REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

August 4, 2005

Mr. Robert S. Markwell
Vice President
Beazer East, Inc.
C/O Three Rivers Management, Inc.
One Oxford Centre, Suite 3000
Pittsburgh, PA 15219-6401

Subject: Cabot/Koppers Superfund Site, Gainesville, Florida

Dear Mr. Markwell,

The United States Environmental Protection Agency ("EPA") is in receipt of your letter dated July 27, 2005, regarding Floridan aquifer monitoring at the Koppers portion of the Cabot/Koppers Superfund Site ("Site"). Your letter responds to EPA's July 20, 2005, letter, in which Beazer East, Inc. ("Beazer") was directed for a second time to notify EPA of it's intent to implement EPA's July 12, 2005, "Revised Floridan Aquifer Monitoring Plan Addendum" ("EPA's plan"). Your July 27, 2005, letter again failed to specify Beazer's intent to comply with EPA's direction.

Several concerns with respect to implementation of EPA's plan were raised in the July 27 letter. These concerns appear to be a result of misreading EPA's plan, and I believe they can be addressed by providing further clarification in this letter. EPA made an effort to answer questions and provide clarification of our plan during a July 14, 2005, telephone conference with Mike Slenska (Beazer) and Jim Erikson (GeoTrans, Inc.), and some of the concerns raised in the July 27 letter were discussed at that time. This letter provides further clarification of the EPA plan.

In your July 27 letter, an issue of concern was raised regarding cross-contamination risk associated with installing additional Floridan aquifer wells closer to the Site source areas, specifically, that there is a risk of Dense Non-Aqueous Phase Liquid ("DNAPL") "drag-down" in wells that encounter DNAPL below the third casing (page 3, paragraph 1 of July 27 letter). This issue is addressed in EPA's monitoring plan. Items 3 and 4 on page 9 of EPA's plan specify well construction procedures that include sealing off the overlying Hawthorn Group sediments from the lower Hawthorn Group clay with the third protective casing (specified to be set approximately 2 feet into the lower Hawthorn Clay) and abandonment of the well if DNAPL is detected below this third casing at a depth of 20 feet or greater into the lower Hawthorn Group clay. These procedures are intended to address a concern about the substantial head difference

between water levels in the sandier material above the lower clay and the Floridan aquifer (addressed by the third protective casing) and a concern about the potential for finding DNAPL in relatively permeable zones within the lower Hawthorn clay (addressed by specifying abandonment of the hole if mobile DNAPL is found in the lowermost part of the clay). Presumptions in the plan are that: (1) circulation of fluids could be avoided using sonic drilling and (2) mobile DNAPL would be the sole concern with regard to fluid movement out of the lower Hawthorn clay during the brief period when contaminant movement out of the lower Hawthorn and into the upper Floridan aquifer could occur.

Concern has been expressed that DNAPL could be encountered at some point below the third protective casing, but above the lowermost part of the lower Hawthorn clay. It is possible and consistent with EPA's monitoring plan to drill the borehole and set the third casing at a depth somewhat more than 2 feet into the lower Hawthorn Clay in areas where core (from immediately above or in the uppermost part of the clay) indicates a possibility of deeper penetration of DNAPL into the lower Hawthorn clay. This is why EPA's plan states that the third casing is to be set approximately 2 feet into the lower Hawthorn clay. In this circumstance, the third casing can be set at a depth below the point that any DNAPL contamination in the upper part of the lower Hawthorn clay is observed. Between the base of the third casing and the point at which well abandonment procedures are to be implemented per item 4, page 9 of EPA's monitoring plan, continuous cores will be obtained. Any DNAPL in sediments or any indications of DNAPL moving into the borehole below the third casing will be observed. If it appears that DNAPL is present in the borehole below the third casing and is either mobile (i.e. flowing into the hole) or may be transmitted into the upper part of the Floridan aquifer, through drag down during well construction or by lost circulation once the top of the Floridan is reached, then the borehole can always be abandoned, as if the condition specified in item 4 on page 9 of EPA's plan applied.[1]

In your July 27 letter, an issue of concern was raised regarding the requirement to install multi-level sampling equipment in newly installed Floridan aquifer wells within the prescribed time frame, presenting physical and logistical difficulties. This issue is clarified in the following two paragraphs.

In accordance with EPA's plan, a borehole may remain open for longer than 24 hours. EPA's plan submitted to Beazer specifies two time periods: (1) the time period defined when installation of the multilevel system must begin [i.e., when "Sufficient Multilevel System Specification ("MS") equipment and well construction materials shall be made available at the construction site to start installation of the MS], which is within 24 hours after the completion of

---

[1]Note that EPA's plan does not take precedence over field conditions that indicate another course of action is environmentally prudent. This approach is consistent with procedures that are routinely followed in the course of Superfund site investigations. For example, if a work plan called for backhoe excavations at a site and field monitoring indicated buried metal drums and potentially explosive air concentrations of organic contaminants in the excavation area, then the excavation would stop.

well development", as stated under the heading "Multilevel System Specifications"; and (2) the time period defined when the multilevel system must be completed, which is 24 hours after completion of the geophysical logging that should follow well development, as stated under the heading "Well Construction Specifications".

As an example, if well development is finished at noon on Monday, and geophysical logging is completed at 6 p.m., the installation of the Multilevel system should begin by noon on Tuesday, and the well must be completed by 6 p.m. that day. Thus, if it is considered that the open borehole condition applies from the time that well development ends (noon Monday) until the time the multilevel system is completed (6 p.m. on Tuesday), there are 30 hours of open hole conditions. Note, however, that EPA's plan does not specify that any time period begins when well development is initiated, or at any time while the well is still being drilled. Thus, if well development takes four hours, there are (for this example scenario) 34 hours between the time that well development begins and the multilevel system is installed. If well development lasts for eight hours, the time period between initiation of well development and completion of the well would be 38 hours.

I want to reiterate EPA's commitment to full implementation of the "Revised Floridan Aquifer Monitoring Plan Addendum", including installation of the four source area wells. The well design in EPA's plan is based on specifications allowing the collection of monitoring data at different depths in the Floridan aquifer at the four source areas, in conjunction with eight downgradient locations. The source area wells must be located close enough to the source to be able to detect any contamination present that may be flowing through discrete permeable zones in the karst aquifer system, and may not be detected in wells farther downstream. Immediate installation and monitoring of the four source area wells (in addition to the downgradient transect wells) are critical to collecting data needed to determine the nature and extent of contamination in the Floridan aquifer and to support the development of appropriate remedial strategies that are protective of human health and the environment.

EPA is willing to confer with Beazer to elaborate further on issues clarified in this letter, if necessary, as well as issues related to notification and reporting requirements specified in our plan. We remain hopeful that Beazer will fully comply with EPA's plan, but in order to avoid further delay, EPA has already begun initial steps to implement the plan, in the event that Beazer fails to do so. Pursuant to the terms specified in the 1991 Unilateral Administrative Order (UAO) (Section X.I.A.) and the 1994 UAO Amendment, please notify EPA of Beazer's intent to implement EPA's "Revised Floridan Aquifer Monitoring Plan Addendum", and submit a schedule for implementation of the plan, within seven (7) days of receipt of this letter.

Sincerely,

for Winston A. Smith, Director
Waste Management Division

cc: Kelsey Helton, FDEP
John Mousa, ACEPD
Brett Goodman, GRU
Rick Hutton, GRU