State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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June 19, 2006

Ms. Jane Patarcity
Beazer East, Inc.
One Oxford Centre, Suite 3000
Pittsburgh, PA 15219-6401

Subject: Human Health Risk Assessment
Koppers Inc., Superior, Wisconsin Facility
BRRTs: 02-16-000484

Dear Ms. Patarcity:

Thank you for meeting with the Department on May 24, 2006 to discuss the clean-up at the Koppers facility in Superior, Wisconsin. During our meeting several questions arose. This letter is to provide further information regarding the Human Health Risk Assessment portion of the discussion. Each question is italicized for clarity.

Can the polygons be used as a starting point for design of the Human Health risk-based approach? Yes, the polygons can be used as a starting point for design, but at the time remediation actions occur confirmation samples must be collected or the remediation action must continue to the next existing sampling point which meets the clean-up standards.

Is Beazer required to use 1 x 10^{-6} for individual compounds as a maximum allowable excess cancer risk as required by NR 720.19 (5)1 Wis. Adm. Code? Yes, the maximum allowable excess cancer risk per individual compound is 1 x 10^{-6} and the maximum cumulative excess cancer risk for multiple compounds at the site is 1 x 10^{-5}.

Is Benzo(a)pyrene-Toxic Equivalents (BAP-TE) considered a single compound or multiple compounds under NR 720.19 (5)1. and 2. Wis. Adm. Code? BAP-TE is considered multiple compounds, and the risk for each carcinogen detected allows the maximum cumulative risk to be adjusted from by 1 x 10^{-6}, up to 1 x 10^{-5}. This means that if each of the seven carcinogenic polycyclic aromatic hydrocarbons (PAH) compounds are present (and no other carcinogenic compounds) at 1 x 10^{-6} excess cancer risk for each compound, the maximum cumulative risk is 7 x 10^{-6}. In this case, an individual compound excess cancer risk would be allowed to exceed 1 x 10^{-6}. In the event that there are more than ten carcinogenic compounds present, the cumulative excess risk still cannot exceed 1 x 10^{-5}.

cumulative cancer risk for all of the sampled points an adjustment for the dioxin/furan cancer risk needs to be included. For this purpose we agreed to allow the cumulative excess cancer risk derived from an up-to-date dioxin/furan Theissen polygon to be added to the risk from other contaminants of concern at each sampled point. The agreed upon exposure assumptions shall be used in this calculation.

For purposes of the HHRA, can the site be divided into units other than those based upon waste management units? We are allowing the use of waste management units because risk-related drivers and exposure assumptions are expected to be similar within a given unit. If a waste management unit specific HHRA is conducted, we would allow the list of contaminants of concern to be reduced to the actual contaminants detected at each individual waste management unit.

Thank you for the opportunity to answer questions that arose during our meeting. If you have any further questions, please feel free to call me at (715)-392-0802.

Sincerely,

James A. Hosch
Hydrogeologist

cc: Jim Ross – Superior
John Robinson – Rhinelander
Mark Gordon – RR/3
Jeff Holden- BBL
Brian Magee – AMEC
Henry Nehls-Lowe - DHFS
Vicky Drake - Douglas County Health Department
Bob Egan - EPA Region 5