



June 16, 2020

(via email)
Ms. Linda Paul
Manager, Legacy Programs
Koppers, Inc.
436 Seventh Avenue
Pittsburg, PA 15219

Subject: Koppers, Inc. - Superior Drip Pad
3185 South County Highway A
Superior, WI
BRRTS ID #: 02-16-585874

Dear Ms. Paul,

The DNR received and reviewed the RCRA Subpart W Drip Pad Closure Demonstration Report (Closure Demonstration Report), prepared by KU Resources, Inc. (KU) and submitted to the Wisconsin Department of Natural Resources (DNR) in January 2019. This report includes sampling results of the concrete drip pad and soil 0-1 foot beneath the concrete drip pad and aggregate base course beneath the drip pad. The DNR also received a figure from KU illustrating the 2018 drip pad samples in relation to Beazer's site investigation borings and monitoring wells near the drip pad.

In the Closure Demonstration Report KU states that Koppers' goals are to provide the basis for a determination that the drip pad closure demonstration meets the requirements for a final RCRA Subpart W closure, and for the concrete drip pad to not be considered a cap for protection against direct contact with contaminated soil or for groundwater protection. KU also indicated that the drip pad had been used as a 90-day accumulation area pursuant to Wis. Admin. Code s. NR 662.034, and is subject to the closure requirements of sub ch. W of Wis. Adm. Code ch. NR 665.

The Closure Demonstration Report lists five determinations made by KU's analysis of the information collected for the Closure Demonstration Report as well as previous investigative work conducted by Koppers associated with the drip pad. Below are the five determinations along with the DNR response:

"1. The mean soil results for samples collected beneath the drip pad (SWMU 7, a portion of the Area F of the site-wide RCRA Corrective Action Program) fall well below the maximum values in this area that the site-wide RCRA Corrective Action Program post-remediation risk assessment determined could remain un-covered/un-remediated (see Table 2)."

Wis. Admin. Code ch. NR720.07(2)(b) requires alternative approaches to evaluating exceedances of soil standards be approved by the DNR prior to use. Use of soil averaging has not been approved by the DNR for use for contamination below the drip pad. DNR Guidance RR-991, Compliance Averaging of Soil and Contamination Concentration Data, describes a process the DNR may accept in certain circumstances. This requires an adequate sample set in both number and distribution. Also, the DNR generally does not allow averaging away hotspots by incorporating highly contaminated samples into a dataset with many uncontaminated or lower contaminated soils. Contaminant concentrations below the drip pad were not known at the time Beazer evaluated direct contact corrective action alternatives because the drip pad was considered a structural impediment to complete investigations.

The sample set used by KU in the Closure Demonstration Report only evaluated the soil directly beneath the concrete drip pad 0-1 foot beneath the concrete and aggregate base course. The DNR considers the 0-4 foot depth to be the depth of direct contact risk. The number and spatial distribution of samples, both horizontally and vertically are inadequate to characterize the direct contact risk from contamination associated with the drip pad. Therefore, a decision on the direct contact risk associated with soils beneath the concrete drip pad cannot be made until Koppers conducts a full and complete Wis. Admin. Code ch. NR716 site investigation of contamination beneath the drip pad.

If the DNR allows the use of a risk assessment for the area beneath the drip pad, following completion of a full investigation of contaminated soil and groundwater associated with drip pad, and if Koppers intends to rely on the risk assessment prepared by Beazer, the risk assessment used for the Beazer corrective action would require updating, with DNR review and approval, to include:

1. New analytical results from existing and future investigation of contamination associated with the drip pad.
2. Updated toxicity data.
3. Update the exposure scenarios based on current and anticipated land use.
4. Update the exposure assessment for the updated scenarios using current toxicity data.
5. Use the updated exposure scenarios and a target non-cancer hazard index of 1 and updated target risk values to determine a site-specific screening level.
6. Compare the updated Exposure Point Concentrations from the exposure assessment to the site-specific screening levels to determine if additional action is warranted based on risk.

“2. No additional soil quality impacts are evident in, nor is future risk-based cleanup required for, the subsoils directly beneath the drip pad, based on the comparison to risk-based cleanup values established for Area F in the site-wide RCRA Corrective Action Program.”

A 1992 report submitted to the DNR by Keystone Environmental Resources, Inc. (Keystone) documented the collection and analysis of ten soil samples collected during the drip track extension constructed in 1991. The ten soil samples were reported to be collected from a 0.0 to 1.0 foot depth after visibly impacted surficial soils had been excavated. Analytical results from these samples show significant PCP and PAH contamination that has not been fully investigated or assessed to determine appropriate remedial actions.

In January 2007 KU submitted a Drip Pad Closure Investigation report to the DNR. This report documented surface soil sampling, 0-6 inches from ground surface, on each side of the drip track at three location along its length. The surface soil samples collected during this investigation consisted of mainly surficial gravel, not native clay. Boring logs for two temporary monitoring wells, TW-1 and TW-2, documented in the 2007 KU report indicate gravel and ballast present to approximately 1.5 to 2 feet below grade respectively. The logs also mention black clay and moth ball odors present at approximately 2-2.5 feet below grade. No soil samples were collected from these borings.

The January 2007 KU Drip Pad Closure Investigation report also documented the installation and sampling of the two temporary monitoring wells, TW-1 and TW-2, installed adjacent to the drip pad. Pentachlorophenol was detected in the water sample from TW-1 at a concentration of 75ug/l and at 3ug/l in the sample collected from TW-2. The ch. NR140 Wis. Adm. Code Enforcement Standard for Pentachlorophenol is 1ug/l. Naphthalene was detected in the water sample from TW-2 at a concentration of 3,400ug/l. The ch. NR140 Wis. Adm. Code Enforcement Standard for naphthalene is 100ug/l. No permanent monitoring wells have been installed to specifically monitor contamination beneath the drip pad.

Soil samples collected from the soil borings installed during the latest sampling, documented in the January 2019 KU Closure Demonstration report indicate contamination in the 0-1 foot depth below the concrete drip pad and aggregate base course. These samples were apparently collected from backfill clay soil placed following

contaminated soil removal associated with the concrete drip pad and drip pad extension construction. Although boring logs for borings installed for the 2019 KU Closure Demonstration Report indicate black staining and odors at depth, no soil samples were analyzed below the 0-1 foot depth.

Soil and groundwater sampling and observations to date indicate significant contamination remains beneath the drip pad that has not been adequately investigated or remediated.

“3. The concrete core information shows no significant penetration of wood treating solution into or through the drip pad concrete; consequently, the concrete drip pad had acted as an effective barrier to the subsurface.”

Results from the Closure Demonstration Report do not indicate pentachlorophenol in soil samples collected from the clay fill soil placed following contaminated soil removal during drip track installation. However, results from previous sampling show significant PCP and petroleum contamination beneath the drip pad that has not been fully investigated or remediated.

“4. Prior studies of groundwater monitoring wells sampled by Koppers adjacent to the either side of the drip pad showed results consistent with and reflective of site wide groundwater quality impacts identified in the RCRA Corrective Action Program conducted by Beazer East, Inc. (Beazer). These site-wide groundwater quality impacts are already being addressed within the approved on-property monitored natural attenuation groundwater remedy approved by the WDNR under the RCRA Corrective Action Program.”

As stated above, results of the 2007 KU Resources Drip Pad Closure Investigation showed PCP and naphthalene contamination in groundwater at the location of the drip pad at concentrations well above the Wisc. Admin. Code ch. NR140 Enforcement Standards. These wells were immediately abandoned, and permanent wells were never installed to determine the degree or extent of groundwater contamination associated with the drip pad. When the Beazer portion of the site investigation was conducted the drip pad was considered a structural impediment to complete investigation of the area. Based on the work conducted by KU documented in the 2019 Drip Pad Demonstration report, it is apparent the concrete drip pad is no longer a structural impediment to investigation. The current monitoring well network installed for the Beazer Corrective Action is not adequate to assess the groundwater contamination beneath the drip pad.

“5. As a result of this report information, Koppers requests WDNR approval at this time to stop maintaining the drip pad as a surface cover, barrier cap, or structural impediment for soil that underlies the concrete drip pad, and requests full and formal drip pad closure as part of the final approval of the on-property site-wide Corrective Action Program Remedy.”

In a letter to Koppers dated July 2, 2013 (attached) the DNR, referencing a DNR letter on partial closure of the facility dated June 28, 2007 (attached), stated clean closure of the drip pad could not be approved without investigation and remediation of contamination associated with the drip pad.

The assessment work conducted by Koppers over the years has demonstrated there is significant contamination remaining below the drip pad. While it appears the concrete drip pad may be acting as a cap to prevent exposure to contamination below the drip pad, the assessment conducted to date has not defined the nature, degree, or extent of contamination beneath and adjacent to the drip pad. Also, Koppers has not properly evaluated remedial action options for the contamination beneath the drip pad. A complete investigation, evaluation of remedial action options and performance of remedial actions are all necessary for compliance with Wis. Stats. ch. 292 and Wis. Admin. Code chs. NR700-754 and the closure requirements of Wis. Adm. Code Subch. NR 665.

Conclusion:

Following review of the information available to the DNR, the DNR does not believe the work conducted to date provides a basis for a determination that the drip pad closure demonstration meets the requirements for a final NR

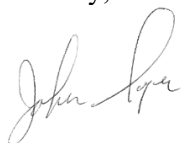
665 Subchapter W closure or the requirements of Wis. Admin. Code chs. NR700 – NR754. Also, the DNR does not believe Koppers has conducted the necessary investigation/remediation for a determination on the need to maintain the drip pad as a barrier cap. The DNR believes Koppers has shown the drip pad is not a structural impediment to further investigation and remedial action.

In order to progress towards closure of the drip pad Koppers must comply with the requirements of Wis. Stats. ch. 292 and follow the process contained in Wisc. Admin. Code NR700-754. The first step to achieve compliance is the development of a site investigation work plan to define the complete degree and extent of contamination beneath the drip pad. This includes but is not limited to investigation of soil within the 0-4 foot depth the DNR considers the depth of direct contact risk as well as contamination at depth. The site investigation must also include permanent groundwater monitoring wells located within the footprint or immediately adjacent to the drip pad and laterally and vertically distant to define the degree and extent of groundwater contamination associated with the drip pad. The site investigation can use data already collected as well as data available from the Beazer investigation of the site. However, the DNR will not approve a site investigation that relies solely on previously collected data without further investigation of the drip pad. Site investigation requirements are specified in Wis. Admin. Code ch. NR 716. Following completion of a site investigation Koppers must complete evaluation and implementation of an appropriate remedial action compliant with the requirements of Wis. Admin. Code chs. NR700-NR754 for the contamination associated with the drip pad.

The DNR understands that Koppers has retained control over and responsibility for the contamination beneath the drip pad, and therefore the DNR believes Koppers is responsible for the contamination as that responsibility is defined in Wis. Stats. ch. 292.11(3). The DNR has created a Bureau for Remediation and Redevelopment Tracking System (BRRTS) site specific to the Koppers – Superior Drip Pad. The BRRTS number for the Koppers – Superior Drip Pad site is 02-16-585874. All reports and correspondence for the Koppers – Superior Drip Pad site have been copied to this location on the DNR BRRTS database. The information is publicly available through the internet using BRRTS on the Web (search “BOTW”). Future reports and correspondence associated with the Koppers – Superior Drip Pad site will also be associated with this BRRTS number. Attached to this letter is a responsible party letter addressed to Koppers for the contamination beneath the drip pad. The letter contains the initial expected actions to be completed by a responsible party in response to a hazardous substance discharge.

The DNR expects submittal of a site investigation work plan, required in Wis. Admin. Code ch. NR 716.09 within the timeframe specified in the attached responsibility letter. Please note fees are required under Wis. Admin. Code ch. NR749 if you would like DNR review of future submittals. Please contact me if you have any questions.

Sincerely,



John Sager
Hydrogeologist
Remediation and Redevelopment Program

C: Mr. Chris Saari, DNR, Northern Region Remediation and Redevelopment Supervisor
Mr. Robert Smith, KU Resources, Inc. (via email)
Ms. Jane Patarcity, Beazer