying the current property owner and any potential purchaser of the property of the following:

- The presence of impacted soil and groundwater at the Site;
- Future use restrictions (the future use of the property is restricted to industrial use);
- Well construction restrictions (the construction of a water well without prior WDNR approval is prohibited); and
- Soil excavation procedures (the notification and submittal specify the procedures to manage soils that may be excavated or disturbed as a result of site activities such as minor repair activities).

The *Notification of Continuing Obligations and Residual Contamination* and *GIS Registry Submittal* are provided herein as Appendices D.1 and D.2, respectively.

In addition to these completed corrective actions, as presented in the Focused CMS, natural attenuation is the corrective action for groundwater impacts at the Site. Beazer conducted multiple supplemental groundwater investigations between 2004 and 2007 and again between April 2013 and January 2014 to support the natural attenuation remedy. Data generated from these investigations have confirmed that concentrations of constituents of potential concern (COPCs) in groundwater are stable or decreasing, and that natural attenuation of COPCs is occurring. Summaries of the supplemental groundwater investigations are provided in various documents previously submitted to WDNR, primarily in the *Groundwater Natural Attenuation Evaluation*

[1] WDNR conditionally approved the *On-Property Corrective Measures Implementation Design Report* on May 25, 2010. Arcadis provided responses to WDNR's comments on July 2, 2010, and WDNR approved the responses to comments on July 8, 2010.

Report (BBL, January 2006), the *Summary of Supplemental Groundwater Investigations* (Arcadis, September 2007), and the *Groundwater Natural Attenuation Demonstration Summary Report* (Arcadis, June 2014).

A *Technical Assistance and Environmental Liability Clarification Request* was subsequently submitted to WNDR on behalf of Beazer (Arcadis, October 2014) requesting approval of the natural attenuation remedy for groundwater. WDNR's Remediation and Redevelopment Program approved the groundwater natural attenuation remedy in a letter to Beazer dated November 18, 2014 with the stipulation that long term care groundwater monitoring was to continue.

2.2 PHYSICAL FEATURES

This section contains a physical description of the Site and surroundings. Site topography, geology (including regional seismic zones), hydrogeology, groundwater flow, and surface water features (including floodplains) are discussed in subsections 2.2.1 through 2.2.4, respectively.

2.2.1 Topography

Site topography is depicted on two figures. Figure 2-1 is a Site location map based on a United States Geological Survey quadrangle. Figure 2-1 depicts topography in the vicinity of the Site and extends to a distance of at least 1,000 feet from the Site boundary. Figure 2-1 depicts topography on 10-foot contour intervals given the relief in the area. Figure 2-2 is a general site arrangement plan which depicts topography at a contour interval of 2 feet. Figure 2-2 is based on a scale of 1-inch equals 300 feet. Relevant information required by NR 670.014(2)(s) is satisfied by Figures 2-1 and 2-2.

2.2.2 Geology and Hydrogeology

A comprehensive review of regional and Site geology and hydrogeology is presented in the *Phase II RCRA Facility Investigation Report of Findings* and the *RCRA Facility Investigation Report* (Phase II and Phase III Reports).

A Site map depicting the locations of all monitoring wells is provided as Figure 2-3. The most recent (April 2021) potentiometric surface elevation contour maps for the shallow (A-Zone) and deep (C-Zone) water bearing zones are presented on Figures 2-4 and 2-5, respectively. For historical reference, additional groundwater elevation tables and contour maps dating back to 2002 (the first groundwater monitoring event under the WDNR-approved SAP) are copied and included in Appendix E.

A summary of the geology and hydrogeology at the Site is provided in the following subsections.

2.2.2.1 Geology

In some areas of the Site, primarily in the vicinity of the former treatment area, a thin layer of fill material is present at the ground surface. However, most of the Site is underlain by a sequence of

Quaternary sediments deposited by continental glaciers. Three of the four stratigraphic zones of interest at the Site are within in these deposits.

The uppermost stratigraphic unit is a red-brown clay deposit, which likely represents a till composed of reworked lake bottom sediments. The upper approximately 15-feet of the red-brown clay contains hairline fractures filled with greenish gray silt and clay. The shallow (A-zone) and intermediate (B-zone) zones consist primarily of this clay with little to no sand or gravel.

The lower regions of the red-brown clay unit, which represent the deep zone (C-zone) at the Site, contain discontinuous deposits of fine- to coarse-grained sand and silt. These discontinuous fine to coarse grained deposits occur at depths that vary from approximately 35 to 50 feet below ground surface (ft-bgs) in certain areas of the Site.

The clay unit continues beneath the discontinuous sand and silt deposits to the top of the Precambrian Lake Superior Sandstone, the uppermost bedrock (D-zone) at the Site. The Precambrian Lake Superior Sandstone occurs regionally at a depth of approximately 170 ft-bgs.

2.2.2.2 Hydrogeology

Perched groundwater may be temporarily retained in the thin fill layer (where present). However, across most of the Site, the uppermost groundwater occurs in an unconfined state within the thick red-brown clay (an aquitard). A-zone monitoring wells monitor the water table in this shallow clay with the bottom of the screened interval typically located approximately 13.0 to 15.5 ft-bgs. Previous geologic studies in the Superior area and aquifer testing at the Site show these clay deposits to have very low intergranular hydraulic conductivities. B-zone monitoring wells at the Site monitor the slightly deeper zones within the shallow clay (bottom of the screened interval located approximately 32 to 35 ft-bgs).

Historically, groundwater flow patterns in the shallow and intermediate clay indicate localized distortions to the overall northerly flow due to combined effects of variability in recharge; low hydraulic conductivity of the clay; and interactions with surface water (drainage ditches). However, groundwater elevation data consistently support a generally northerly flow direction for groundwater at the Site, which is to be expected based upon the location of regional receiving surface water bodies.

The most recent (April 2021) A-zone groundwater elevation contours are presented on Figure 2-4. It should be noted that the development of meaningful A-zone groundwater elevation contours is complicated by the low hydraulic conductivity of the soil and the presence of drainage ditches. Due to these factors, variable groundwater flow patterns have been observed historically for the A-zone clay unit. Despite the varying patterns associated with contouring shallow groundwater in this setting, the predominant groundwater flow direction in the A-zone is generally toward the north/northwest. Two effective porosity values (0.01 and 0.3) are used when calculating groundwater flow velocities within the A-zone. The 0.3 value is used to evaluate flow through the pore space in the clay (primary porosity). The 0.01 value is used to evaluate the flow through the

microfractures in the clay (secondary porosity). In April 2021, the A-zone had an estimated groundwater flow velocity of 0.02 feet per year (ft/year) when using the primary effective porosity value (0.3) and 0.47 ft/year when using the secondary effective porosity value (0.01).

C-zone monitoring wells at the Site monitor groundwater in the discontinuous silt and sand within the clay unit and are generally screened at depths from approximately 39 to 49 ft-bgs. Groundwater occurs in a confined state within the C-zone. The groundwater flow direction in the C-zone is generally toward the north, although it should be noted that the sand lenses in the C-zone are discontinuous and are separated by the red-brown clay aquitard.

The most recent C-zone groundwater elevation contours are presented on Figure 2-5 (April 2021). An effective porosity of 0.2 is used when calculating groundwater flow velocities within the C-zone. The C-zone had an estimated groundwater flow velocity of 3.4×10^{-1} ft/day during the April 2021 monitoring event.

Based upon observed potentiometric elevation differentials at cluster well locations, there is minimal hydraulic connection between the A and C zones. Within the Site, there is a general tendency for downward vertical gradients.

Three D-zone wells (W-18D, W-33D, and W-34D) were installed at the Site in February 2000 to evaluate groundwater flow and quality in the bedrock zone. These wells are screened at depths of approximately 176 to 196 ft-bgs. The D-zone wells monitor the Precambrian Lake Superior Sandstone, which is the uppermost bedrock at the Site. It appears that groundwater flow in the D-zone is to the north/northwest based on the potentiometric surface elevations measured for the three D-zone monitoring wells.

2.2.3 Surface Water

Crawford Creek, a tributary to the Nemadji River, is located approximately 0.5 miles to the northwest of the Site. The primary drainage feature for the Site is the on-Site Outfall 001 drainage ditch, which feeds an unnamed tributary to Crawford Creek. The tributary flows approximately 0.5 miles from the northwest corner of Site to Crawford Creek.

The Site is not located within a 100-year floodplain as identified on the Federal Emergency Management Agency (FEMA) Panel Numbers 55031C0089D and 55031C0095D (last revised February 2, 2012). A copy of the FEMA map is provided as Figure 2-6.

2.2.4 Seismic Standard

The Site is located in Douglas County, Wisconsin. Douglas County is not included among those political jurisdictions listed in Appendix VI of 40 CFR 264 for which seismic standards must be considered. Therefore, the closed RCRA-regulated unit complies with the requirements regarding seismic areas.

2.3 REGULATED UNITS / FORMER SWMUs

2.3.1 Closed Regulated Units

There is one closed regulated unit at the Site addressed in this Application: the RCRA-Regulated Closed Surface Impoundments.

The two clay-lined RCRA-regulated former surface impoundments (also known as the closed RCRA-regulated unit) were constructed in 1982 to store process wastewater following oil-water separation. Each of the rectangular RCRA-regulated surface impoundments measured approximately 127-feet by 170-feet from the top of the dike with sloping sides to the bottom. The total bottom area was estimated to be approximately 40,672 square feet with an estimated maximum hydraulic volume of 2,203,234 gallons.

Closure activities for the RCRA-regulated surface impoundments were initiated in 1988. Sludge and bottom sediment were removed and taken off-site for disposal prior to construction of the RCRA cap. The RCRA cap consists of a multi-component cover system constructed of a 24-inch clay barrier soil layer, a high-density polyethylene (HDPE) geomembrane barrier layer, a geocomposite drainage layer, a 30-inch-thick soil layer, and a top soil/vegetative cover layer. The surface impoundments were closed in 1989 as a single RCRA-regulated unit. The closure activities were conducted in accordance with the Closure and Post-Closure Care Plan (Keystone, August 1987) and associated Conditional Closure and Long-Term Care Plan Approval (WDNR, October 1987) with subsequent Hazardous Waste Closure and Long-Term Care Plan Condition Clarification (WDNR, October 1987). The completed closure activities were documented in the Closure Report. As stated in Section 2.1.4, copies of the aforementioned closure documents are provided herein as Appendices B.1 – B.4.

The closed RCRA-regulated unit is associated with USEPA listed hazardous waste K001 (bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol). However, it should be noted that the use of pentachlorophenol as a wood preservative at the Site was discontinued in 1979, three years prior to the construction of the RCRA-regulated surface impoundments. Thus, it is highly unlikely that the RCRA-regulated surface impoundments received wastewater containing pentachlorophenol. Waste characteristics associated with the closed regulated unit are discussed in further detail in Section 3.0.

2.3.2 Former SWMUs

During the RFA conducted in 1987/1988, the USEPA identified fourteen SWMUs at the Site. Several of the former SWMUs were grouped by the USEPA into six (6) potential source areas (Areas A through F). Two additional areas, Areas G and H, were not included in the RFA, but were later added to the USEPA's list by Koppers Company, Inc. and Beazer, respectively. The former spray irrigation field was investigated as part of the 1987/1988 RFA, however; the USEPA recommended no further action at that time. Additional investigation of soil quality within the former sprayfield was completed during the Phase III RFI and the area was later added as an area of potential concern and referred to as Area S.

Table 2-1 provides a summary of the former SWMUs/potential source areas at the Site managed by Beazer, and does not relate in any way to any solid waste units managed by and/or activities conducted by TRP (the current property owner) and Koppers, including, but not limited to, those activities related to the drip pad at the Site regulated under 40 CFR Subpart W. The locations of these former SWMUs/potential source areas managed by Beazer are depicted on Figure 2-2.

As previously stated in Section 2.1.4, Beazer has conducted corrective measures to address the impacted media for various former SWMUs. The completed soil cover (covering Areas A, B, F, G, H, and S) and the engineered liner system in the on-property portion of the Outfall 001 Drainage Ditch (Area D) are components of the final remedy for the Site. Details on these corrective measures for the former SWMUs are provided in the Construction Documentation Report (Appendix C).

2.4 SITE SECURITY AND STRUCTURES

Access to the Site is off of County Road A and is controlled by entrance gates. Only authorized personnel are allowed access into the Site during operational hours and the entrance gates are locked when not in use. All visitors and contractors are required to check in at the Site Office prior to accessing the Site. In addition to the Site security features, the closed RCRA-regulated unit is secured by a fence and an entrance gate that is closed and locked at all times (except during maintenance). Signs that read "Danger – Unauthorized Personnel Keep Out" are at the entrance gate and other strategic locations around the fence in sufficient numbers to be seen from any approach and are legible from a distance of at least 25 feet.

An aerial photograph depicting the current Site structures is included in the Part A of this Application (Appendix A).

3.0 WASTE CHARACTERISTICS / WASTE ANALYSIS PLAN

3.1 WASTE CHARACTERISTICS

The hazardous wastes associated with the former RCRA-regulated surface impoundments (closed RCRA-regulated unit) at the Site (K001) originated from wood treating operations utilizing creosote. All K001 material and visibly contaminated soils were removed from the RCRA-regulated surface impoundments during closure in 1988/1989, and no wastes have since been treated, stored, or disposed of in the closed RCRA-regulated unit.

As documented in the Closure Report (Appendix B.4), residual K001 COPCs were detected in several subgrade soil samples collected from the uppermost stratigraphic unit (A/B-zones) following excavation of the K001 material / visibly contaminated soils from the RCRA-regulated surface impoundments. Due to the low permeability of the clay where the COPCs were detected, residual COPCs have remained localized in the A-zone as evidenced by the consistency of groundwater data collected over the past 30 years.

Beazer is currently registered as a Very Small Quantity Generator (VSQG) of hazardous waste. A minimal amount of investigative derived waste (IDW) is generated from sampling events. Routine waste streams at the Site include purged groundwater and personal protective equipment (PPE). Purged groundwater and PPE are managed protectively with the following USEPA waste codes:

- F032 (Wastewaters [except those that have not come into contact with process contaminants], process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations [except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with §261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations]. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol); and
- F034 (Wastewaters [except those that have not come into contact with process contaminants], process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol).

Purged groundwater is transferred directly from monitoring wells into portable collection containers (5-gallon buckets) prior to being transferred into 55-gallon Department of Transportation (DOT) approved storage/transportation drums for offsite disposal. Disposable PPE and sampling supplies and/ or any other environmental investigation media are also transferred into DOT-approved drums awaiting proper disposal. All drums are labeled in accordance with the applicable USEPA and DOT regulations.

3.2 WASTE ANALYSIS PLAN

The closed RCRA-regulated unit at the Site is in long-term care, therefore; no waste is or will be treated, stored, or disposed at the regulated unit during the Post-Closure Period. In accordance with NR 670.014, the Chemical and Physical Analysis requirement of NR 670.014(2)(b) and the Waste Analysis Plan requirement defined in NR 670.014(2)(c) and NR 664.0013 do not apply.

The hazardous waste previously contained in the RCRA-regulated surface impoundments (also known as the closed RCRA-regulated unit) was classified as K001, defined in 40 CFR 261 as "bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol." As previously stated, the use of pentachlorophenol as a wood preservative at the Site was discontinued three years prior to the construction of the RCRA-regulated surface impoundments, therefore; it is highly unlikely that the RCRA-regulated surface impoundments received wastewater containing pentachlorophenol.

The K001 material and visibly contaminated soils were removed from the surface impoundments prior to construction of the RCRA cap. The RCRA cap consists of a multi-component cover system constructed of a 24-inch clay barrier soil layer, a HDPE geomembrane barrier layer, a geocomposite drainage layer, a 30-inch-thick soil layer, and a top soil / vegetative cover layer. Details on this installation are included in the Closure Report (Appendix B.4). No wastes have since been treated, stored, or disposed of in this unit, therefore; a Waste Analysis Plan is not applicable for this Application.

4.0 LONG-TERM CARE REQUIREMENTS

This section discusses the activities performed in closing the RCRA-regulated surface impoundments (later identified as a single RCRA-regulated unit) and the long-term care activities to be performed at the former SWMUs and RCRA-regulated unit. The information presented in this section satisfies the applicable requirements governing closure of waste management units.

4.1 CLOSURE PLANS AND CERTIFICATIONS

Closure activities for the former RCRA-regulated surface impoundments were completed in 1989 in accordance with the conditionally approved October 1987 Closure and Post-Closure Care Plan (Appendix B.1). Closure certification was completed on November 3, 1989 by a licensed State of Wisconsin Professional Engineer. The K001 material and visibly contaminated soils were removed from the surface impoundments prior to construction of the RCRA cap. The RCRA cap consists of a multi-component cover system constructed of a 24-inch clay barrier soil layer, a HDPE geomembrane barrier layer, a geocomposite drainage layer, a 30-inch-thick soil layer, and a top soil / vegetative cover layer. Closure and certification information for this unit is provided in Appendix B.4.

In addition to the preceding closure, corrective measures for the former SWMUs have been completed for the Site. These corrective measures were conducted in accordance with the *On-Property Corrective Measures Implementation Design Report* (Arcadis, December 2009)[2]. Details on the completed corrective measures for former SWMUs are provided in the Construction Documentation Report (Appendix C).

4.1.1 Post-Closure Plan and Contacts

Long-term care requirements for the closed surface impoundments (RCRA-regulated unit) are provided in the conditionally approved October 1987 Closure and Post-Closure Plan (Appendix B.1). The Post-Closure Care Plan for the closed surface impoundments includes inspection, monitoring, and maintenance activities that are performed to prevent the unlikely post closure release of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall or waste decomposition products to groundwater or surface waters or to the atmosphere. Approved long-term care activities for the closed regulated unit, include the following:

- Monthly inspections and maintenance of the closed RCRA-regulated unit cap and security fencing; and
- Groundwater monitoring (water level measurement and groundwater sampling/analysis), well network inspections and well maintenance.

[2] WDNR conditionally approved the *On-Property Corrective Measures Implementation Design Report* on May 25, 2010. Arcadis provided responses to WDNR's comments on July 2, 2010, and WDNR approved the responses to comments on July 8, 2010.

Additional detail regarding these activities is provided in Section IX of the Closure and Post Closure Care Plan (Appendix B.1). Site inspections and maintenance are summarized in Sections 4.5.1 and 4.5.2 of this Application. Groundwater monitoring is summarized in Section 5.0 of this Application.

The long-term care contact for the Site is:

Ms. Jane Patarcity, Senior Environmental Manager
Beazer East, Inc.
c/o Three Rivers Management, Inc.
600 River Avenue, Suite 200
Pittsburgh, Pennsylvania 15212
(412) 208-8813

The property owner for the Site is:

TRP Properties LLC
12930 I Street
Omaha, Nebraska 68137

4.1.2 On-Property Corrective Measures Inspections and Maintenance

Inspection and maintenance of the completed corrective measure components for the former SWMUs (i.e., surface covers and Outfall 001 drainage ditch liner system) are provided in the *On-Property Corrective Measures Operations and Maintenance Plan* (O&M Plan; Appendix J of the Construction Documentation Report provided herein as Appendix C). Approved inspection and maintenance activities include the annual inspection and as-needed maintenance of the former SWMU surface covers and drainage ditch liner system and annual monitoring of Outfall 001 drainage ditch sumps.

4.1.3 Off-Property Corrective Actions

In August 2014, Arcadis, on behalf of Beazer, submitted a Focused Corrective Measures Study (FCMS; Arcadis 2014) to WDNR, which identified and evaluated potential corrective action alternatives for the sediment and floodplain materials in the off-property portion of the Site (i.e., the Tributary to Crawford Creek and portions of Crawford Creek). WDNR provided draft comments on the FCMS in a letter to Beazer dated November 13, 2014 (WDNR 2014). Following subsequent meetings and discussions with WDNR, Beazer elected to proceed with a Great Lakes Legacy Act (GLLA) Focused Feasibility Study (FFS) project. Therefore, the 2014 FCMS was never revised, nor approved by WDNR. Preparation of the GLLA FFS is currently underway. Selection of a remedy for the off-property portion of the Site is anticipated to occur following completion of the GLLA FFS.

4.2 PREPAREDNESS AND PREVENTION

There is no possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents from the closed RCRA-regulated unit that would constitute a threat to human health or the environment. In general, this performance standard was achieved by removing the K001 hazardous waste and visibly contaminated soils from the former RCRA-regulated surface impoundments as described in Section 2.3.1. As documented in the Closure Report (Appendix B.4), residual COPCs were detected in several subgrade samples collected from the uppermost stratigraphic unit (A/B-zones) following excavation of the K001 material / visibly contaminated soils from the RCRA-regulated surface impoundments. Due to the low permeability of the clay where the COPCs were detected, residual COPCs have remained localized in the A-zone as evidenced by the consistency of groundwater data collected over the past 30 years.

The performance standard is being ensured through inspection and maintenance of the closed RCRA-regulated unit as described in Section 4.5.1 and continued groundwater monitoring. Pursuant to NR 670.014(2)(f) and the preceding justification, it is therefore requested that the Preparedness and Prevention Plan requirements be waived for this Site.

Even though a waiver has been requested, the most recent *Preparedness, Prevention and Contingency (PPC) Plan* (FTS, February 2021) is provided herein as Appendix G.1 to demonstrate compliance with the requirements set forth in NR 664 Subchapter C pending approval of the waiver request.

4.3 CONTINGENCY PLAN

NR 670.028 does not specify that a copy of the contingency plan [NR 670.014(g)(2)] is required for submittal unless the department determines that this additional information is necessary. As previously stated, there is no possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents from the closed RCRA-regulated unit that would constitute a threat to human health or the environment. Should WDNR determine that a contingency plan is required for submittal, Beazer proposes that the PPC Plan will serve as the Site's Contingency Plan. Beazer will provide a copy of the PPC Plan to TRP so that TRP may ensure that any workers at the Site are aware of the elements of the PPC Plan.

4.4 SECURITY

Access to the Site is off of County Road A and is controlled by entrance gates. Only authorized personnel are permitted access into the Site during operational hours and the entrance gates are locked when not in use. All visitors and contractors are required to check in at the Site Office prior to accessing the Site. In addition to the Site security features, the closed RCRA-regulated unit is secured by a fence and the entrance gate is closed and locked at all times (except during inspection and maintenance). Signs that read "Danger – Unauthorized Personnel Keep Out" are at the entrance gate and other strategic locations in sufficient numbers to be seen from any approach and are legible from a distance of at least 25 feet.

4.5 INSPECTION AND MAINTENANCE PLANS

The following post-closure care and corrective action process features of the Site are subject to inspection/maintenance during the long-term care period:

- Closed RCRA-regulated unit and associated monitoring well network; and
- On-property corrective measure surface covers and Outfall 001 drainage ditch liner system.

The long-term care inspections/maintenance of these features will be conducted in accordance with the conditionally approved October 1987 Closure and Post-Closure Plan (Appendix B.1) and the O&M Plan (Appendix J of the Construction Documentation Report provided herein as Appendix C). If any problems or deficiencies are noted during inspections, the long-term care contact person will be notified and repairs will be initiated. Copies of the inspection records will be kept for at least three years from the date of inspection in the onsite records storage facility. A summary of the closed RCRA-regulated unit and corrective measure inspection/maintenance activities are provided in the following subsections.

4.5.1 Closed RCRA-Regulated Unit Inspection/Maintenance

Long-term care inspections of the closed RCRA-regulated unit are performed on a monthly basis in accordance with Section IX 1.0 of the Closure and Post-Closure Care Plan (Appendix B.1). Inspections of the closed RCRA-regulated unit include access and security systems (i.e., fences, gates and signage), cover integrity (i.e., vegetative cover condition, potential erosion damage, run on and run off control systems, and presence of standing water), and the condition of associated benchmarks and groundwater monitoring wells. Maintenance activities are conducted as needed based on the inspection findings. The completed inspection forms, as well as documentation of any corrective maintenance, are maintained for at least three years from the date of inspection in the onsite records storage facility. The Long-term Care Inspection Form is provided in Appendix F.1.

4.5.2 Groundwater Monitoring Well Inspections/Maintenance

All groundwater monitoring wells included in the current groundwater monitoring program (as described in Section 5.4) are inspected semi-annually during sampling activities for physical integrity and security in accordance with Section IX 2.0 of the Closure and Post-Closure Care Plan (Appendix B.1). A well inspection form is provided in Appendix F.2.

Subject to weather conditions, monitoring well repairs will be initiated within 60 days of identifying the deficiency and will be documented as part of the Annual RCRA Groundwater Monitoring Reports submitted to WDNR.

4.5.3 On-Property Corrective Measures Inspections/Maintenance

As previously stated in Section 4.1.2, inspection and maintenance of the completed corrective measure components for the former SWMUs (i.e., surface covers and Outfall 001 drainage ditch

liner system) are provided in the O&M Plan (Appendix J of the Construction Documentation Report provided herein as Appendix C).

4.6 PERSONNEL TRAINING

Individuals responsible for the inspection and maintenance of the closed RCRA-regulated unit (and associated groundwater monitoring well network), semi-annual groundwater monitoring, and the annual on-property corrective measures surface cover inspections and maintenance will be appropriately trained to conduct those activities. Written records will be maintained at the Site concerning the formal training received associated with the long-term care activities and will be available upon request. The *RCRA Hazardous Waste Training Outline* (FTS, June 2021) is provided as Appendix G.2.

It is anticipated that there will be three positions required to maintain and monitor the closed RCRA-regulated unit and the on-property corrective measure components at the Site (i.e., surface covers and Outfall 001 drainage ditch liner system) during the long-term care period. Descriptions of these positions are provided below:

- **Site Inspector -** The responsibilities of this position are to perform the long-term care inspections, on-property corrective measure surface cover inspections, and Outfall 001 drainage ditch liner system inspections. In addition, the Site Inspector is the designated Primary Emergency Coordinator for the long-term care operations regulated under WDNR License No. 03157. Beazer will ensure that any individual performing inspections and acting as an emergency coordinator has been appropriately trained in inspection and inspection log completion procedures.

- **Groundwater Monitoring Technicians -** The responsibilities of this position include obtaining groundwater samples and water level measurements for the monitoring wells, as described in the SAP and conduct monitoring well inspections. The use of monitoring technicians trained in proper RCRA procedures will ensure that the well network will be properly inspected, monitored and maintained. Groundwater Monitoring Technicians may also perform the long-term care inspections, on-property corrective measure surface cover inspections, and Outfall 001 drainage ditch liner system inspections.

- **Maintenance Personnel -** Responsibilities for this position include activities required to maintain the RCRA regulated unit such as mowing the grass, removing any undesirable vegetation or trees, and performing other maintenance or repair activities as recommended by the Beazer Environmental Manager and/or directed by Beazer's contractor/consultant. These activities will be performed by qualified personnel. When maintenance activities are required during the long-term care period, training records and qualifications of maintenance personnel used will be maintained at the Site and in Beazer's files and will be available upon request.

Personnel training is limited to the individuals responsible for the operations regulated under WDNR License No. 03157. The closed RCRA-regulated unit is not part of the active operations at the Site and is not accessed by the property owner or lessees. The current property owner (TRP) and lessee (Koppers) have been notified by Beazer to not enter into the confines of the closed RCRA-regulated unit which is capped and enclosed by security fencing. Both TRP and Koppers have been instructed to notify the Beazer-designated Primary Emergency Coordinator (Site Inspector) should they observe a release or the potential for a release from the closed RCRA-regulated unit (which is extremely unlikely given that all K001 waste and visibly contaminated soils were removed during closure and no wastes have since been treated, stored, or disposed of in the RCRA-regulated unit since closure).

4.7 POST-CLOSURE NOTICES

This section contains information on post-closure notifications and associated land use restrictions and institutional controls.

As a required component of the on-property corrective actions, Beazer submitted a *Notification of Continuing Obligations and Residual Contamination* (Beazer, June 2014) to the property owner (TRP) and a *GIS Registry Submittal* (Beazer, August 2015) to WDNR to preclude any disturbance of the features of the final remedy (surface covers and engineered liner system) at the Site. This notification and submittal (through the Wisconsin Remediation and Redevelopment Database [WRRD]) provide a mechanism for notifying the current property owner and any potential purchaser of the property of the following:

- The presence of impacted soil and groundwater at the Site;
- Future use restrictions (the future use of the property is restricted to industrial use);
- Well construction restrictions (the construction of a water well without prior WDNR approval is prohibited); and
- Soil excavation procedures (the notification and submittal specify the procedures to manage soils that may be excavated or disturbed as a result of site activities such as minor repair activities).

4.8 LONG-TERM CARE COST ESTIMATE AND FINANCIAL ASSURANCE

The most recent long-term care cost estimate for the Site is provided in Appendix H. Financial assurance will be maintained for 40 years for long-term care of the closed RCRA-regulated unit and onsite corrective action components. Beazer reserves the right to provide a justification for a shorter time period should conditions allow. The most recent financial assurance documentation provided by Beazer is included in Appendix I.

5.0 GROUNDWATER ASSESSMENT INFORMATION

This section provides a summary of groundwater quality as determined via implementation of groundwater monitoring regulated under WDNR License No. 03157. The information presented in this section satisfies the additional information requirements regarding groundwater protection pursuant to NR 670.014(3).

5.1 GEOLOGY AND HYDROGEOLOGY

A discussion of Site geology and hydrogeology, including identification of upper and lower zones of the monitored groundwater, and groundwater flow characteristics, was provided in Section 2.2.2 of this Application.

5.2 CONSTITUENTS OF INTEREST IN GROUNDWATER

The current groundwater monitoring program at the Site requires the analysis of VOCs and SVOCs at a semi-annual frequency and dioxins and furans at an annual frequency for select upgradient (background), side-gradient, and downgradient monitoring wells.

5.3 GROUNDWATER QUALITY DATA

A copy of all groundwater monitoring data collected since October 2002 (the first groundwater monitoring event under the WDNR-approved SAP) is provided as Appendix J. The results of the most recent semi-annual/annual sampling event (conducted in April 2021) are summarized in the following subsections.

5.3.1 Current Groundwater Monitoring Program

The current groundwater monitoring program is conducted in accordance with the SAP (The RETEC Group, Inc., April 2002; Appendix N) requirements (and subsequent well network modifications; Appendix M) and consists of the following activities:

- Inspection and maintenance of all monitoring wells used in any routine monitoring activity;

- Semi-annual gauging and inspection of thirty-seven (37) wells (W-02C, W-04AR2, W-05CR, W-06A, W-06C, W-08A, W-09C, W-10AR2, W-11A, W-12A, W-12CR, W-14A, W-14B, W-16AR, W-18D, W-19A, W-19C, W-20AR, W-21A, W-21B, W-25A, W-26A, W-26B, W-28C, W-29A, W-30A, W-30C, W-31C, W-32C, W-33D, W-34D, W-35A, W-36A, W-37A, W-38A, W-39A, and W-40A);

- Semi-annual sampling of two (2) upgradient (background) monitoring wells (W-04AR2 and W-28C) and seven (7) side-gradient or downgradient monitoring wells (W-06A, W-06C, W-10AR2, W-12A, W-12CR, W-30A, and W-30C) for VOCs and SVOCs;

- Annual sampling of two (2) upgradient (background) monitoring wells (W-04AR2 and W-28C) and seven (7) side-gradient or downgradient monitoring wells (W-06A, W-06C, W-10AR2, W-12A, W-12CR, W-30A, and W-30C) for dioxins and furans; and

Installation records for wells in the groundwater monitoring network are provided as Appendix K. The most recent semi-annual / annual groundwater monitoring event was conducted in April 2021. A brief discussion of the results of the most recent groundwater monitoring event follows.

5.3.2 April 2021 Groundwater Sampling/Analysis Results

In accordance with the current requirements, groundwater samples collected during the April 2021 monitoring event were analyzed for VOCs, SVOCs, and dioxins/furans. Analytical data summaries from the April 2021 groundwater monitoring event are presented in Table 5-1. The April 20201 analytical data were compared to the WDNR Preventative Action Limits (PALs), WDNR Enforcement Standards (ESs), and/or USEPA Maximum Contaminant Levels (MCLs). A summary of detected constituents and PAL, ES, and MCL exceedances are summarized in Table 5-2. A brief summary of the April 2021 analytical data is provided in the remainder of this subsection.

5.3.2.1 Volatile Organic Compounds

VOC constituents were detected in samples from two (2) of the nine (9) monitoring wells sampled for VOCs (W-10AR2 and W-30A) during the April 2021 sampling event. At both of these wells benzene was the only VOC constituent detected in excess of a WDNR PAL, WDNR ES and/or the MCL values during the April 2021 sampling event, as summarized on Table 5-2. The results observed during the April 2021 sampling event are consistent with historical results.

5.3.2.2 Semi-Volatile Organic Compounds

The primary SVOC COPCs include polycyclic aromatic hydrocarbons (PAHs) and phenolic compounds. As summarized on Table 5-2, SVOCs were detected in eight (8) of the ten (10) of the groundwater samples collected during the April 2021 sampling event. Three monitoring wells (W-04AR2, W-10AR2, and W-30A) contained low-level, estimated detections of a limited number of PAHs in excess of the WDNR PAL, WDNR ES, and/or MCL values as discussed below. Monitoring well W-04AR2 contained benzo(a)pyrene (0.094 J µg/L), benzo(b)fluoranthene (0.18 J µg/L), and chrysene (0.38 ug/L) above their WDNR PALs of 0.02 µg/L and WDNR ESs of 0.2 µg/L. The sample from monitoring well W-10AR2 contained benzo(b)fluoranthene (0.09 J µg/L), and chrysene (0.16 J µg/L) above their WDNR PALs (0.02 µg/L), but below the WDNR ESs (0.2 µg/L). The sample from monitoring well W-30A contained benzo(a)pyrene (0.11 J µg/L), benzo(b)fluoranthene (0.16 J µg/L) and chrysene (0.29 J ug/l) above their WDNR PALs and WDNR ESs. The results observed during the April 2021 sampling event are consistent with historical results.

5.3.2.3 Dioxins/Furans

Nine monitoring wells (W-04AR2, W-28C, W-06A, W-06C, W-10AR2, W-12A, W-12CR, W-30A, and W-30C) were sampled and analyzed for dioxin and furan congeners to determine the 2,3,7,8-TCDD toxicity equivalent quotient (TEQ) in April 2021 as part of the annual sampling event. Although dioxin/furan congeners were detected in all nine (9) monitoring wells, the 2,3,7,8-TCDD congener was not detected in any of the nine wells sampled during the April 2021 sampling event. As shown in Table 5-2, the only well with TCDD TEQ values that exceeded the 2,3,7,8-TCDD WDNR PAL (0.000003 ug/l) was W-30A. These results are consistent with historical results.

5.3.3 Data Trends

Figure 5-1 presents graphs of recent and historical groundwater monitoring results at monitoring wells W-10AR2 and W-30A. These wells typically exhibit the highest concentrations and frequency of detection of COPCs among the monitored wells. The constituents selected for trend analysis in Figure 5-1 (benzene, chrysene, naphthalene, and pentachlorophenol) are considered representative of COPCs that have been historically detected above WDNR PALs or ESs and are consistent with the constituents selected for trend evaluation in previous groundwater evaluations.

Using these recent data, along with historical data (dating back to 1999) collected from wells W-10AR2 and W-30A for benzene, chrysene, pentachlorophenol, and naphthalene, a linear regression analysis was completed using a 95% confidence level to evaluate whether a data trend exists at wells W-10AR2 and W-30A. The statistical analyses indicate that the long-term trends in the benzene, chrysene, pentachlorophenol, and naphthalene concentrations in wells W-10AR2 and W-30A are stable or decreasing. Details related to the linear regression analysis are provided in Appendix L.

These findings are consistent with the natural attenuation evaluations reported to the WDNR in the *Groundwater Natural Attenuation Evaluation Report* (BBL, January 2006), the *Summary of Supplemental Groundwater Investigations* (Arcadis, September 2007), and the *Groundwater Natural Attenuation Demonstration Summary Report* (Arcadis, June 2014). Those evaluations documented several lines of evidence indicating the occurrence of natural attenuation of Site COPCs in groundwater at the Site.

5.4 GROUNDWATER MONITORING PROGRAM

There are no proposed revisions to the current groundwater monitoring program (as described in Section 5.3.1) at this time, however; an addendum to the approved SAP (The RETEC Group, Inc., April 2002) has been provided as Appendix M to incorporate groundwater monitoring network modifications that have been made since WNDR-approval of the existing SAP in 2002.

6.0 REFERENCES

Copies of the documents referenced below are provided in Appendix N except as otherwise noted.

AMEC Earth & Environmental, Inc., 2007, *Post-Remediation Human Health Risk Assessment, Koppers Inc. Facility, Superior,* Wisconsin, July 2007. (Appendix N.1).

ARCADIS, Inc. (Arcadis), 2007, *Focused Corrective Measures Study, Koppers Inc. Facility, Superior, Wisconsin,* Revised July 2007. (Appendix N.2).

Arcadis, 2007, *Koppers Inc. Superior, WI Facility – Summary of Supplemental Groundwater Investigations,* September 18, 2007. (Appendix N.3).

Arcadis, 2009, *On-Property Corrective Measures Implementation Design Report, Koppers Inc. Superior, Wisconsin Facility,* December 31, 2009. (Appendix N.4).

Arcadis, 2011, *On-Property Corrective Measures Implementation Construction Documentation Report, Koppers Inc. Facility, Superior, Wisconsin,* September 2011. (Appendix C)

Arcadis, 2011, *Operation and Maintenance Plan On-Property Corrective Measures Implementation, Koppers Inc. Facility, Superior, Wisconsin,* Revised September 2011. (Appendix C).

Arcadis, 2014, *Supplemental Off-Property Investigation Summary Report, Former Koppers Inc. Facility – Superior, WI,* April 2014. (Appendix N.5).

Arcadis, 2014, *Groundwater Natural Attenuation Demonstration Summary Report, Former Koppers Inc. Facility, Superior, Wisconsin,* June 2014. (Appendix N.6).

Arcadis, 2014, *Off-Property Focused Corrective Measures Study, Former Koppers Inc. Facility – Superior,* August 22, 2014. (Appendix N.7).

Arcadis, 2014, *Technical Assistance and Environmental Liability Clarification Request, Former Koppers Inc. Facility – Superior, WI,* October 17, 2014. (Appendix N.8).

Beazer East, Inc. (Beazer), 2014, *Superior, WI Facility Notification of Continuing Obligations and Residual Contamination,* June 16, 2014. (Appendix D.1)

Beazer, 2015, *GIS Registry Submittal, Former Koppers Inc. Facility – Superior, WI,* August 5, 2015. (Appendix D.2).

Blasland, Bouck & Lee, Inc. (BBL), 2000, *RFI Bedrock Monitoring Wells Report,* July 14, 2000. (Appendix N.9)

BBL, 2000, *Supplemental Surface Water and Streambed Sediment Investigation Report, Koppers Industries, Inc. Facility – Superior, Wisconsin*, July 2000. (Appendix N.10).

BBL, 2003, *Koppers Inc. (formerly known as Koppers Industries, Inc., or KII) Wood-Treating Facility, Superior, Wisconsin - Crawford Creek Floodplain Investigation Results*, June 26, 2003. (Appendix N.11).

BBL, 2003, *Koppers Inc. Superior, Wisconsin Facility, Summary of May 2003 Outfall 001 Drainage Ditch Investigation*, October 2, 2003. (Appendix N.12).

BBL, 2006, *Koppers Inc. Superior, Wisconsin Facility, Summary of Supplemental Groundwater Monitoring and Natural Attenuation Evaluation*, January 24, 2006. (Appendix N.13).

BBL, 2006, *Off-Property Investigation Data Summary Report, Koppers Inc. Facility, Superior, Wisconsin*, February 2006. (Appendix N. 14).

Dames & Moore, Inc., 1988, *Final Draft Report, Environmental Assessment, Koppers Company, Inc., Superior, Wisconsin, For Landels, Ripley, & Diamond*, September 20, 1988. (Appendix N.15).

Douglas County Recorder, Superior WI, Document Number 853676, *Deed Restriction, September 20, 2012*. (Appendix N.23).

Field & Technical Services, LLC, 2021, *Preparedness, Prevention, and Contingency Plan, Beazer East, Inc. Operations at the Former Koppers Inc. Superior Facility, Superior, Wisconsin*, Revised September 2021. (Appendix G.1).

Field & Technical Services, LLC, 2021, *RCRA Hazardous Waste Training Outline, Beazer East, Inc. Operations at the Former Koppers Inc. Superior Facility, Superior, Wisconsin*, Update September 2021. (Appendix G.2).

Fluor Daniel GTI, 1997, *Preliminary Characterization Report, Surface Water and Streambed Sediment*, March 1997. (Appendix N.16).

Fluor Daniel GTI, 1997, *RCRA Facility Investigation Report, Koppers Industries, Inc., Superior, Wisconsin Facility, WID 006-179-493*, June 1997. (Appendix N.17).

Keystone Environmental Resources (Keystone), 1987, *Closure and Post-Closure Care Plan For The Koppers Company, Inc. Hazardous Waste Management Facility, Superior, Wisconsin, Surface Impoundments, EPA I.D. No. WID006179493*, Revised August 27, 1987. (Appendix B.1).

Keystone, 1989, *Construction Documentation Report, Surface Impoundment Closure, Koppers Industries, Inc., Superior, Wisconsin*, November 1989. (Appendix B.4).

The RETEC Group, Inc., 2002, *Groundwater Monitoring Sampling and Analysis Plan, KII Superior Facility, Superior, Wisconsin, EPA ID No. WID006176498,* April 2002. (Appendix N.19).

Wisconsin Department of Natural Resources (WDNR), 1987, *Hazardous Waste Closure and Long-Term Care Plan, Conditional Approval, Koppers Co., Inc. – Surface Impoundment, EPA ID: WID006179493,* October 1, 1987. (Appendix B.2).

WDNR, 1987, *Hazardous Waste Closure and Long-Term Care Plan, Koppers Co., Inc. – Surface Impoundment, Conditional Clarification, EPA ID: WID006179493,* October 21, 1987. (Appendix B.3).

WDNR, 1990, *Hazardous Waste Facility Operation License No. 03157,* Effective Date December 21, 1990. (Appendix N.20).

WDNR, 2002, *Koppers Industries, Inc. (KII)/Beazer East, Inc. (Beazer), Closure and Long-Term Care Plan Approval, Groundwater Monitoring Sampling and Analysis Plan, KII Superior Facility Superior, Wisconsin, WID No.: 006176498,* October 29, 2002. (Appendix N.21).

WDNR, 2014, *Technical Assistance and Environmental Liability Request for the Groundwater Natural Attenuation Remedy at the Former Koppers Inc. Facility, Superior, Wisconsin, WDNR BRRTS #023-16-0004884,* November 18, 2014. (Appendix N.22) .

TABLES

Table 1-1

RCRA Part B "Crosswalk"
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

NR 670.014 (Contents of the Feasibility and Plan of Operation Report: General Requirements) As required by NR 670.028 (Information Requirements for Long-Term Care Licenses)	Conditional Close-Out Attachment A WDNR Minimum Application Requirements[1]	Conditional Close-Out Attachment B Long-Term Care Application Information Identified in NR 670.028[2]	Location in this Application
670.014 (2)(a): A general description of the facility.	Items 1.a., 1.b., 1.c., 1.d., and 2.a.	Item 1.	Section 2.0
670.014(2)(d): A description of the security procedures and equipment required by s. NR 664.0014.	Item 2.e.	Item 2.a.	Sections 2.4 and 4.4
670.014(2)(e): A copy of the general inspection schedule required by s. NR 664.0015 (2).	Item 2.e.	Item 2.b.	Section 4.5
670.014(2)(f): A justification of any request for a waiver of the preparedness and prevention requirements of NR 664 Subchapter C	Item 2.f.	Item 3.	Section 4.2
670.014(2)(k): Floodplain information.	Item 1.g.	Item 4.	Section 2.2.3 Figure 2-6
670.014(2)(m): A copy of the closure plan and, where applicable, the long-term care plan.	Items 1.f., 1.h., 2.a., 2.b., 2.c., 2.d., 2.e., and 2.f.	Items 5.a., 5.c., 5.d., 6.a., and 6.b.	Sections 4.0 and 5.0 Appendices **B.1**, **B.2**, and **B.3**
670.014(2)(n): Documentation that notices required under s. NR 664.0119 have been filed.	Item 1.h.	Items 7.a., 7.b., and 7.c.	Section 4.1 Appendix **B.4**
NR 670.014(2)(p): The most recent long-term care cost estimate for the facility prepared according to s. NR 664.0144 plus a copy of the documentation required to demonstrate financial assurance under s. NR 664.0145.	Item 3.a.	Item 9.	Section 4.8 Appendices **H** and **I**
NR 670.014(2)(s): A topographic map showing the specified information.	Item 1.e.	Item 10.	Figures 2-1, 2-2, and 2-6 Appendix **A**
NR 670.014(3): Additional information requirements regarding protection of groundwater.	Items 2.a., 2.b., and 2.c.	Items 11.a. and 11.b.	Sections 2.2.2, 4.0, and 5.0; Tables 5-1 and 5-2; Figure 5-1 Appendix **L**
NR 670.014(4): Information requirements for solid waste management units	Item 3.b.	Items 12.a., 12.b., and 12.c.	Sections 2.1.4 and 2.3; Figure 2-2 Appendices **H** and **I**
NR 670.014(2)(g),(l),(h)3.: Additional information requirements as requested by WDNR.	Items 2.b, 2.c., 2.d, 2.e., and 2.f.	Item 13.a.	Sections 4.2, 4.3, 4.6 and 5.0 Appendices **G.1** and **G.2**

Table 1-1

RCRA Part B "Crosswalk"
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

Conditional Close Out Letter Section B Application Contents based on the NON and Response (As Requested by WDNR)	Location in this Application
NON Items 1.a and 2.a – LTC and CA Work Descriptions Tasks a. and b.	Section 4.5.1
NON Items 1.a and 2.a – LTC and CA Work Descriptions Task c.	Section 4.5.2
NON Items 1.a and 2.a – LTC and CA Work Descriptions Task d.	Section 3.1
NON Items 1.a and 2.a – LTC and CA Work Descriptions Tasks e., f., and g.	Section 4.5.3
NON Items 1.b and 2.b – Cost Estimates	Appendix **H**
NON Items 1.c and 2.c – Third Party Work	Appendix **H**
NON Items 1.d and 2.d – Project Management Costs	Appendix **H**
NON Items 1.e and 2.e – Duration of Financial Responsibility	Section 4.8 and Appendix **I**
NON Item 2.f – Off-site Remediation Costs	Not Applicable
NON Items 4 and 5 – Preparedness and Prevention, Contingency Planning, and Emergency Coordinator	Sections 4.2 and 4.3
NON Item 7 – Cost Estimate Updates	Appendix **I**
NON Item 8 – Groundwater Monitoring	Section 5.0
NON Item 9 – Training	Section 4.6 and Appendices **G.1** and **G.2**
NON Item 10 – Licensing History	Sections 2.1.2 and 2.1.3

Notes:

[1] Minimum Long-term Care Application requirements per NR 670 as summarized by Attachment A of the *Conditional Close-Out* letter (WDNR, May 5, 2021).

[2] Long-Term Care Application Information Identified in NR 670.0282 as summarized by Attachment B of the *Conditional Close-Out* letter (WDNR, May 5, 2021).

Table 2-1
Former SWMU/Potential Source Area and Corrective Measure Summary
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

Former SWMU/Potential Source Area			CORRECTIVE MEASURE[1, 2]
Area A	SWMU 1	Former Unlined Landfarm/Landfill	Complete – Placement of grubbed material, ground timber mats and excavated material from Areas B, F-1, F-2 and the Outfall 001 drainage ditch; Vegetated Surface Cover installation; and restoration.
Area B	SWMUs 2, 3, 4, 5, 6 and 7	Treatment Area	Complete – Debris and standing water removal; Concrete Tank Basin preparation; subgrade leveling; installation of a Clay Vegetated Surface Cover, a Vegetated Surface Cover, and a Road Base Surface Cover; and restoration
Area C	SWMUs 8 and 9	Closed Surface Impoundments (Non-RCRA)	Complete - Water removal; excavation of sludges and soils for off-site disposal. A portion of the closed RCRA-regulated unit overlies two of the southern non-RCRA impoundments. The non-RCRA impoundments extend approximately 400 feet north of the closed RCRA-regulated unit.
Area D	SWMW 10	Outfall No. 001	Complete – Excavation of soil from the existing channel bottom and channel side-slopes as needed (excavated material was placed in Area A); Installation of liner system with anchor trenches installed at the top of each bank to secure the liner system materials; and restoration.
Area E	SWMU 11	Outfall No. 004	There is no record of a release or environmental impact associated with this area, therefore; no remediation activities were required to protect human health and the environment in the area of this SWMU.
Area F	SWMUs 12, 13 and 14	Drip Track	Complete – Excavation of the top 1 foot of existing material (excavated material was placed in Area A); installation of a Clay Vegetated Surface Cover and Road Base Surface Cover; and restoration
Area G	SWMU not identified during initial RFA[3]	Pentachlorophenol Straw Bales	Complete - Subgrade preparation (including "bridging of wet/soft areas); installation of a Clay Vegetated Surface Cover graded to provide drainage away from the existing railroad tracks; and restoration.
Area H	SWMU not identified during initial RFA[3]	Lead Track Landfill	Complete - Subgrade preparation (including "bridging of wet/soft areas); installation of a Clay Vegetated Surface Cover graded to provide drainage away from the existing railroad tracks; and restoration..
Area S	SWMU not identified during initial RFA[4]	Spray Irrigation Field	Complete - Subgrade preparation (including "bridging of wet/soft areas); installation of a Clay Vegetated Surface Cover graded to provide drainage away from the existing railroad tracks; and restoration.

Notes:

[1] Details regarding corrective measures are provided in the WDNR-conditionally approved *On-Property Corrective Measures Implementation Construction Completion Report*, Arcadis, September 2011.

[2] Corrective measures address soil impacts. Natural attenuation is the corrective action approach for addressing groundwater impacts at the Site.

[3] Areas G and H were not included in the RFA, but were later added to the USEPA's list by Koppers and Beazer.

[4] The former spray irrigation field was investigated as part of the 1987/1988 RFA, however; the USEPA recommended no further action at that time. The former sprayfield area was later added and referred to as Area S.

Table 5-1
Analytical Summary - First Semi-Annual 2021 Groundwater Data
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

ANALYTE NAME	UNITS	W-04AR2 4/28/2021	W-06A 4/28/2021	W-06C 4/28/2021	W-10AR2 4/28/2021	W-12A 4/29/2021	W-12CR 4/29/2021	W-18D 4/28/2021	W-28C 4/28/2021	W-28C-DUP 4/28/2021	W-30A 4/28/2021	W-30C 4/29/2021	Equipment Blank 4/28/2021	Equipment Blank 4/29/2021	Trip Blank 4/28/2021	Trip Blank 4/29/2021
8260C																
1,1,1-TRICHLOROETHANE	UG/L	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	NA	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
1,2,4-TRIMETHYLBENZENE	UG/L	0.75 U	0.75 U	0.75 U	**9**	0.75 U	0.75 U	NA	0.75 U	0.75 U	**1.1**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,3,5-TRIMETHYLBENZENE	UG/L	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	NA	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
BENZENE	UG/L	0.41 U	0.41 U	0.41 U	**15**	0.41 U	0.41 U	NA	0.41 U	0.41 U	**1.8**	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
CHLOROMETHANE	UG/L	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
ETHYLBENZENE	UG/L	0.74 U	0.74 U	0.74 U	**21**	0.74 U	0.74 U	NA	0.74 U	0.74 U	**4.5**	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
METHYL(TERT)BUTYL ETHER	UG/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
NAPHTHALENE	UG/L	0.43 U	0.43 U	0.43 U	**6.3**	0.43 U	0.43 U	NA	0.43 U	0.43 U	**10**	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
N-BUTYLBENZENE	UG/L	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	NA	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
N-PROPYLBENZENE	UG/L	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	NA	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
STYRENE	UG/L	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	NA	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
TOLUENE	UG/L	0.51 U	0.51 U	0.51 U	**1**	0.51 U	0.51 U	NA	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
XYLENE, META & PARA	UG/L	0.66 U	0.66 U	0.66 U	**2.6**	0.66 U	0.66 U	NA	0.66 U	0.66 U	**0.9 J**	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U
O-XYLENE	UG/L	0.76 U	0.76 U	0.76 U	**16**	0.76 U	0.76 U	NA	0.76 U	0.76 U	**1.4**	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
8270D LL																
1,2,4-TRICHLOROBENZENE	UG/L	0.29 U	0.31 U	0.31 U	0.3 U	0.31 U	0.29 U	0.29 U	0.29 U	0.29 U	0.31 U	0.31 U	0.29 U	0.3 U	NA	NA
1,2-DICHLOROBENZENE	UG/L	0.28 U	0.3 U	0.3 U	0.29 U	0.3 U	0.28 U	0.28 U	0.28 U	0.28 U	0.3 U	0.3 U	0.28 U	0.29 U	NA	NA
1,3-DICHLOROBENZENE	UG/L	0.24 U	0.26 U	0.26 U	0.25 U	0.26 U	0.24 U	0.24 U	0.24 U	0.24 U	0.26 U	0.26 U	0.24 U	0.25 U	NA	NA
1,4-DICHLOROBENZENE	UG/L	0.26 U	0.28 U	0.28 U	0.27 U	0.28 U	0.26 U	0.26 U	0.26 U	0.26 U	0.28 U	0.28 U	0.26 U	0.27 U	NA	NA
1-METHYLNAPHTHALENE	UG/L	0.49 U	0.52 U	0.51 U	**23**	0.52 U	0.48 U	0.48 U	0.48 U	0.49 U	**16**	0.52 U	0.48 U	0.5 U	NA	NA
2,3,4,6-TETRACHLOROPHENOL	UG/L	1.5 U	1.6 U	1.6 U	1.5 U	1.6 U	1.4 U	1.5 U	1.4 U	1.5 U	1.6 U	1.6 U	1.4 U	1.5 U	NA	NA
2,3,5,6-TETRACHLOROPHENOL	UG/L	2.4 U	2.6 U	2.6 U	2.5 U	2.6 U	2.4 U	2.4 U	2.4 U	2.4 U	2.6 U	2.6 U	2.4 U	2.5 U	NA	NA
2,4,5-TRICHLOROPHENOL	UG/L	2.2 U	2.4 U	2.4 U	2.3 U	2.4 U	2.2 U	2.2 U	2.2 U	2.2 U	2.4 U	2.4 U	2.2 U	2.3 U	NA	NA
2,4,6-TRICHLOROPHENOL	UG/L	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U	1.1 U	NA	NA
2,4-DICHLOROPHENOL	UG/L	2.2 U	2.4 U	2.3 U	2.3 U	2.4 U	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.4 U	2.2 U	2.3 U	NA	NA
2,4-DIMETHYLPHENOL	UG/L	3.2 U	3.5 U	3.4 U	3.4 U	3.5 U	3.2 U	3.2 U	3.2 U	3.2 U	3.4 U	3.5 U	3.2 U	3.3 U	NA	NA
2,4-DINITROPHENOL	UG/L	7.2 U	7.7 U	7.7 U	7.5 U	7.8 U	7.1 U	7.1 U	7.1 U	7.2 U	7.6 U	7.7 U	7.1 U	7.4 U	NA	NA
2,4-DINITROTOLUENE	UG/L	0.29 U	0.31 U	0.31 U	0.3 U	0.31 U	0.29 U	0.29 U	0.29 U	0.29 U	0.31 U	0.31 U	0.29 U	0.3 U	NA	NA
2,6-DINITROTOLUENE	UG/L	0.12 U	0.13 U	0.12 U	0.12 U	0.13 U	0.11 U	0.12 U	0.11 U	0.12 U	0.12 U	0.12 U	0.11 U	0.12 U	NA	NA
2-CHLORONAPHTHALENE	UG/L	0.33 U	0.35 U	0.35 U	0.34 U	0.36 U	0.32 U	0.33 U	0.33 U	0.33 U	0.35 U	0.35 U	0.32 U	0.34 U	NA	NA
2-CHLOROPHENOL	UG/L	0.78 U	0.83 U	0.82 U	0.81 U	0.84 U	0.76 U	0.77 U	0.77 U	0.78 U	0.82 U	0.83 U	0.76 U	0.8 U	NA	NA
2-METHYLNAPHTHALENE	UG/L	0.13 U	0.14 U	0.13 U	0.13 U	0.14 U	0.12 U	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	0.12 U	0.13 U	NA	NA
2-METHYLPHENOL	UG/L	0.3 U	0.32 U	0.32 U	0.31 U	0.33 U	0.3 U	0.3 U	0.3 U	0.3 U	0.32 U	0.32 U	0.3 U	0.31 U	NA	NA
2-NITROANILINE	UG/L	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	NA	NA
2-NITROPHENOL	UG/L	2.1 U	2.2 U	2.2 U	2.2 U	2.2 U	2 U	2.1 U	2 U	2.1 U	2.2 U	2.2 U	2 U	2.1 U	NA	NA
3,3'-DICHLOROBENZIDINE	UG/L	0.91 U	0.98 U	0.97 U	0.95 U	0.99 U	0.9 U	0.9 U	0.9 U	0.91 U	0.97 U	0.97 U	0.9 U	0.94 U	NA	NA
3-NITROANILINE	UG/L	2.2 U	2.4 U	2.4 U	2.3 U	2.4 U	2.2 U	2.2 U	2.2 U	2.2 U	2.4 U	2.4 U	2.2 U	2.3 U	NA	NA
4,6-DINITRO-2-METHYLPHENOL	UG/L	4.8 U	5.1 U	5.1 U	5 U	5.2 U	4.7 U	4.7 U	4.7 U	4.8 U	5.1 U	5.1 U	4.7 U	4.9 U	NA	NA
4-BROMOPHENYL PHENYLETHER	UG/L	0.88 U	0.95 U	0.94 U	0.92 U	0.95 U	0.87 U	0.88 U	0.87 U	0.88 U	0.93 U	0.94 U	0.87 U	0.91 U	NA	NA

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Analytical Summary - First Semi-Annual 2021 Groundwater Data
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Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

ANALYTE NAME	UNITS	W-04AR2 4/28/2021	W-06A 4/28/2021	W-06C 4/28/2021	W-10AR2 4/28/2021	W-12A 4/29/2021	W-12CR 4/29/2021	W-18D 4/28/2021	W-28C 4/28/2021	W-28C-DUP 4/28/2021	W-30A 4/28/2021	W-30C 4/29/2021	Equipment Blank 4/28/2021	Equipment Blank 4/29/2021	Trip Blank 4/28/2021	Trip Blank 4/29/2021
4-CHLORO-3-METHYLPHENOL	UG/L	2.1 U	2.3 U	2.3 U	2.2 U	2.3 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.3 U	2.1 U	2.2 U	NA	NA
4-CHLOROANILINE	UG/L	2 U	2.2 U	2.2 U	2.1 U	2.2 U	2 U	2 U	2 U	2 U	2.2 U	2.2 U	2 U	2.1 U	NA	NA
4-CHLOROPHENYLPHENYL-ETHER	UG/L	0.79 U	0.84 U	0.83 U	0.82 U	0.85 U	0.77 U	0.78 U	0.78 U	0.79 U	0.83 U	0.84 U	0.77 U	0.81 U	NA	NA
4-METHYLPHENOL	UG/L	0.43 U	0.46 U	0.45 U	0.45 U	0.46 U	0.42 U	0.42 U	0.42 U	0.43 U	0.45 U	0.46 U	0.42 U	0.44 U	NA	NA
4-NITROANILINE	UG/L	3.8 U	4.1 U	4 U	4 U	4.1 U	3.7 U	3.8 U	3.8 U	3.8 U	4 U	4.1 U	3.7 U	3.9 U	NA	NA
4-NITROPHENOL	UG/L	2.3 U	2.4 U	2.4 U	2.4 U	2.5 U	2.2 U	2.3 U	2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.3 U	NA	NA
ACENAPHTHENE	UG/L	0.35 U	0.38 U	0.37 U	**68**	0.38 U	0.34 U	0.35 U	0.34 U	0.35 U	**42**	0.37 U	0.34 U	0.36 U	NA	NA
ACENAPHTHYLENE	UG/L	0.31 U	0.33 U	0.33 U	**1.8**	0.34 U	0.31 U	0.31 U	0.31 U	0.31 U	**1**	0.33 U	0.3 U	0.32 U	NA	NA
ANTHRACENE	UG/L	**4**	0.33 U	0.33 U	**0.82 J**	0.34 U	0.31 U	0.31 U	0.31 U	0.31 U	**1.1**	0.33 U	0.3 U	0.32 U	NA	NA
BENZO (A) ANTHRACENE	UG/L	**0.19**	**0.055 J**	**0.048 J**	**0.13 J**	**0.05 J**	**0.048 J**	0.042 U	**0.092 J**	**0.047 J**	**0.24**	0.046 U	0.042 U	0.044 U	NA	NA
BENZO (A) PYRENE	UG/L	**0.094 J**	0.058 U	0.058 U	0.057 U	0.059 U	0.053 U	0.054 U	0.054 U	0.054 U	**0.11 J**	0.058 U	0.053 U	0.056 U	NA	NA
BENZO (B) FLUORANTHENE	UG/L	**0.18 J**	0.06 U	0.06 U	**0.09 J**	0.061 U	0.055 U	0.056 U	0.056 U	0.056 U	**0.16 J**	0.06 U	0.055 U	0.058 U	NA	NA
BENZO (G,H,I) PERYLENE	UG/L	0.41 U	0.44 U	0.43 U	0.43 U	0.44 U	0.4 U	0.4 U	0.4 U	0.41 U	0.43 U	0.43 U	0.4 U	0.42 U	NA	NA
BENZO (K) FLUORANTHENE	UG/L	**0.092 J**	0.077 U	0.076 U	0.075 U	0.078 U	0.071 U	0.071 U	0.071 U	0.072 U	**0.091 J**	0.077 U	0.07 U	0.074 U	NA	NA
BENZOIC ACID	UG/L	4.4 U	4.8 U	4.7 U	4.6 U	4.8 U	4.3 U	4.4 U	4.4 U	4.4 U	4.7 U	4.7 U	4.3 U	4.6 U	NA	NA
BENZYL ALCOHOL	UG/L	3 U	3.2 U	3.1 U	3.1 U	3.2 U	2.9 U	2.9 U	2.9 U	3 U	3.1 U	3.2 U	2.9 U	3.1 U	NA	NA
BIS (2-CHLOROETHOXY)- METHANE	UG/L	0.29 U	0.31 U	0.31 U	0.3 U	0.31 U	0.29 U	0.29 U	0.29 U	0.29 U	0.31 U	0.31 U	0.29 U	0.3 U	NA	NA
BIS (2-CHLOROETHYL) ETHER	UG/L	0.34 U	0.36 U	0.36 U	0.35 U	0.37 U	0.33 U	0.34 U	0.33 U	0.34 U	0.36 U	0.36 U	0.33 U	0.35 U	NA	NA
BIS (2-CHLOROISOPROPYL)-ETHER	UG/L	0.29 U	0.31 U	0.31 U	0.3 U	0.31 U	0.29 U	0.29 U	0.29 U	0.29 U	0.31 U	0.31 U	0.29 U	0.3 U	NA	NA
BIS (2-ETHYLHEXYL)- PHTHALATE	UG/L	2.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.3 U	2.3 U	2.3 U	2.4 U	2.5 U	2.5 U	2.3 U	2.4 U	NA	NA
BUTYL BENZYL PHTHALATE	UG/L	0.26 U	0.28 U	0.28 U	0.27 U	0.28 U	0.26 U	0.26 U	0.26 U	0.26 U	0.28 U	0.28 U	0.26 U	0.27 U	NA	NA
CHRYSENE	UG/L	**0.38 J**	0.15 U	0.14 U	**0.16 J**	0.15 U	0.13 U	0.13 U	0.13 U	0.14 U	**0.29 J**	0.14 U	0.13 U	0.14 U	NA	NA
DIBENZO (A,H) ANTHRACENE	UG/L	0.062 U	0.067 U	0.066 U	0.065 U	0.067 U	0.061 U	0.062 U	0.061 U	0.062 U	0.066 U	0.066 U	0.061 U	0.064 U	NA	NA
DIBENZOFURAN	UG/L	0.34 U	0.36 U	0.36 U	0.35 U	0.37 U	0.33 U	0.34 U	0.33 U	0.34 U	**15**	0.36 U	0.33 U	0.35 U	NA	NA
DIETHYLPHTHALATE	UG/L	0.43 U	0.46 U	0.45 U	0.45 U	0.46 U	0.42 U	0.42 U	0.42 U	0.43 U	0.45 U	0.46 U	0.42 U	0.44 U	NA	NA
DIMETHYLPHTHALATE	UG/L	0.37 U	0.4 U	0.39 U	0.38 U	0.4 U	0.36 U	0.37 U	0.36 U	0.37 U	0.39 U	0.39 U	0.36 U	0.38 U	NA	NA
DI-N-BUTYLPHTHALATE	UG/L	0.78 U	0.83 U	0.82 U	0.81 U	0.84 U	0.76 U	0.77 U	0.77 U	0.78 U	0.82 U	0.83 U	0.76 U	0.8 U	NA	NA
DI-N-OCTYLPHTHALATE	UG/L	2.4 U	2.6 U	2.5 U	2.5 U	2.6 U	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.6 U	2.4 U	2.5 U	NA	NA
FLUORANTHENE	UG/L	**0.34 J**	0.33 U	0.33 U	**2**	0.34 U	0.31 U	0.31 U	0.31 U	0.31 U	**1.8**	0.33 U	0.3 U	0.32 U	NA	NA
FLUORENE	UG/L	0.37 U	0.4 U	0.39 U	**21**	0.4 U	0.36 U	0.37 U	0.36 U	0.37 U	**14**	0.39 U	0.36 U	0.38 U	NA	NA
HEXACHLOROBENZENE	UG/L	0.14 U	0.15 U	0.14 U	0.14 U	0.15 U	0.13 U	0.13 U	0.13 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	NA	NA
HEXACHLOROBUTADIENE	UG/L	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	NA	NA
HEXACHLOROCYCLOPENTADIENE	UG/L	3.3 U	3.6 U	3.5 U	3.5 U	3.6 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.6 U	3.3 U	3.4 U	NA	NA
HEXACHLOROETHANE	UG/L	0.94 U	1 U	1 U	0.98 U	1 U	0.93 U	0.93 U	0.93 U	0.94 U	1 U	1 U	0.92 U	0.97 U	NA	NA
INDENO (1,2,3-CD) PYRENE	UG/L	0.082 U	0.088 U	0.087 U	0.085 U	0.088 U	0.08 U	0.081 U	0.08 U	0.082 U	0.086 U	0.087 U	0.08 U	0.084 U	NA	NA
ISOPHORONE	UG/L	0.28 U	0.3 U	0.3 U	0.29 U	0.3 U	0.28 U	0.28 U	0.28 U	0.28 U	0.3 U	0.3 U	0.28 U	0.29 U	NA	NA
NAPHTHALENE	UG/L	NA	NA	NA	NA	NA	NA	0.29 U	NA	NA	NA	NA	NA	NA	NA	NA
NITROBENZENE	UG/L	0.44 U	0.47 U	0.46 U	0.46 U	0.47 U	0.43 U	0.43 U	0.43 U	0.44 U	0.46 U	0.47 U	0.43 U	0.45 U	NA	NA
N-NITROSODI-N-PROPYLAMINE	UG/L	0.14 U	0.15 U	0.14 U	0.14 U	0.15 U	0.13 U	0.13 U	0.13 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	NA	NA
N-NITROSO-DI-PHENYLAMINE	UG/L	0.33 U	0.35 U	0.35 U	0.34 U	0.36 U	0.32 U	0.33 U	0.33 U	0.33 U	0.35 U	0.35 U	0.32 U	0.34 U	NA	NA
PENTACHLOROPHENOL	UG/L	1.7 U	0.34 U	0.34 U	1.7 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	3.4 U	0.34 U	0.34 U	0.34 U	NA	NA
PHENANTHRENE	UG/L	0.34 U	0.36 U	0.36 U	**4.7**	0.37 U	0.33 U	0.34 U	0.33 U	0.34 U	**4.7**	0.36 U	0.33 U	0.35 U	NA	NA
PHENOL	UG/L	0.35 U	0.38 U	0.37 U	**0.71 J**	0.38 U	0.34 U	0.35 U	0.34 U	0.35 U	0.37 U	0.37 U	0.34 U	0.36 U	NA	NA
PYRENE	UG/L	0.47 U	0.5 U	0.49 U	**1.2**	0.5 U	0.46 U	0.46 U	0.46 U	0.47 U	**1.2**	0.5 U	0.46 U	0.48 U	NA	NA

Table 5-1
Analytical Summary - First Semi-Annual 2021 Groundwater Data
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

ANALYTE NAME	UNITS	W-04AR2 4/28/2021	W-06A 4/28/2021	W-06C 4/28/2021	W-10AR2 4/28/2021	W-12A 4/29/2021	W-12CR 4/29/2021	W-18D 4/28/2021	W-28C 4/28/2021	W-28C-DUP 4/28/2021	W-30A 4/28/2021	W-30C 4/29/2021	Equipment Blank 4/28/2021	Equipment Blank 4/29/2021	Trip Blank 4/28/2021	Trip Blank 4/29/2021
8290A																
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)	UG/L	**0.000055**	**0.0000054 J**	**0.0000041 J**	**0.00002 J**	**0.000047 J**	**0.0000048 J**	NA	**0.00001 J**	**0.0000079 J**	**0.00017**	**0.000042 J**	**0.00000061 JI**	0.0000005 U	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)	UG/L	**0.0000064 J**	0.0000013 U	0.00000076 U	**0.0000035 J**	**0.000011 J**	0.00000097 U	NA	0.00000099 U	0.0000011 U	**0.000046 J**	**0.0000074 J**	**0.00000036 JI**	**0.00000037 JI**	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)	UG/L	0.00000031 U	0.00000039 U	**0.0000004 JI**	0.00000038 U	**0.0000022 JI**	0.00000012 U	NA	0.00000023 U	0.00000042 U	**0.0000047 J**	**0.0000023 JI**	0.00000027 U	**0.00000032 J**	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)	UG/L	0.0000018 U	0.0000014 U	0.000001 U	0.000001 U	0.000002 U	0.00000095 U	NA	0.0000012 U	0.0000012 U	0.0000016 U	0.00000084 U	**0.0000012 J**	**0.00000098 J**	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)	UG/L	**0.00000092 JI**	0.0000003 U	0.00000021 U	0.00000053 U	**0.0000067 J**	0.00000007 U	NA	0.00000022 U	0.00000023 U	**0.0000064 J**	**0.0000011 J**	0.00000017 U	0.00000018 U	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)	UG/L	**0.0000016 JI**	0.00000031 U	0.00000021 U	**0.00000066 JI**	**0.0000047 JI**	0.00000036 U	NA	**0.00000057 JI**	0.00000026 U	**0.0000047 J**	0.0000022 U	0.00000016 U	**0.00000047 J**	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)	UG/L	**0.0000012 J**	0.00000031 U	0.00000024 U	**0.0000015 JI**	**0.0000038 JI**	0.000000081 U	NA	0.00000023 U	0.00000025 U	**0.000012 J**	**0.0000018 JI**	0.00000019 U	0.0000002 U	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)	UG/L	0.0000013 U	0.00000031 U	0.0000002 U	0.0000009 U	**0.0000017 J**	**0.0000003 J**	NA	0.0000009 U	0.00000079 U	0.0000017 U	**0.0000012 J**	**0.00000051 J**	0.00000023 U	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)	UG/L	0.00000051 U	0.00000039 U	0.00000028 U	0.00000071 U	0.00000077 U	0.000000091 U	NA	0.00000028 U	0.00000032 U	0.0000015 U	0.00000034 U	0.00000023 U	0.00000025 U	NA	NA
1,2,3,7,8-PECDD (TEF = 1)	UG/L	0.00000021 U	0.00000037 U	0.00000019 U	0.0000004 U	0.00000028 U	0.000000084 U	NA	0.0000002 U	**0.00000048 JI**	**0.00000034 JI**	0.00000028 U	0.00000021 U	0.00000027 U	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)	UG/L	0.00000043 U	0.00000055 U	0.00000023 U	0.00000029 U	**0.00000088 J**	0.000000096 U	NA	0.00000026 U	0.00000047 U	**0.00000084 J**	0.0000003 U	0.00000024 U	0.00000035 U	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)	UG/L	0.00000042 U	0.00000033 U	0.00000023 U	0.0000006 U	**0.0000013 JI**	0.000000078 U	NA	0.00000023 U	0.00000026 U	0.0000013 U	**0.0000011 JI**	0.00000019 U	0.00000021 U	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)	UG/L	0.0000004 U	0.00000048 U	0.0000002 U	0.00000027 U	**0.00000097 JI**	0.000000088 U	NA	0.00000025 U	0.0000004 U	**0.00000098 J**	0.00000026 U	0.00000021 U	0.00000031 U	NA	NA
2,3,7,8-TCDD (TEF = 1)	UG/L	0.00000024 U	0.00000027 U	0.00000011 U	0.00000025 U	0.0000003 U	0.00000021 U	NA	0.00000031 U	0.00000027 U	0.000000056 U	0.00000017 U	0.00000011 U	0.0000003 U	NA	NA
2,3,7,8-TCDF (TEF = 0.1)	UG/L	0.00000026 U	0.00000043 U	0.00000025 U	0.00000027 U	**0.0000005 J**	**0.000000083 JI**	NA	0.00000021 U	0.0000002 U	**0.00000027 J**	0.00000031 U	0.00000019 U	0.0000002 U	NA	NA
OCDD (TEF = 0.0003)	UG/L	**0.00066**	**0.000059 J**	**0.000048 J**	**0.00017**	**0.00023**	**0.000059 J**	NA	**0.000093 J**	**0.000081 J**	**0.0021**	**0.00014**	**0.0000022 J**	**0.000002 JI**	NA	NA
OCDF (TEF = 0.0003)	UG/L	**0.000029 J**	0.0000058 U	0.0000036 U	**0.000014 J**	**0.000024 J**	0.0000039 U	NA	0.0000046 U	0.0000059 U	**0.00017**	**0.000016 J**	**0.0000013 JI**	**0.0000012 JI**	NA	NA
TOTAL HPCDD	UG/L	**0.0003**	**0.000014 JI**	**0.000014 J**	**0.000065**	**0.000084**	**0.000017 J**	NA	**0.000046 J**	**0.000034 J**	**0.00043**	**0.000071**	**0.0000016 JI**	0.0000005 U	NA	NA
TOTAL HPCDF	UG/L	**0.000023 J**	**0.0000033 JI**	**0.0000027 JI**	**0.000012 J**	**0.000037 JI**	0.000003 U	NA	**0.0000025 JI**	**0.000003 JI**	**0.00018 I**	**0.000032 JI**	**0.00000036 JI**	**0.00000069 JI**	NA	NA
TOTAL HXCDD	UG/L	**0.000025 JI**	0.0000014 U	0.000001 U	0.0000074 U	**0.000017 JI**	0.0000034 U	NA	0.0000073 U	0.000004 U	**0.00003 JI**	**0.000013 JI**	**0.0000018 J**	**0.000014 J**	NA	NA
TOTAL HXCDF	UG/L	**0.000025 JI**	0.00000039 U	0.00000028 U	**0.000022 JI**	**0.000073 I**	**0.0000022 JI**	NA	**0.0000021 J**	**0.0000014 JI**	**0.00013 I**	**0.00004 JI**	0.00000023 U	0.00000025 U	NA	NA
TOTAL PECDD	UG/L	0.00000021 U	0.00000037 U	0.00000019 U	0.0000004 U	**0.00000081 JI**	**0.00000027 J**	NA	0.0000002 U	**0.00000048 JI**	**0.0000013 JI**	0.00000028 U	0.00000021 U	0.00000027 U	NA	NA
TOTAL PECDF	UG/L	**0.0000046 JI**	0.00000055 U	0.00000023 U	**0.000017 JI**	**0.000051 I**	**0.00000078 JI**	NA	0.00000026 U	0.00000047 U	**0.000096 I**	**0.000014 JI**	0.00000024 U	0.00000035 U	NA	NA
TOTAL TCDD	UG/L	0.00000024 U	0.00000027 U	**0.00000026 J**	0.00000025 U	0.0000003 U	0.00000021 U	NA	0.00000031 U	**0.00000069 JI**	**0.00000012 JI**	0.00000033 U	0.00000014 U	0.0000003 U	NA	NA
TOTAL TCDF	UG/L	**0.00000056 J**	0.00000043 U	0.00000025 U	**0.0000063 JI**	**0.000036 I**	0.00000035 U	NA	**0.00000022 JI**	0.0000002 U	**0.000018 I**	**0.000067 I**	0.00000019 U	**0.00000039 JI**	NA	NA
2,3,7,8-TCDD TEQ - ND = 0	UG/L	**1.19E-06**	**7.17E-08**	**5.94E-08**	**5.02E-07**	**2.87E-06**	**1.04E-07**	NA	**1.85E-07**	**5.83E-07**	**5.88E-06**	**1.08E-06**	**1.82E-07**	**1.53E-07**	NA	NA

Notes:
TEF = Toxicity Equivalent Factor (World Health Organization, 2005)
TEQ = Toxicity Equivalent Quotient
Bold values represent detections.
DUP indicates duplicate sample.
U indicates compound was not detected.
J indicates an estimated value.
I indicates value is estimated maximum possible concentration.
NA indicates not analyzed.
Laboratory results that were U-qualified were assigned a value of 0 for 2,3,7,8-TCDD TEQ calculation.

Table 5-2
Summary of Detected Constituents
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8270D LL					
W-10AR2	1-Methylnaphthalene	23	NA	NA	NA
W-30A	1-Methylnaphthalene	16	NA	NA	NA
W-10AR2	Acenaphthene	68	NA	NA	NA
W-30A	Acenaphthene	42	NA	NA	NA
W-10AR2	Acenaphthylene	1.8	NA	NA	NA
W-30A	Acenaphthylene	1	NA	NA	NA
W-04AR2	Anthracene	4	600	3000	NA
W-10AR2	Anthracene	0.82 J	600	3000	NA
W-30A	Anthracene	1.1	600	3000	NA
W-04AR2	Benzo(a)anthracene	0.19	NA	NA	NA
W-06A	Benzo(a)anthracene	0.055 J	NA	NA	NA
W-06C	Benzo(a)anthracene	0.048 J	NA	NA	NA
W-10AR2	Benzo(a)anthracene	0.13 J	NA	NA	NA
W-12A	Benzo(a)anthracene	0.05 J	NA	NA	NA
W-12CR	Benzo(a)anthracene	0.048 J	NA	NA	NA
W-28C	Benzo(a)anthracene	0.092 J	NA	NA	NA
W-28C DUP	Benzo(a)anthracene	0.047 J	NA	NA	NA
W-30A	Benzo(a)anthracene	0.24	NA	NA	NA
W-04AR2	Benzo(a)pyrene	0.094 J	0.02	0.2	0.2
W-30A	Benzo(a)pyrene	0.11 J	0.02	0.2	0.2
W-04AR2	Benzo(b)fluoranthene	0.18 J	0.02	0.2	NA
W-10AR2	Benzo(b)fluoranthene	0.09 J	0.02	0.2	NA
W-30A	Benzo(b)fluoranthene	0.16 J	0.02	0.2	NA
W-04AR2	Benzo(k)fluoranthene	0.092 J	NA	NA	NA
W-30A	Benzo(k)fluoranthene	0.091 J	NA	NA	NA
W-04AR2	Chrysene	0.38 J	0.02	0.2	NA
W-10AR2	Chrysene	0.16 J	0.02	0.2	NA
W-30A	Chrysene	0.29 J	0.02	0.2	NA
W-30A	Dibenzofuran	15	NA	NA	NA
W-04AR2	Fluoranthene	0.34 J	80	400	NA
W-10AR2	Fluoranthene	2	80	400	NA
W-30A	Fluoranthene	1.8	80	400	NA
W-10AR2	Fluorene	21	80	400	NA
W-30A	Fluorene	14	80	400	NA
W-10AR2	Phenanthrene	4.7	NA	NA	NA
W-30A	Phenanthrene	4.7	NA	NA	NA
W-10AR2	Phenol	0.71 J	400	2000	NA
W-10AR2	Pyrene	1.2	50	250	NA
W-30A	Pyrene	1.2	50	250	NA

Table 5-2
Summary of Detected Constituents
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8260C					
W-10AR2	1,2,4-Trimethylbenzene	9	96*	480*	NA
W-30A	1,2,4-Trimethylbenzene	1.1	96*	480*	NA
W-10AR2	Benzene	15	0.5	5	5
W-30A	Benzene	1.8	0.5	5	5
W-10AR2	Ethylbenzene	21	140	700	700
W-30A	Ethylbenzene	4.5	140	700	700
W-10AR2	Naphthalene	6.3	10	100	NA
W-30A	Naphthalene	10	10	100	NA
W-10AR2	Toluene	1	160	800	1000
W-10AR2	Xylene, Meta & Para	2.6	400**	2000**	10000**
W-30A	Xylene, Meta & Para	0.9 J	400**	2000**	10000**
W-10AR2	Xylene, Ortho	16	400**	2000**	10000**
W-30A	Xylene, Ortho	1.4	400**	2000**	10000**
8290A					
W-04AR2	1,2,3,4,6,7,8-HPCDD	0.000055	NA	NA	NA
W-06A	1,2,3,4,6,7,8-HPCDD	0.0000054 J	NA	NA	NA
W-06C	1,2,3,4,6,7,8-HPCDD	0.0000041 J	NA	NA	NA
W-10AR2	1,2,3,4,6,7,8-HPCDD	0.00002 J	NA	NA	NA
W-12A	1,2,3,4,6,7,8-HPCDD	0.000047 J	NA	NA	NA
W-12CR	1,2,3,4,6,7,8-HPCDD	0.0000048 J	NA	NA	NA
W-28C	1,2,3,4,6,7,8-HPCDD	0.00001 J	NA	NA	NA
W-28C DUP	1,2,3,4,6,7,8-HPCDD	0.0000079 J	NA	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDD	0.00017	NA	NA	NA
W-30C	1,2,3,4,6,7,8-HPCDD	0.000042 J	NA	NA	NA
W-04AR2	1,2,3,4,6,7,8-HPCDF	0.0000064 J	NA	NA	NA
W-10AR2	1,2,3,4,6,7,8-HPCDF	0.0000035 J	NA	NA	NA
W-12A	1,2,3,4,6,7,8-HPCDF	0.000011 J	NA	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDF	0.000046 J	NA	NA	NA
W-30C	1,2,3,4,6,7,8-HPCDF	0.0000074 J	NA	NA	NA
W-06C	1,2,3,4,7,8,9-HPCDF	0.0000004 JI	NA	NA	NA
W-12A	1,2,3,4,7,8,9-HPCDF	0.0000022 JI	NA	NA	NA
W-30A	1,2,3,4,7,8,9-HPCDF	0.0000047 J	NA	NA	NA
W-30C	1,2,3,4,7,8,9-HPCDF	0.0000023 JI	NA	NA	NA
W-04AR2	1,2,3,4,7,8-HXCDF	0.00000092 JI	NA	NA	NA
W-12A	1,2,3,4,7,8-HXCDF	0.0000067 J	NA	NA	NA
W-30A	1,2,3,4,7,8-HXCDF	0.0000064 J	NA	NA	NA
W-30C	1,2,3,4,7,8-HXCDF	0.0000011 J	NA	NA	NA
W-04AR2	1,2,3,6,7,8-HXCDD	0.0000016 JI	NA	NA	NA
W-10AR2	1,2,3,6,7,8-HXCDD	0.00000066 JI	NA	NA	NA
W-12A	1,2,3,6,7,8-HXCDD	0.0000047 JI	NA	NA	NA
W-28C	1,2,3,6,7,8-HXCDD	0.00000057 JI	NA	NA	NA
W-30A	1,2,3,6,7,8-HXCDD	0.0000047 J	NA	NA	NA
W-04AR2	1,2,3,6,7,8-HXCDF	0.0000012 J	NA	NA	NA
W-10AR2	1,2,3,6,7,8-HXCDF	0.0000015 JI	NA	NA	NA
W-12A	1,2,3,6,7,8-HXCDF	0.0000038 JI	NA	NA	NA
W-30A	1,2,3,6,7,8-HXCDF	0.000012 J	NA	NA	NA
W-30C	1,2,3,6,7,8-HXCDF	0.0000018 JI	NA	NA	NA
W-12A	1,2,3,7,8,9-HXCDD	0.0000017 J	NA	NA	NA

Table 5-2
Summary of Detected Constituents
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
W-12CR	1,2,3,7,8,9-HXCDD	0.0000003 J	NA	NA	NA
W-30C	1,2,3,7,8,9-HXCDD	0.0000012 J	NA	NA	NA
W-28C DUP	1,2,3,7,8-PECDD	0.00000048 JI	NA	NA	NA
W-30A	1,2,3,7,8-PECDD	0.00000034 JI	NA	NA	NA
W-12A	1,2,3,7,8-PECDF	0.00000088 J	NA	NA	NA
W-30A	1,2,3,7,8-PECDF	0.00000084 J	NA	NA	NA
W-12A	2,3,4,6,7,8-HXCDF	0.0000013 JI	NA	NA	NA
W-30C	2,3,4,6,7,8-HXCDF	0.0000011 JI	NA	NA	NA
W-12A	2,3,4,7,8-PECDF	0.00000097 JI	NA	NA	NA
W-30A	2,3,4,7,8-PECDF	0.00000098 J	NA	NA	NA
W-12A	2,3,7,8-TCDF	0.0000005 J	NA	NA	NA
W-12CR	2,3,7,8-TCDF	0.000000083 JI	NA	NA	NA
W-30A	2,3,7,8-TCDF	0.00000027 J	NA	NA	NA
W-04AR2	OCDD	0.00066	NA	NA	NA
W-06A	OCDD	0.000059 J	NA	NA	NA
W-06C	OCDD	0.000048 J	NA	NA	NA
W-10AR2	OCDD	0.00017	NA	NA	NA
W-12A	OCDD	0.00023	NA	NA	NA
W-12CR	OCDD	0.000059 J	NA	NA	NA
W-28C	OCDD	0.000093 J	NA	NA	NA
W-28C DUP	OCDD	0.000081 J	NA	NA	NA
W-30A	OCDD	0.0021	NA	NA	NA
W-30C	OCDD	0.00014	NA	NA	NA
W-04AR2	OCDF	0.000029 J	NA	NA	NA
W-10AR2	OCDF	0.000014 J	NA	NA	NA
W-12A	OCDF	0.000024 J	NA	NA	NA
W-30A	OCDF	0.00017	NA	NA	NA
W-30C	OCDF	0.000016 J	NA	NA	NA
W-04AR2	Total HPCDD	0.0003	NA	NA	NA
W-06A	Total HPCDD	0.000014 JI	NA	NA	NA
W-06C	Total HPCDD	0.000014 J	NA	NA	NA
W-10AR2	Total HPCDD	0.000065	NA	NA	NA
W-12A	Total HPCDD	0.000084	NA	NA	NA
W-12CR	Total HPCDD	0.000017 J	NA	NA	NA
W-28C	Total HPCDD	0.000046 J	NA	NA	NA
W-28C DUP	Total HPCDD	0.000034 J	NA	NA	NA
W-30A	Total HPCDD	0.00043	NA	NA	NA
W-30C	Total HPCDD	0.000071	NA	NA	NA
W-04AR2	Total HPCDF	0.000023 J	NA	NA	NA
W-06A	Total HPCDF	0.0000033 JI	NA	NA	NA
W-06C	Total HPCDF	0.0000027 JI	NA	NA	NA
W-10AR2	Total HPCDF	0.000012 J	NA	NA	NA
W-12A	Total HPCDF	0.000037 JI	NA	NA	NA
W-28C	Total HPCDF	0.0000025 JI	NA	NA	NA
W-28C DUP	Total HPCDF	0.000003 JI	NA	NA	NA
W-30A	Total HPCDF	0.00018 I	NA	NA	NA
W-30C	Total HPCDF	0.000032 JI	NA	NA	NA
W-04AR2	Total HXCDD	0.000025 JI	NA	NA	NA
W-12A	Total HXCDD	0.000017 JI	NA	NA	NA
W-30A	Total HXCDD	0.00003 JI	NA	NA	NA
W-30C	Total HXCDD	0.000013 JI	NA	NA	NA
W-04AR2	Total HXCDF	0.000025 JI	NA	NA	NA

Table 5-2
Summary of Detected Constituents
Wisconsin Long-Term Care License Renewal Application
Closed RCRA-Regulated Surface Impoundments
Former Koppers Inc. Wood Treating Facility, Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
W-10AR2	Total HXCDF	0.000022 JI	NA	NA	NA
W-12A	Total HXCDF	0.000073 I	NA	NA	NA
W-12CR	Total HXCDF	0.0000022 JI	NA	NA	NA
W-28C	Total HXCDF	0.0000021 J	NA	NA	NA
W-28C DUP	Total HXCDF	0.000014 JI	NA	NA	NA
W-30A	Total HXCDF	0.00013 I	NA	NA	NA
W-30C	Total HXCDF	0.00004 JI	NA	NA	NA
W-12A	Total PECDD	0.00000081 JI	NA	NA	NA
W-12CR	Total PECDD	0.00000027 J	NA	NA	NA
W-28C DUP	Total PECDD	0.00000048 JI	NA	NA	NA
W-30A	Total PECDD	0.0000013 JI	NA	NA	NA
W-04AR2	Total PECDF	0.0000046 JI	NA	NA	NA
W-10AR2	Total PECDF	0.000017 JI	NA	NA	NA
W-12A	Total PECDF	0.000051 I	NA	NA	NA
W-12CR	Total PECDF	0.00000078 JI	NA	NA	NA
W-30A	Total PECDF	0.000096 I	NA	NA	NA
W-30C	Total PECDF	0.000014 JI	NA	NA	NA
W-06C	Total TCDD	0.00000026 J	NA	NA	NA
W-28C DUP	Total TCDD	0.00000069 JI	NA	NA	NA
W-30A	Total TCDD	0.00000012 JI	NA	NA	NA
W-04AR2	Total TCDF	0.00000056 J	NA	NA	NA
W-10AR2	Total TCDF	0.0000063 JI	NA	NA	NA
W-12A	Total TCDF	0.000036 I	NA	NA	NA
W-28C	Total TCDF	0.00000022 JI	NA	NA	NA
W-30A	Total TCDF	0.000018 I	NA	NA	NA
W-30C	Total TCDF	0.000067 I	NA	NA	NA
W-04AR2	2,3,7,8-TCDD TEQ	1.19E-06	0.000003	0.00003	0.00003
W-06A	2,3,7,8-TCDD TEQ	7.17E-08	0.000003	0.00003	0.00003
W-06C	2,3,7,8-TCDD TEQ	5.94E-08	0.000003	0.00003	0.00003
W-10AR2	2,3,7,8-TCDD TEQ	5.02E-07	0.000003	0.00003	0.00003
W-12A	2,3,7,8-TCDD TEQ	2.87E-06	0.000003	0.00003	0.00003
W-12CR	2,3,7,8-TCDD TEQ	1.04E-07	0.000003	0.00003	0.00003
W-28C	2,3,7,8-TCDD TEQ	1.85E-07	0.000003	0.00003	0.00003
W-28C DUP	2,3,7,8-TCDD TEQ	5.83E-07	0.000003	0.00003	0.00003
W-30A	2,3,7,8-TCDD TEQ	5.88E-06	0.000003	0.00003	0.00003
W-30C	2,3,7,8-TCDD TEQ	1.08E-06	0.000003	0.00003	0.00003

Notes:

- Indicates the detected value exceeds one or more specified standards.

PAL - Preventative Action Limit

MCL - Maximum Contaminant Levels for drinking water

ES - Enforcement Standard

NA - Not available

J - Estimated

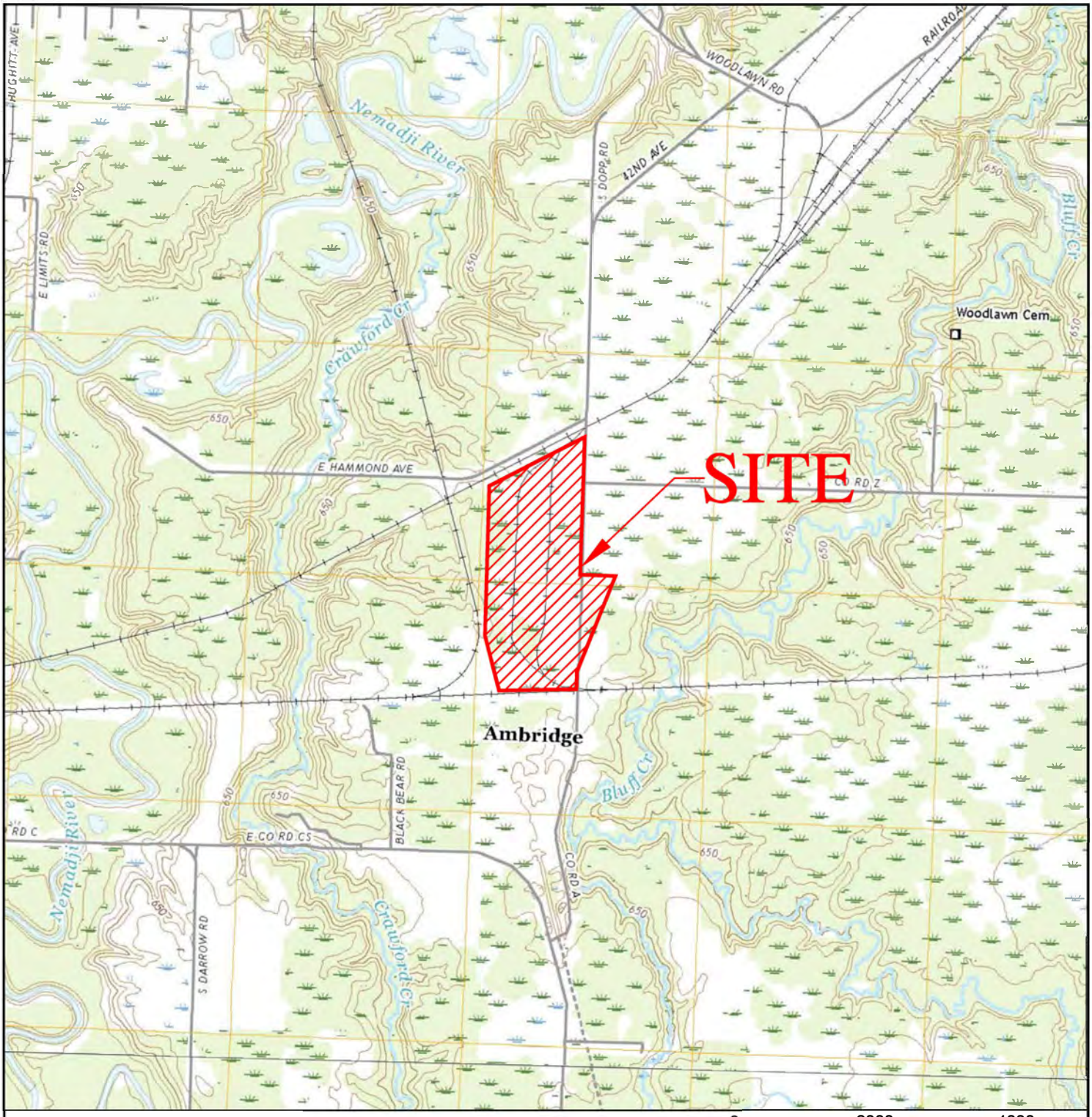
I - Value is estimated maximum possible concentration.

* - Total trimethylbenzene standard

** - Total xylene standard

At the request of WDNR, 2,3,7,8-TCDD TEQ values are compared to the congener-specific PAL and ES for 2,3,7,8-TCDD.

FIGURES



WISCONSIN

QUADRANGLE LOCATION

N

REFERENCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLES
SUPERIOR, WISCONSIN–MINNESOTA – 2018
SUNNYSIDE, WISCONSIN – 2018

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: SCC	DATE: 05/18/21	FIELD & TECHNICAL SERVICES, LLC. 200 THIRD AVENUE CARNEGIE, PA 15106
CHKD: RMW	DATE: 05/18/21	
APPD: DRF	DATE: 05/18/21	
SCALE: AS SHOWN		
ISSUE DATE:		

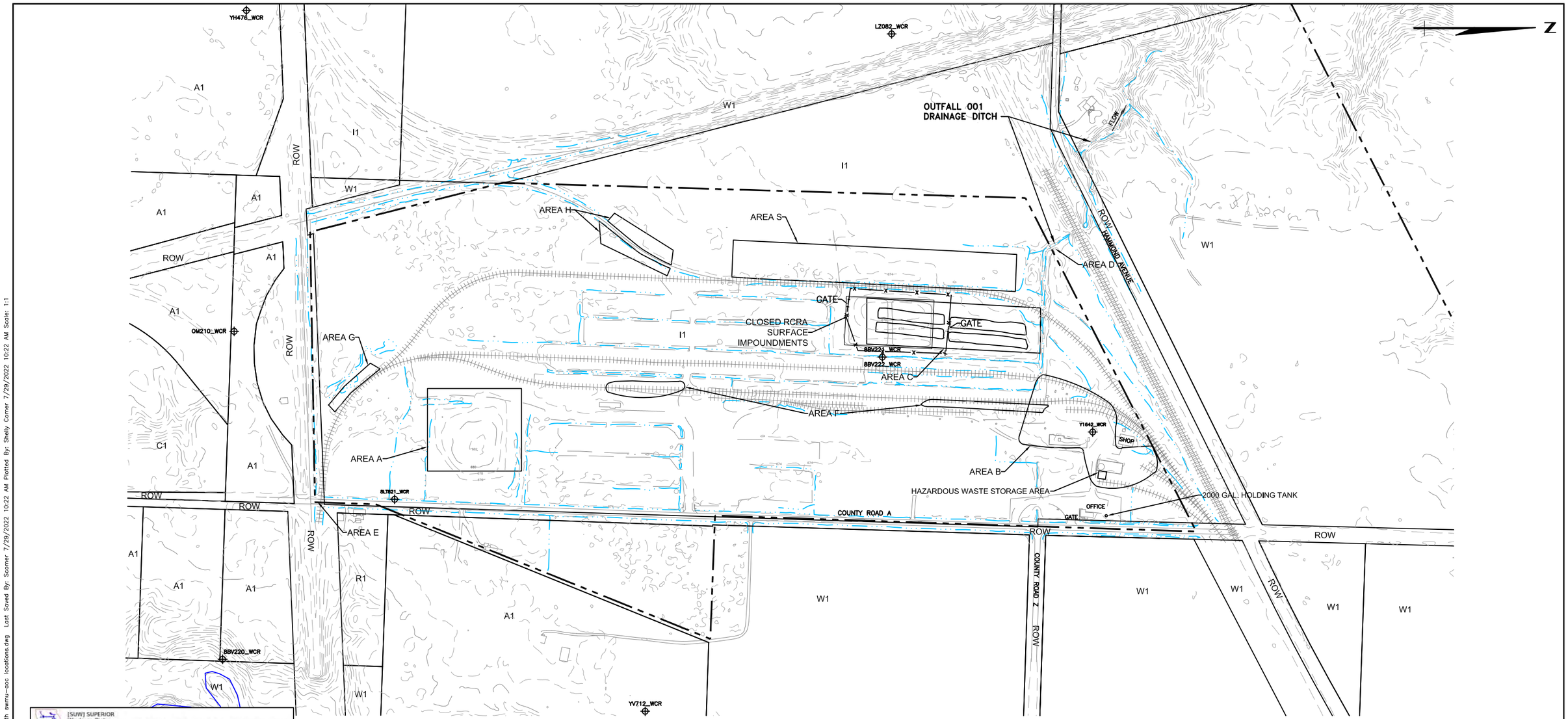
FTS

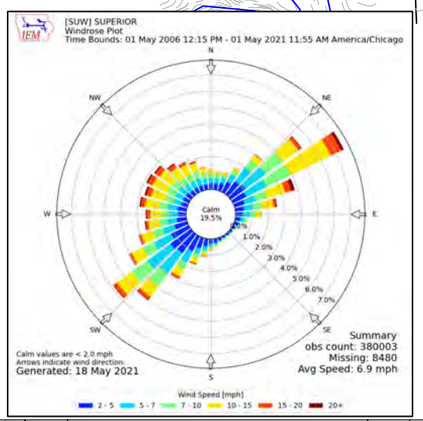
FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

SITE LOCATION MAP

PROJECT NO: T0055621–02
DRAWING NUMBER
FIGURE 2–1

FILE: Q:\PROJECTS\BEAZER PROJECTS\SUPERIOR\CADD\PERMIT RENEWAL\FIGURE 2–1 SITE LOCATION MAP.DWG





Area	Associated Former SWMU's	Potential Source Area
A	1	Landfill
B	2, 3, 4, 5, 6 and 7	Treatment Area
C	8 and 9	Surface Impoundment
D	10	Outfall No. 001
E	11	Outfall No. 004
F	12, 13, and 14	Drip Track
G	-	Pentachlorophenol Straw Bales
H	-	Lead Track Landfill
S	-	Spray Field

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- ROAD
- INTERMITTENT STREAM
- DITCH FOR RUN–OFF
- RAILROAD TRACKS
- FENCE
- CONTOURS
- Y1642_WCR — POTABLE WELL (APPROX.)

LAND USE CLASSIFICATION

A1 – AGRICULTURE
I1 – INDUSTRIAL
ROW – RIGHT–OF–WAY
R1 – RESIDENTIAL 1
W1 – RESOURCE CONSERVATION

0 400 800 FEET

NOTES:

1. ACCORDING TO THE WISCONSIN DNR, NO INJECTION OR WITHDRAWAL WELLS EXIST ON SITE OR WITHIN 1/4 MILE OF THE SITE BOUNDARY.
2. ACCORDING TO THE DOUGLAS COUNTY PLANNING AND ZONING DEPARTMENT THE SANITARY AND STORM SEWER LINES ARE UNAVAILABLE AS THEY WERE NOT SURVEYED PRIOR TO PERMITTING AND INSTALLING.

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE:
1. WISCONSIN STATE PLANE NORTH (NAD 83) COORDINATE SYSTEM.
2. POTABLE WELL INFORMATION OBTAINED FROM WISCONSIN DNR WEBSITE https://dnr.wisconsin.gov/topic/Groundwater/Data.html#wellreports

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: SCC	DATE: 05/18/21	FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106	
CHKD: RMW	DATE: 05/18/21		
APPD: DRF	DATE: 05/18/21		
SCALE: AS SHOWN			
ISSUE DATE:			

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

GENERAL SITE ARRANGEMENT WITH SWMU/AOC LOCATIONS

PROJECT NO:T0055621–02
DRAWING NUMBER
FIGURE 2–2

N

LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-19A — A ZONE GROUNDWATER MONITORING WELL
- W-26B — B ZONE GROUNDWATER MONITORING WELL
- W-32C — C ZONE GROUNDWATER MONITORING WELL
- W-33D — BEDROCK ZONE GROUNDWATER MONITORING WELL
- W-23A — ABANDONED WELL
- SAMPLED WELL LOCATION

OUTFALL 001 DRAINAGE DITCH
CLOSED SURFACE IMPOUNDMENTS (AREA C)
FLOW
OUTFALL 001 (AREA D)
HAMMOND AVENUE
FORMER LEAD TRACK LANDFILL (AREA H)
SPRAY IRRIGATION FIELD
W-05CR
W-02C
W-31C
W-09C
W-12A
W-12CR
NON RCRA REGULATED CLOSED SURFACE IMPOUNDMENTS
W-29A
DESIGN MANAGEMENT ZONE
W-10AR2
W-30A
W-30C
W-08C
W-01C
STRAW BALE (AREA G)
W-38A
W-39A
W-04C
CLOSED RCRA SURFACE IMPOUNDMENTS
W-04B
W-04AR2
W-08A
W-21B
W-21A
W-06A
W-06C
W-07C
W-26B
W-26A
W-32C
W-25A
W-37A
W-24A
W-11A
W-03C
W-25B
W-36A
W-40A
W-22A
W-28A
W-28C
DRIP TRACK AREA (AREA F)
W-23A
W-17A
SHOP
W-33D
FORMER CONTAINER STORAGE FACILITY
FORMER, UNLINED LANDFILL/LANDFARM (AREA A)
W-13A
W-14A
W-14B
TREATMENT AREA (AREA B)
W-34D
W-20AR
W-16A
W-16AR
CONCRETE BERM
W-19C
W-19A
OFFICE
GATE
W-18A
W-18C
W-18D (1)
W-35A
COUNTY ROAD A
OUTFALL 004 (AREA E)
COUNTY ROAD Z

0 300 600
FEET

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: SCC	DATE: 05/18/21	FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106	
CHKD: RMW	DATE: 05/18/21		
APPD: DRF	DATE: 05/18/21		
SCALE: AS SHOWN			
ISSUE DATE:			

FTS

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

GROUNDWATER SAMPLING LOCATIONS

PROJECT NO: T0055621-02
DRAWING NUMBER
FIGURE 2-3

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
(1) W-18D IS SAMPLED VOLUNTARILY.

q:\projects\beazer projects\superior\cadd\permit renewal\figure 2-3 groundwater sampling locations.dwg Last Saved By: Scomer 6/9/2021 11:19 AM Plotted By: Shelly Comer 6/9/2021 11:20 AM Scale: 1:1

N

LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-12A 674.48 — A ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 672 — GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)

OUTFALL 001 DRAINAGE DITCH
CLOSED SURFACE IMPOUNDMENTS (AREA C)
FLOW
OUTFALL 001 (AREA D)
HAMMOND AVENUE
FORMER LEAD TRACK LANDFILL (AREA H)
SPRAY IRRIGATION FIELD
DESIGN MANAGEMENT ZONE
CLOSED RCRA SURFACE IMPOUNDMENTS
STRAW BALES (AREA G)
FORMER, UNLINED LANDFILL/LANDFARM (AREA A)
DRIP TRACK AREA (AREA F)
TREATMENT AREA (AREA B)
SHOP
FORMER CONTAINER STORAGE FACILITY
CONCRETE BERM
OFFICE
GATE
COUNTY ROAD A
COUNTY ROAD Z
OUTFALL 004 (AREA E)

W-39A 673.28
W-38A 674.02
W-37A 673.92
W-40A 673.32
W-25A 673.56
W-36A 674.11
W-14A 674.35
W-29A 672.31
W-04AR2 672.79
W-11A 672.02
W-10AR2 673.30
W-12A 674.48
W-30A 673.00
W-06A 670.49
W-08A 671.35
W-21A 669.83
W-26A 670.70
W-20AR 669.45
W-16AR 671.02
W-19A 671.59
W-35A 671.79

674 673 672 671 670

0 300 600 FEET

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: KLC	DATE: 05/18/21	FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106	
CHKD: RMW	DATE: 05/18/21		
APPD: DRF	DATE: 05/18/21		
SCALE: AS SHOWN			
ISSUE DATE:			

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

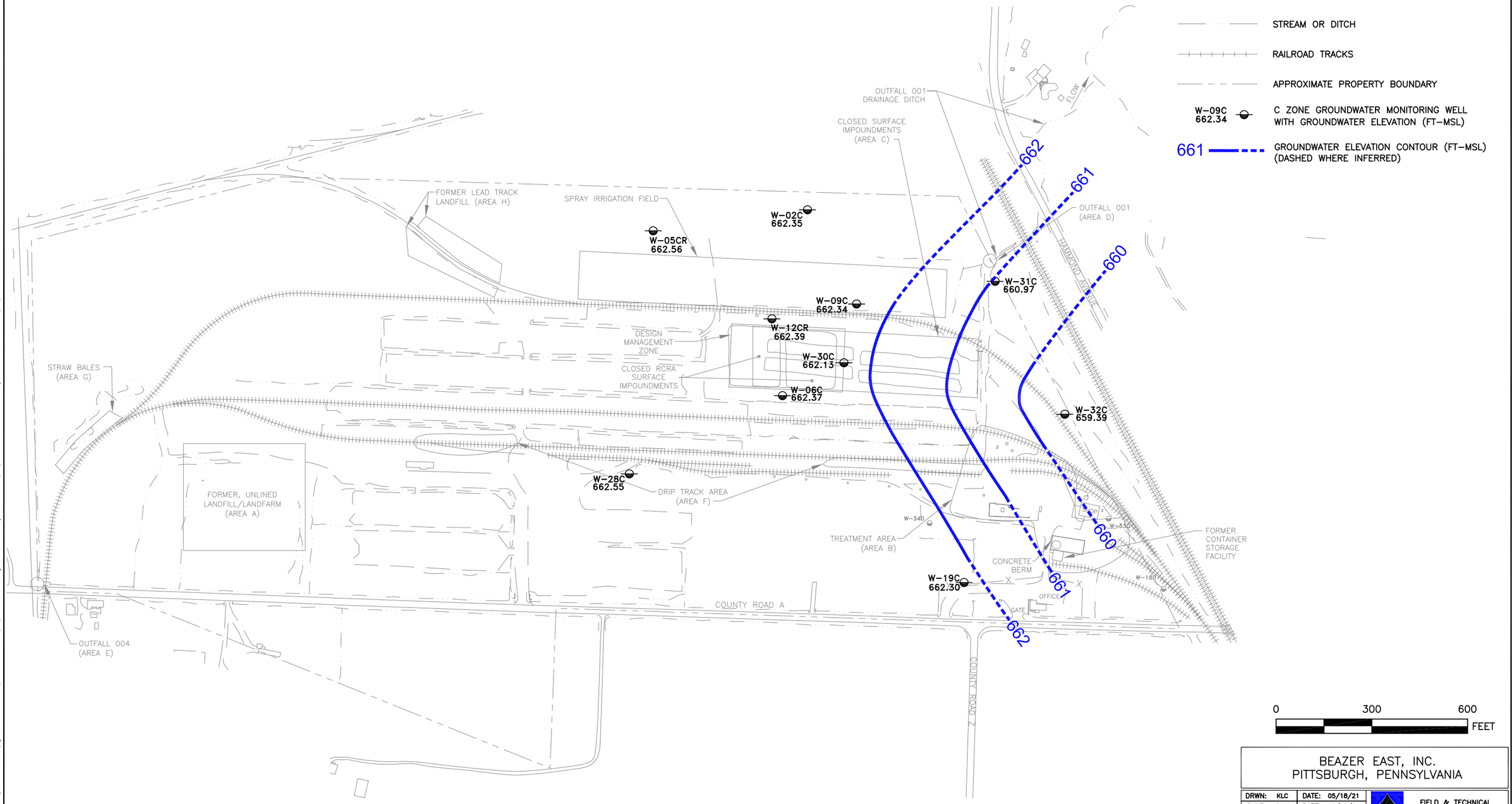
A-ZONE POTENTIOMETRIC CONTOUR MAP (APRIL 2021)

PROJECT NO:T0055621-02
DRAWING NUMBER
FIGURE 2-4

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
ALL LOCATIONS ARE APPROXIMATE.

q:\projects\beazer projects\superior\cadd\permit renewal\figure 2-4 a-zone potentiometric map april 2021.dwg Last Saved By: Scomer 5/18/2021 7:24 AM Plotted By: Shelly Comer 5/18/2021 7:29 AM Scale: 1:1



REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
ALL LOCATIONS ARE APPROXIMATE.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN:	KLC	DATE:	05/18/21
CHKD:	RMW	DATE:	05/18/21
APPD:	DRF	DATE:	05/18/21
SCALE:	AS SHOWN		
ISSUE DATE:			

FTS
FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

C-ZONE POTENTIOMETRIC CONTOUR MAP
APRIL 27, 2021

PROJECT NO:T0055621-02
DRAWING NUMBER
FIGURE 2-5

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 15. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided by Douglas County. The aerial photography was acquired in the spring of 2006 to create 1":200' scale digital orthophotos with 1-foot ground resolution.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0089D

FIRM

FLOOD INSURANCE RATE MAP

DOUGLAS COUNTY, WISCONSIN
AND INCORPORATED AREAS

PANEL 89 95 OF 895
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

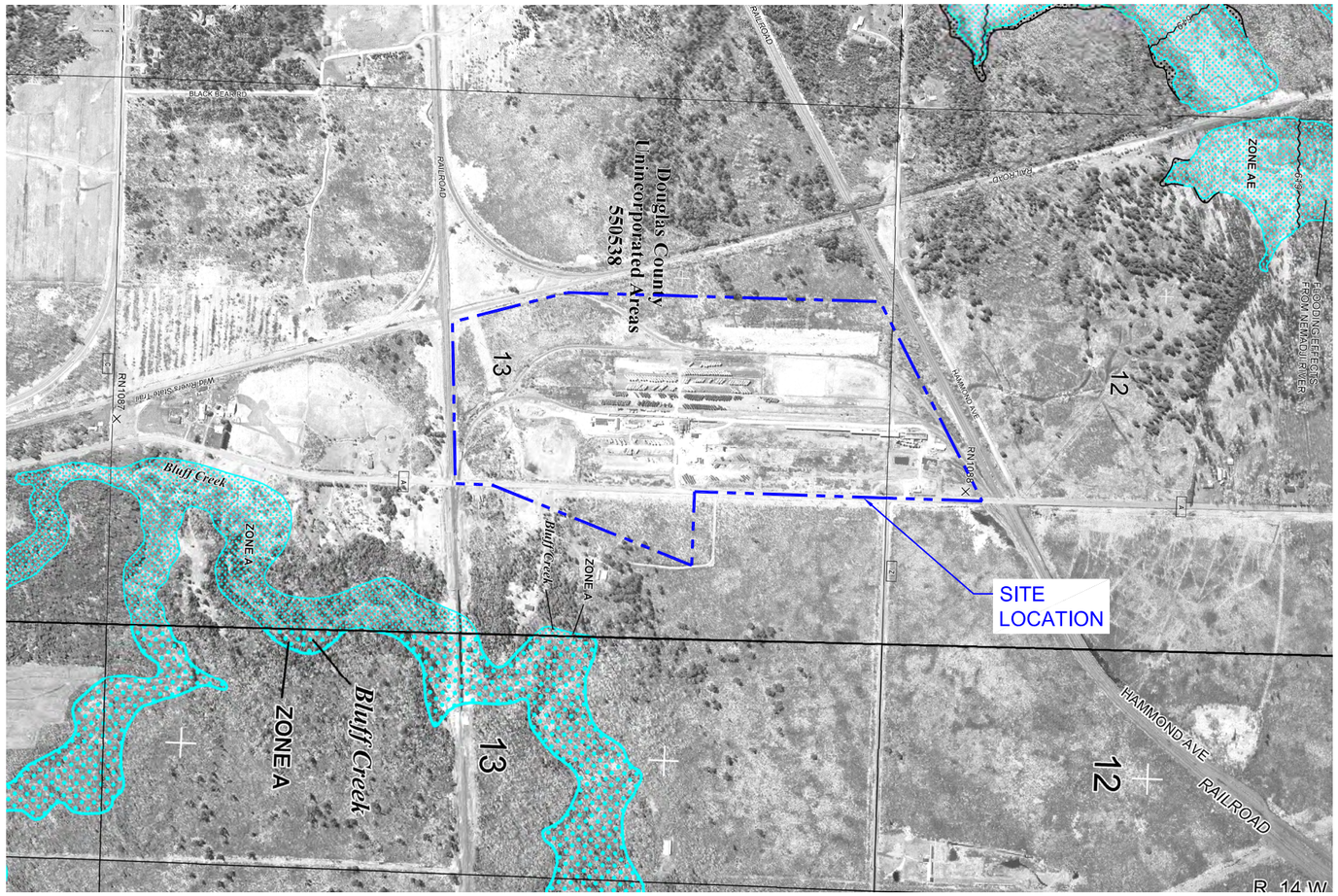
COMMUNITY	NUMBER	PANEL	SUFFIX
DOUGLAS COUNTY	550538	0089	D
DOUGLAS COUNTY	550538	0095	D
SUPERIOR, CITY OF	550116	0095	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
55031C0089D
55031C0095D

EFFECTIVE DATE
FEBRUARY 2, 2012

Federal Emergency Management Agency



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 (EL 987) — Base Flood Elevation line and value; elevation in feet* / Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT — 5000-foot ticks: Wisconsin State Plane North Zone (FIPS Zone 4801), Lambert Conformal Conic projection
- 4989000 N — 1000-meter Universal Transverse Mercator grid values, zone 15
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
February 2, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: SCC	DATE: 05/18/21	FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 05/18/21	200 THIRD AVENUE
APPD: DRF	DATE: 05/18/21	CARNEGIE, PA 15106
SCALE: AS SHOWN		
ISSUE DATE:		

FTS

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

FLOODPLAIN MAP

PROJECT NO:T0055621-02
DRAWING NUMBER
FIGURE 2-6

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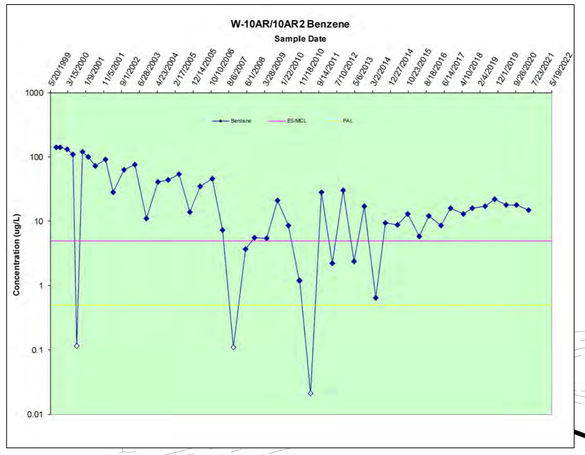
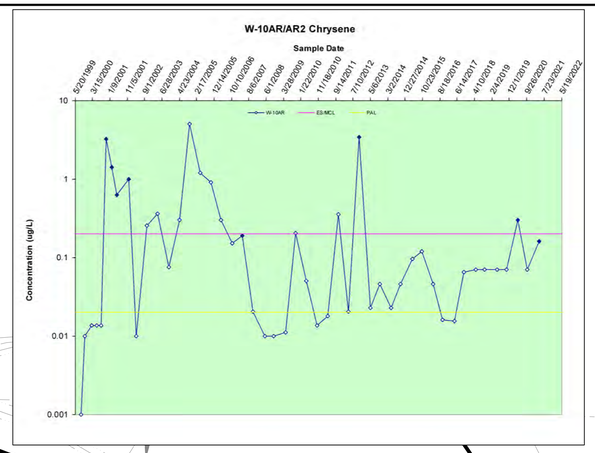
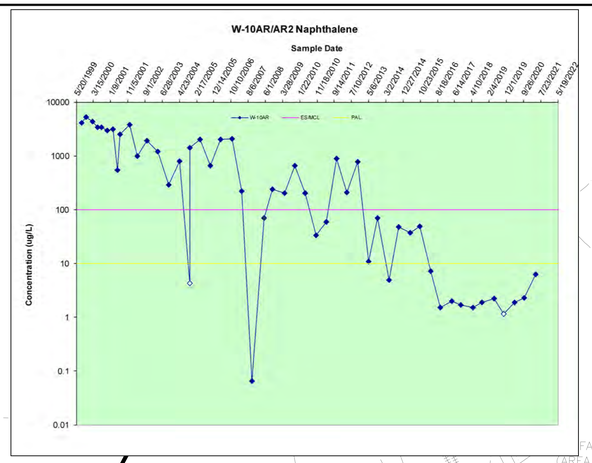
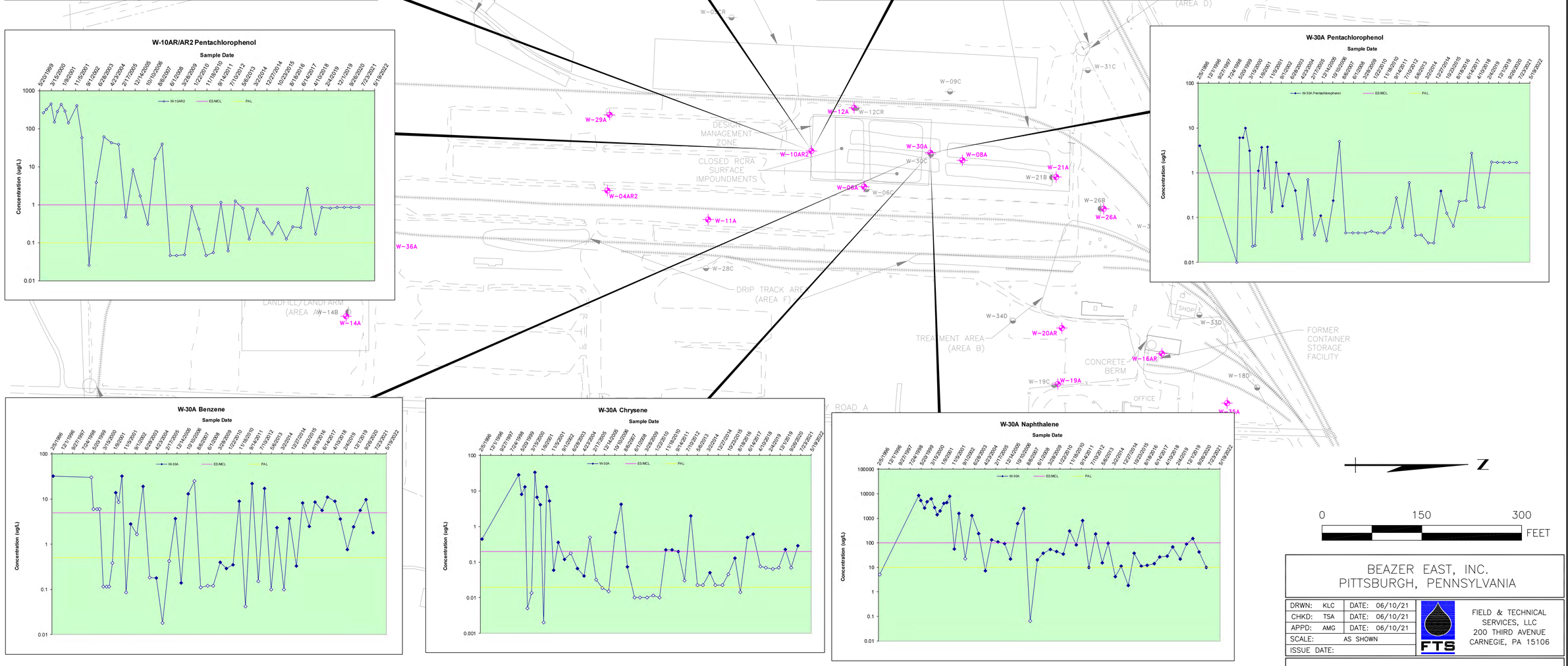








LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-08A — A ZONE GROUNDWATER MONITORING WELL
- INDICATES ANALYTICAL RESULT WAS NON DETECT. VALUE POSTED REPRESENTS ONE-HALF THE DETECTION LIMIT.

N

0 150 300 FEET

REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
ALL LOCATIONS ARE APPROXIMATE.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: KLC	DATE: 06/10/21	FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106	
CHKD: TSA	DATE: 06/10/21		
APPD: AMG	DATE: 06/10/21		
SCALE: AS SHOWN			
ISSUE DATE:			

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

A-ZONE PARAMETER CONCENTRATION TRENDS OF BENZENE, CHRYSENE, NAPHTHALENE, PENTACHLOROPHENOL

PROJECT NO: T0055621-02
DRAWING NUMBER
FIGURE 5-1

q:\projects\beazer projects\superior\cadd\permit renewal\figure 5-1 a-zone concentration map.dwg Last Saved By: Scomer 6/10/2021 11:47 AM Plotted By: Shely Comer 6/10/2021 12:01 PM Scale: 1:1

APPENDIX A

Part A Permit Application

United States Environmental Protection Agency
RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal (Select only one.)

☐	Obtaining or updating an EPA ID number for on-going regulated activities (Items 10-17 below) that will continue for a period of time.
☐	Submitting as a component of the Hazardous Waste Report for _____ (Reporting Year)
	☐ Site was a TSD facility, a reverse distributor, and/or generator of ≥ 1,000 kg of non-acute hazardous waste, > 1 kg of acute hazardous waste, or > 100 kg of acute hazardous waste spill cleanup in **one or more months of the reporting year** (or State equivalent LQG regulations)
☐	Notifying that regulated activity is no longer occurring at this Site
☐	Obtaining or updating an EPA ID number for conducting Electronic Manifest Broker activities
☑	Submitting a new or revised Part A (permit) Form

2. Site EPA ID Number

W	I	D	0	0	6	1	7	9	4	9	3

3. Site Name

Koppers Industries Inc. / Beazer East, Inc. - Superior, WI

4. Site Location Address

Street Address	**3185 County Road A**				
City, Town, or Village	**Superior**			County	**Douglas**
State	**WI**	Country	**USA**	Zip Code	**54880-8229**
Latitude	**46 38 47.91**	Longitude	**92 04 10.70**	☐ Use Lat/Long as Primary Address	

5. Site Mailing Address ☐ Same as Location Street Address

Street Address	**600 River Avenue, Suite 200**				
City, Town, or Village	**Pittsburgh**				
State	**PA**	Country	**USA**	Zip Code	**15212-5994**

6. Site Land Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

7. North American Industry Classification System (NAICS) Code(s) for the Site (at least 5-digit codes)

A. (Primary) **321114**	C.
B.	D.

8. Site Contact Information

☐ Same as Location Address

First Name **Jane**	MI	Last Name **Patarcity**
Title **Senior Environmental Manager**		
Street Address **600 River Avenue, Suite 200**		
City, Town, or Village **Pittsburgh**		
State **PA**	Country **USA**	Zip Code **15212-5994**
Email **Jane.Patarcity@TRMI.Biz**		
Phone **(412) 208-8813**	Ext	Fax

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner

☐ Same as Location Address

Full Name **TRP Properties**	Date Became Owner (mm/dd/yyyy) **9/7/2012**

Owner Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

Street Address **12930 I Street**		
City, Town, or Village **Omaha**		
State **Nebraska**	Country **USA**	Zip Code **68137**
Email		
Phone	Ext	Fax
Comments		

B. Name of Site's Legal Operator

☐ Same as Location Address

Full Name **Beazer East, Inc.**	Date Became Operator (mm/dd/yyyy) **12/1/1988**

Operator Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

Street Address **600 River Avenue, Suite 200**		
City, Town, or Village **Pittsburgh**		
State **PA**	Country **USA**	Zip Code **15212-5994**
Email **Jane.Patarcity@TRMI.Biz**		
Phone **(412) 208-8813**	Ext	Fax
Comments		

10. Type of Regulated Waste Activity (at your site)

Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities

☑ Y ☐ N	1. Generator of Hazardous Waste—If "Yes", mark only one of the following—a, b, c	
☐	a. LQG	-Generates, in any calendar month, 1,000 kg/mo (2,200 lb/mo) or more of non-acute hazardous waste (includes quantities imported by importer site); or - Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lb/mo) of acute hazardous waste; or - Generates, in any calendar month or accumulates at any time, more than 100 kg/mo (220 lb/mo) of acute hazardous spill cleanup material.
☐	b. SQG	100 to 1,000 kg/mo (220-2,200 lb/mo) of non-acute hazardous waste and no more than 1 kg (2.2 lb) of acute hazardous waste and no more than 100 kg (220 lb) of any acute hazardous spill cleanup material.
☑	c. VSQG	Less than or equal to 100 kg/mo (220 lb/mo) of non-acute hazardous waste.
☐ Y ☑ N	2. Short-Term Generator (generates from a short-term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section. *Note: If "Yes", you MUST indicate that you are a Generator of Hazardous Waste in Item 10.A.1 above.*	
☐ Y ☑ N	3. Treater, Storer or Disposer of Hazardous Waste—Note: Part B of a hazardous waste permit is required for these activities.	
☐ Y ☑ N	4. Receives Hazardous Waste from Off-site	
☐ Y ☑ N	5 Recycler of Hazardous Waste	
☐	a. Recycler who stores prior to recycling	
☐	b. Recycler who does not store prior to recycling	
☐ Y ☑ N	6. Exempt Boiler and/or Industrial Furnace—If "Yes", mark all that apply.	
☐	a. Small Quantity On-site Burner Exemption	
☐	b. Smelting, Melting, and Refining Furnace Exemption	

B. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g. D001, D003, F007, U112). Use an additional page if more spaces are needed.

F032						
F034						

C. Waste Codes for State Regulated (non-Federal) Hazardous Wastes. Please list the waste codes of the State hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed.

11. Additional Regulated Waste Activities (NOTE: Refer to your State regulations to determine if a separate permit is required.)

A. Other Waste Activities

☐ Y ☑ N	1. Transporter of Hazardous Waste—If "Yes", mark all that apply.
☐	a. Transporter
☐	b. Transfer Facility (at your site)
☐ Y ☑ N	2. Underground Injection Control
☐ Y ☑ N	3. United States Importer of Hazardous Waste
☐ Y ☑ N	4. Recognized Trader—If "Yes", mark all that apply.
☐	a. Importer
☐	b. Exporter
☐ Y ☑ N	5. Importer/Exporter of Spent Lead-Acid Batteries (SLABs) under 40 CFR 266 Subpart G—If "Yes", mark all that apply.
☐	a. Importer
☐	b. Exporter

B. Universal Waste Activities

☐ Y ☑ N	1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) - If "Yes" mark all that apply. Note: Refer to your State regulations to determine what is regulated.
☐	a. Batteries
☐	b. Pesticides
☐	c. Mercury containing equipment
☐	d. Lamps
☐	e. Aerosol Cans
☐	f. Other (specify) _____
☐	g. Other (specify) _____
☐ Y ☑ N	2. Destination Facility for Universal Waste Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

☐ Y ☑ N	1. Used Oil Transporter—If "Yes", mark all that apply.
☐	a. Transporter
☐	b. Transfer Facility (at your site)
☐ Y ☑ N	2. Used Oil Processor and/or Re-refiner—If "Yes", mark all that apply.
☐	a. Processor
☐	b. Re-refiner
☐ Y ☑ N	3. Off-Specification Used Oil Burner
☐ Y ☑ N	4. Used Oil Fuel Marketer—If "Yes", mark all that apply.
☐	a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
☐	b. Marketer Who First Claims the Used Oil Meets the Specifications

D. Pharmaceutical Activities

☐ Y ☑ N	1. Operating under 40 CFR Part 266, Subpart P for the management of hazardous waste pharmaceuticals—if "Yes", mark only one. Note: See the item-by-item instructions for definitions of healthcare facility and reverse distributor.
☐	a. Healthcare Facility
☐	b. Reverse Distributor
☐ Y ☑ N	2. Withdrawing from operating under 40 CFR Part 266, Subpart P for the management of hazardous waste pharmaceuticals. Note: You may only withdraw if you are a healthcare facility that is a VSQG for all of your hazardous waste, including hazardous waste pharmaceuticals.

12. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR Part 262, Subpart K.

☐ Y ☑ N	A. Opting into or currently operating under 40 CFR Part 262, Subpart K for the management of hazardous wastes in laboratories— If "Yes", mark all that apply. Note: See the item-by-item instructions for definitions of types of eligible academic entities.
☐	1. College or University
☐	2. Teaching Hospital that is owned by or has a formal written affiliation with a college or university
☐	3. Non-profit Institute that is owned by or has a formal written affiliation with a college or university
☐ Y ☑ N	B. Withdrawing from 40 CFR Part 262, Subpart K for the management of hazardous wastes in laboratories.

13. Episodic Generation

☐ Y ☑ N	Are you an SQG or VSQG generating hazardous waste from a planned or unplanned episodic event, lasting no more than 60 days, that moves you to a higher generator category. If "Yes", you must fill out the Addendum for Episodic Generator.

14. LQG Consolidation of VSQG Hazardous Waste

☐ Y ☑ N	Are you an LQG notifying of consolidating VSQG Hazardous Waste Under the Control of the Same Person pursuant to 40 CFR 262.17(f)? If "Yes", you must fill out the Addendum for LQG Consolidation of VSQG hazardous waste.

15. Notification of LQG Site Closure for a Central Accumulation Area (CAA) (optional) OR Entire Facility (required)

☐ Y ☑ N	LQG Site Closure of a Central Accumulation Area (CAA) or Entire Facility.
	A. ☐ Central Accumulation Area (CAA) or ☐ Entire Facility
	B. Expected closure date: _____ mm/dd/yyyy
	C. Requesting new closure date: _____ mm/dd/yyyy
	D. Date closed : _____ mm/dd/yyyy ☐ 1. In compliance with the closure performance standards 40 CFR 262.17(a)(8) ☐ 2. Not in compliance with the closure performance standards 40 CFR 262.17(a)(8)

16. Notification of Hazardous Secondary Material (HSM) Activity

☐ Y ☑ N	Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 260.30, 40 CFR 261.4(a)(23), (24), (25), or (27)? If "Yes", you must fill out the Addendum to the Site Identification Form for Managing Hazardous Secondary Material.

17. Electronic Manifest Broker

☐ Y ☑ N	Are you notifying as a person, as defined in 40 CFR 260.10, electing to use the EPA electronic manifest system to obtain, complete, and transmit an electronic manifest under a contractual relationship with a hazardous waste generator?

18. Comments (include item number for each comment)

This form is being submitted as part of a renewal application for the Site's existing WDNR Hazardous Waste Facility Operation License (License 03157) for two closed surface impoundments which are regulated as a single closed unit under RCRA. Closure of the RCRA regulated unit occurred between 1988-1989. The completed closure activities were documented in a Construction Documentation Surface Impoundment Closure Report (Keystone, 1989).

Currently no hazardous materials are treated, stored, or disposed within the closed regulated unit.

K001 wastes are no longer generated at the Site, therefore; they are not listed above as wastes handled at the Site in this Part A 10.B. Current waste streams routinely generated at the Site consist of Investigation Derived Waste (IDW) generated as a result of groundwater monitoring (purge water and PPE). All IDW is protectively managed as F032 and F034 waste.

19. Certification I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. **Note: For the RCRA Hazardous Waste Part A permit Application, all owners and operators must sign (see 40 CFR 270.10(b) and 270.11).**

Signature of legal owner, operator or authorized representative 	Date (mm/dd/yyyy) 10/10/22
Printed Name (First, Middle Initial Last) **Michael Slenska**	Title **President / Beazer East, Inc.**
Email **Mike. Slenska@TRMI.Biz**	

Signature of legal owner, operator or authorized representative	Date (mm/dd/yyyy)
Printed Name (First, Middle Initial Last)	Title
Email	

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT PART A FORM

1. Facility Permit Contact

First Name	**Jane**	MI		Last Name	**Patarcity**
Title	**Senior Environmental Manager**				
Email	**Jane.Patarcity@TRMI.Biz**				
Phone	**(412) 208-8813**	Ext		Fax	

2. Facility Permit Contact Mailing Address

Street Address	**600 River Avenue, Suite 200**		
City, Town, or Village	**Pittsburgh**		
State **PA**	Country **USA**	Zip Code	**15212-5994**

3. Facility Existence Date (mm/dd/yyyy)

1928

4. Other Environmental Permits

A. Permit Type	B. Permit Number	C. Description

5. Nature of Business

This form is being submitted as part of a renewal application for the Site's existing WDNR Hazardous Waste Facility Operation License (License 03157) for two closed surface impoundments which are regulated as a single closed unit under RCRA. Closure of the RCRA regulated unit occurred between 1988-1989. The completed closure activities were documented in a Construction Documentation Surface Impoundment Closure Report (Keystone, 1989).

The Site is the location of a former wood treating facility which ceased wood treating operations in 2006. The former process facilities have been dismantled and removed from the Site. The Site is currently used by TRP Properties, LLC (the current property owner) as a railroad tie grinding facility. Koppers Inc. leases portions of the property for storage and transfer of untreated railroad ties.

6. Process Codes and Design Capacities

Line Number		A. Process Code			B. Process Design Capacity (1) Amount	B. Process Design Capacity (2) Unit of Measure	C. Process Total Number of Units	D. Unit Name
0	1	S	0	4	0	Y	1	Closed RCRA regulated unit. See comments.

7. Description of Hazardous Wastes (Enter codes for Items 7.A, 7.C and 7.D(1))

Line No.		A. EPA Hazardous Waste No.				B. Estimated Annual Qty of Waste	C. Unit of Measure	D. Processes (1) Process Codes								D. Processes (2) Process Description (if code is not entered in 7.D1))
0	1	K	0	0	1	0	Y	S	0	4						Closed RCRA-regulated unit.
0	2	F	0	3	2	165	G	S	0	1						Purge water / PPE
0	3	F	0	3	4	165	G	S	0	1						Purge water / PPE
																See comments.

8. Map

Attach to this application a topographical map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all spring, rivers, and other surface water bodies in this map area. See instructions for precise requirements.

9. Facility Drawing

All existing facilities must include a scale drawing of the facility. See instructions for more detail.

10. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, and disposal areas; and sites of future storage, treatment, or disposal areas. See instructions for more detail.

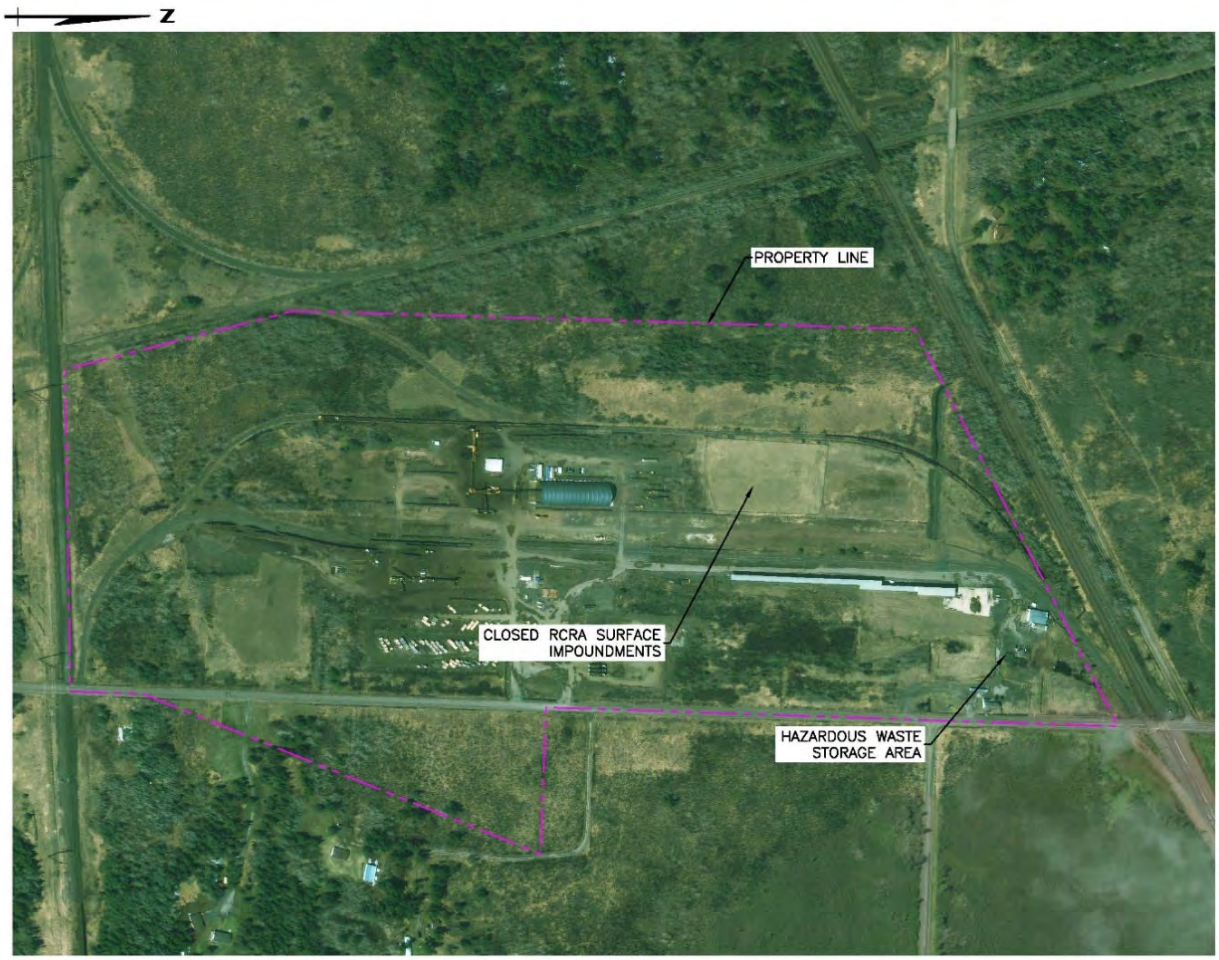
11. Comments

See attached page.

8. Figures 2-1 and 2-2 from the corresponding Part B Permit Renewal Application are attached and display the information required for Item 10.

9. Figure 2-2 from the corresponding Part B Permit Renewal Application is attached.

10. An aerial photograph of the Site including callouts for the closed RCRA-regulated unit and the hazardous waste storage area is provided below.



11. This form is being submitted as part of a renewal application for the Site's existing WDNR Hazardous Waste Facility Operation License (License 03157) for two closed surface impoundments which are regulated as a single closed unit under RCRA. Closure of the RCRA regulated unit occurred between 1988-1989. All K001 material (bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol) was removed from the closed surface impoundments during closure. The completed closure activities were documented in a Construction Documentation Surface Impoundment Closure Report (Keystone, 1989). Currently no hazardous materials are treated, stored, or disposed within the closed regulated unit.

    The Site is the location of a former wood treating facility which ceased wood treating operations in 2006. The former process facilities have been dismantled and removed from the Site. The Site is currently used by TRP

Properties, LLC (the current property owner) as a railroad tie grinding facility. Koppers Inc. leases portions of the property for storage and transfer of untreated railroad ties.

Current routine waste streams at the Site consist of Investigation Derived Waste (IDW) generated as a result groundwater monitoring (purge water and PPE). All IDW is protectively managed as F032 and F034 waste.