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June 25, 2008

Mr. James Hosch  
Wisconsin Department of Natural Resources  
1401 Tower Avenue  
Superior, WI 54880

Re: Koppers Site – Superior, Wisconsin  
Response to May 12, 2008 Letter

Dear Mr. Hosch:

This letter responds to comments provided by the Wisconsin Department of Natural Resources (WDNR) in a May 12, 2008 letter to Beazer East, Inc. (Beazer) regarding the human health risk assessment (HHRA) approach for the “off-property” portion of the Koppers Inc. site in Superior, Wisconsin (Site). Specifically, the WDNR letter provides comments on a Technical Memorandum titled “Approach to Human Health Risk Assessment (Part 2), Koppers Inc. Superior, Wisconsin Facility – Off-Property Area” which was prepared by AMEC Earth & Environmental (AMEC), and submitted to the WDNR on September 24, 2007.

WDNR comments were categorized into the following topics:

- Comments on “Table 3 – Absorption Adjustment Factors”
- Comments on “Table 5 – Summary of Potential Exposure Assumptions”
- Comments on “Table 6 – Noncarcinogenic and Carcinogenic Dose-Response Information”

Each topic is discussed below, including a brief reiteration of the nature of the WDNR comment followed by Beazer’s response.

**Comments on “Table 3 – Absorption Adjustment Factors”**

One main comment falls under this topic: the use of dermal AAFs for PAHs and pentachlorophenol.

**Summary of WDNR Comment:** *“Table 3 – Absorption Adjustment Factors” proposes the use of dermal AAFs for PAHs and pentachlorophenol (0.1/0.02 and 0.03) which are unacceptable to the Department. In the Department letter of September 20, 2007, the Department requested the on-site HHRA use EPA’s default AAFs of 0.13 for all PAHs and 0.25 for pentachlorophenol.*

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*The use of EPA's default AAFs were accepted by Beazer in the AMEC letter from Allison Nightingale dated November 30, 2007*

**Beazer Response:** Beazer believes that the AAFs for PAHs and pentachlorophenol included in Table 3 are appropriate, supported by the current state of the science, and should be used to estimate potential risks associated with exposure to constituents at off-property portions of the Site. Scientific literature was referenced in the July 2007 HHRA (for the on-property portion of the Site) to support the AAF values, and can be provided upon request. EPA's default absorption factors were not "accepted" in AMEC's letter dated November 30, 2007. Rather, the November 30, 2007 letter referred to in WDNR's comments described that EPA's default absorption factors were used to increase cost- and time- efficiency and expedite completion of the on-property risk assessment.

### **Comments on "Table 5 - Summary of Potential Exposure Assumptions"**

Three distinct comments fall under this topic. Each is addressed separately below.

#### 1. Trappers Scenario

**Summary of WDNR Comment:** *An exposure area should be developed specifically for "trappers", who are likely to visit the area on a daily basis during the 4 to 5 months of the trapping season. Trappers are more likely than hunters to enter the stream and come into contact and incidentally ingest sediments than casual visitors, particularly during winter months.*

**Beazer Response:** According to state regulations, trapping season is limited to winter months (beginning no earlier than October and ending by March for most target species). Beazer believes that it is unreasonable to assume that exposures to the off-property portion of the Site would occur on a daily basis during trapping season. Further, it is likely that winter conditions will significantly limit exposure to affected soils, sediments, and surface waters during the 4 to 5 months of the trapping season as the floodplain and creek are likely to be snow and ice covered preventing contact with soils and sediments and a trapper will be wearing winter clothes that limit contact with soils and sediments.

#### 2. Adult Recreational Visitor/Resident Exposure Scenario

**Summary of WDNR Comment:** *Private land owners are very likely to visit all portions of their property more than 12 times per year. We request an expansion of the adult recreational visitor to adult recreational visitor/residents, and increasing the exposure frequency up to 120 times per year, but not less than 40 visits. Perhaps both a central-tendency and a reasonable-maximum exposure scenario could be developed for a recreational visitor and a property owner.*

**Beazer Response:** While people visiting Crawford Creek, the floodplain and the tributary to Crawford Creek may include both recreational visitors and residents, and hence Beazer will expand the description of the receptor to "adult recreational visitor/resident", Beazer does not believe increasing the exposure frequency above 12 days per year is appropriate. The effected portions of the floodplain and Crawford Creek are greatly removed from the nearest residences. The tributary to Crawford Creek, while closer to the residences, has steep incised banks and is not a land feature that would



attract a resident on a frequent basis. Beazer continues to believe the proposed exposure frequency of 12 days per year is very conservative and will lead to an overestimate of potential risks.

### 3. Adolescent Recreational Visitor/Resident Exposure Scenario

**Summary of WDNR Comment:** *The exposure frequency for the adolescent (15-16) recreational visitor/residents should reflect that children who live on or near these properties will visit the creek with even greater frequency than the adult receptor, perhaps even daily. Visitation by youths to the creek is likely to increase with time with the growth of the nearby residential developments. The teen age range of 15-16 years should be changed to a child/teen age range of 7 to 18 years old, the body weight adjusted down from 58 to 48, and the exposure duration expanded from 6 to 11 years. In addition, the daily incidental soil and sediment ingestion rate should be adjusted from 50 to 100 milligrams.*

**Beazer Response:** As noted above for the adult receptor, because of the nature of potentially effected portions of the floodplain, Crawford Creek and the tributary to Crawford Creek, Beazer does not believe an increase in exposure frequency (above the 12 days per year proposed in the September 24, 2007 off-property HHRA Technical Memorandum) is warranted. The teen age range of 15-16 years will be changed to a child/teen age range of 12 to 18 years old. Beazer does not believe children younger than 12 years will have regular contact with the affected portions of the floodplain and Crawford Creek sediments and therefore believes the lower limit of the age range should be a child 12 years old. The body weight of the adolescent recreational visitor/resident will be 57 kg and the exposure duration will be 7 years. In addition, Beazer does not believe that the increase in daily incidental soil and sediment ingestion rate is warranted. A daily ingestion rate of 100 milligrams would overestimate exposures since it is unlikely that all of the recreational user's daily soil ingestion would be comprised of soils from the floodplain or sediments from Crawford Creek or its tributary.

### Comments on "Table 6 – Noncarcinogenic and Carcinogenic Dose-Response Information"

There is one specific comment presented in this topic: the use of EPA's Oral Reference Dose for 2-Methylnaphthalene.

**Summary of WDNR Comment:** *The EPA Oral Reference Dose for 2-Methylnaphthalene of 4.0E-3 mg/kg-day should be used.*

**Beazer Response:** Beazer will use the EPA Oral Reference Dose for 2-Methylnaphthalene of 4.0E-3 mg/kg-day.

With this letter, Beazer believes all of WDNR's comments on the off-property HHRA Technical Memoranda have been addressed. Once Beazer receives confirmation from WDNR that additional comments on the HHRA Technical Memoranda are not forthcoming, Beazer will begin preparing the HHRA to evaluate potential risks to the receptors identified in the Technical Memoranda.

Mr. James Hosch  
June 25, 2006  
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Please feel free to contact me or Jane Patarcity with any additional comments or questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Anderson". The signature is fluid and cursive, with a long horizontal flourish at the end.

Paul Anderson  
Vice President  
Technical Director, Risk Assessment

cc: John Robinson, WDNR  
Mark Gordon, WDNR  
Tom Janisch, WDNR  
Jane Patarcity, Beazer  
Jeff Holden, ARCADIS  
David Bessingpas, ARCADIS  
Henry Nehls-Lowe, WDHFS  
Bob Egan, USEPA Region V  
Vicki Drake, Douglas County Department of Health and Human Services