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**Via Email and Express Mail**

January 14, 2009

Mr. Scott Miller  
Remedial Project Manager  
U.S. Environmental Protection Agency, Region IV  
4WD-SRTMB  
61 Forsyth Street  
Atlanta, Georgia 30303-3104

Subject: Response to Comments on Workplan entitled "*Supplemental Hawthorn Group Investigation and Monitoring Well Installation Workplan, Koppers Inc. Site, Gainesville, Florida, Revision #3*"

Dear Mr. Miller:

On behalf of Beazer East, Inc., attached to this letter is our response to the U. S. Environmental Protection Agency (EPA) December 23, 2008 comments on the November 11, 2008, Supplemental Hawthorn Group Investigation and Monitoring Well Installation Workplan, Koppers Inc. Site, Gainesville, Florida, Revision #3. Detailed responses to the EPA comments are included in Attachment 1.

A revised "*Supplemental Hawthorn Group Investigation and Monitoring Well Installation Workplan, Koppers Inc. Site, Gainesville, Florida, Revision #3*" dated January 14, 2009 will be sent under separate cover.

Sincerely,

James R. Erickson  
Principal Hydrogeologist

Attachments

cc: William O'Steen, U.S. EPA  
M. Brouman, BEI  
M. Slenska, BEI  
G. Council, GT

# ATTACHMENT 1 RESPONSE TO COMMENTS

## SUPPLEMENTAL HAWTHORN GROUP INVESTIGATION AND MONITORING WELL INSTALLATION WORKPLAN KOPPERS, INC. SITE GAINESVILLE, FLORIDA REVISION #3

**Comment #1** *“Existing off-property (east of Koppers) Hawthorn monitoring data indicate that at the two existing well pairs closest to the identified principal contaminant source areas on the Koppers property, ground-water contamination is most significant in the upper Hawthorn monitoring zone. Conversely, for the HG-21 well pair near the northern Koppers property boundary, the contamination is more significant in the lower Hawthorn monitoring zone (reference GeoTrans, 2008, Figure 5-1a through Figure 5-3b). Figures in the referenced GeoTrans report indicate that for the upper Hawthorn Group, the direction of ground-water flow in the area east of the Koppers property has a more eastward component than the apparent direction of flow in the lower Hawthorn monitoring zone, at least for the area near the northern Koppers property boundary. With these factors in mind, we recommend shifting, if possible, the location of proposed well pair HG-27 to a location no further from the HG-21 well pair than the distance between HG-21 and the proposed HG-27 location (as shown on Figure 1), but in a direction more northward than eastward away from the HG-21 location. Referring to Figure 1, an ideal location might be in the apparently open area just south or southeast of what appears to be a relatively small, gray-roofed building approximately 900 feet N15° E of the HG-21 well pair.”*

**Response:** Beazer is willing to relocate the proposed location for well pair HG-27 further to the north to address concerns expressed in this comment. This comment requests that well pair HG-27 be moved further to the north while maintaining the same approximate distance between the proposed location for HG-27 and HG-21. The distance between HG-21 and the proposed location of HG-27 is approximately 500 feet. Based on the approximately 500 feet distance, well pair HG-27 was moved to a location that is approximately 450 feet N15E of the HG-21 monitoring well pair (see Figure 1).

**Comment #2** *“The distance of proposed new Hawthorn wells from the eastern Koppers property boundary should be tied to the contaminant concentrations at existing near-property line and off-property Hawthorn wells. A review of monitoring data shown on Figure 5-1a through Figure 5-3b in the above-referenced GeoTrans report indicates that generally, contamination around the more southern wells (property line HG-6 well pair and off-property HG-26 well pair) is more significant than the contamination in the vicinity of the property line HG-4 well pair and off property well pair HG-20. Given this observation, we suggest that the distance between the HG-28 well pair and the HG-20 well pair be slightly less than the distance between the HG-26 well pair and the proposed HG-29 well pair. The approximate distance between the HG-26 and HG-29 well pairs is 670 feet*

*(based on a review of Figure 1). The distance between the HG-20 and HG-28 well pair is greater, at approximately 850 feet. We recommend that if possible, the HG-28 well pair be shifted southwestward to a location near the margin of the wooded and open areas shown on Figure 1. If this area is unavailable for construction of the new HG-28 well pair (figures included in documents prepared by the contractor for Cabot Carbon indicate there is a stormwater retention pond in the preferred location), then it may still be possible to move the HG-28 location somewhat closer to the HG-21 well pair.”*

**Response:** As requested in this comment, Beazer will attempt to relocate the proposed location for well pair HG-28S/D further to the south and closer to well pair HG-20S/D. Field reconnaissance of this area indicates that the new proposed well location for HG-28S/D is the furthest south and west that this well can be located based on current land use (see Figure 1). Physical access issues associated with the undeveloped and forested track of land between well pair HG-20S/D and the proposed location for well pair HG-28S/D prevent the well from being moved further to the west. This location is also constrained by the presence of the retention pond to the northwest of the proposed well pair location.

**Comment #3** *“Section 3.2 needs to state what procedure(s) will be used to determine the presence or absence of DNAPL within the sample cores. Particularly in the more clayey zones, it may be necessary to physically disturb the core samples, as any DNAPL or evidence of DNAPL in these intervals would more likely be present in small or isolated stringers or films along fractures, cracks, or other features oriented more or less vertically. Such isolated zones would probably not be apparent from an examination of the intact core viewed in more or less the x-y plane relative to land surface.”*

**Response:** The work plan will be revised to indicate that portions of the core sample will be disaggregated in an attempt to visually observe the presence of DNAPL, if present. In addition, sections of the core samples will be sprayed with water in an attempt to visually observe the presence of DNAPL, which presents as small “blebs” or droplets of DNAPL on the surface of the wet core. It has been our experience that this method is reliable in identifying the presence of DNAPL in soils that are below residual DNAPL saturations.

**Comment #4** *“Because of the long-term nature of these monitoring wells as part of a compliance network for the Koppers Site, we recommend that the well screens be constructed of stainless steel rather than PVC. Failure of wells in a long-term monitoring network due to either inadequate well design or inadequate construction materials will result in both well abandonment in conformance with state regulations and the construction of a replacement monitoring well.”*

**Response:** The primary objective of the proposed monitoring well locations is to better define the downgradient lateral extent of the dissolved-phase plume. Based on the previous off-site monitoring well construction to the east of the Site, residual

and free-phase DNAPL is not expected to be encountered in these off-site locations. In addition, the dissolved-phase concentrations are expected to be low to nondetect. Wells constructed with PVC casing and screens have been known to degrade over time when constructed in areas with free-phase creosote DNAPLs. No free-phase DNAPLs or high concentrations of organic constituents are projected in these areas; as such, degradation of PVC materials would not be anticipated. In addition, all isolation casings through the Surficial and Upper Hawthorn will be constructed using mild steel and encased in cement grout. Therefore, Beazer proposes the use of 2-inch PVC casing and screens for the construction of these monitoring wells.

**Comment #5** *“Figure 3, Target Depths for Monitoring Wells, we recommend that the wells be constructed to the base (i.e. the underlying clay unit) of each zone.”*

**Response:** Beazer concurs with this comment and will attempt to complete monitoring well screen intervals as close as possible to the base of the Hawthorn Group Upper and Middle clay units, similar to the most-recent HG well installations in this area. Figure 3 shows the conceptual design of the monitoring wells and is not intended to accurately reflect the vertical location of screen intervals.

**Comment #6** *“There is shared concern among stakeholders about DNAPL contamination in the lower Hawthorn near the eastern Koppers property boundary. Borings into the lower Hawthorn at locations in close proximity to HG-12D and in close proximity to HG-15S should be undertaken to address this concern.”*

**Response:** The DNAPL boring program along the eastern property boundary was primarily intended to investigate the potential for lateral DNAPL migration in the Upper Hawthorn. Borings installed into the Lower Hawthorn will necessitate the use of an isolation casing completed into the HG middle clay unit. In response to this comment, Beazer proposes the installation of two additional Lower Hawthorn borings along the eastern property boundary (see Figure 2). The workplan will be revised to address the installation of these borings.

**Comment #7** *“One of the means by which DNAPL contamination can be inferred, in the absence of actual visual evidence of DNAPL, is calculating the potential for DNAPL based upon (among other factors) the presence of high reported soil concentrations of contaminants of concern. We consider the collection of soils for laboratory analysis to be a useful procedure for identification of likely DNAPL zones in situations where visual evidence of DNAPL may be ambiguous. While such ambiguity is probably less likely with soils contaminated with creosote (in comparison to visually identifying certain other DNAPLs), the soil concentration data will provide additional data relevant to the overall degree of subsurface contamination along the eastern property line, regardless of whether or not DNAPL is actually present. In the absence of actual observations of DNAPL, any field data indicating the presence of contamination is generally*

*qualitative. Soil sample results will provide some indication of the actual magnitude of contamination along the eastern Koppers property line.”*

**Response:** Beazer agrees that the presence of residual DNAPL will be readily identifiable with visual observations of the core. In addition, the field personnel will disaggregate and spray sections of the core with water in an attempt to mobilize DNAPL sheens, if present. Analysis of soil cores will provide a combined soil and groundwater concentration for a small subsample of core. The utility of these data are questionable. Groundwater samples collected from monitoring wells along the property boundary provide the best quantitative data for *“the actual magnitude of contamination along the eastern Koppers property line”*. Therefore, Beazer does not propose to analyze soil samples for organic constituents as requested in this comment.

**Comment #8** *“Further investigation of the Hawthorn to the east of the Koppers property may be warranted, as results of the proposed investigations may indicate. If there is clearly evidence of significant amounts of DNAPL at any boring along the Koppers property boundary, then Beazer should be prepared to move eastward and investigate further.”*

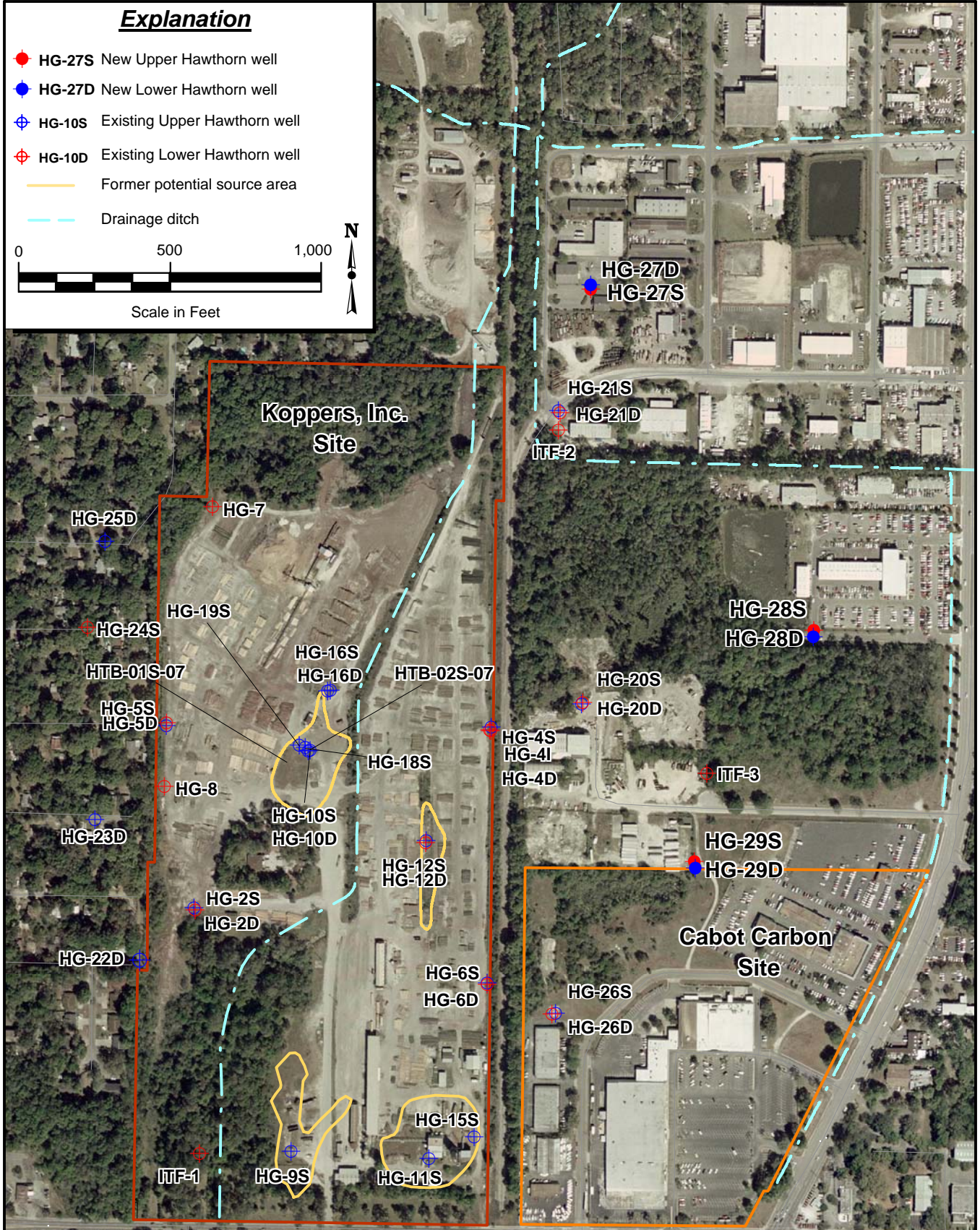
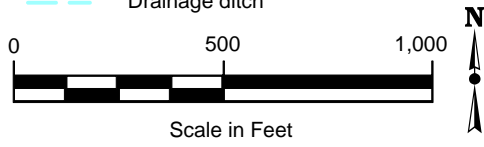
**Response:** Beazer agrees with this comment and will plan to locate additional borings to the east of the Site property boundary should significant DNAPL be encountered. The location of additional borings will be determined based upon the results of the field program, physical constraints to drill rig access and our ability to obtain access from landowners. Borings to the east of the Site property boundary may be proposed as a second phase to this program after the data from this first phase have been evaluated.

**Comment #9** *“The reporting limits for all parameters should be the low limits achieved in 2007 and earlier sampling efforts, not the higher reporting limits in the proposed October 13, 2008, Comprehensive Groundwater Monitoring Plan.”*

**Response:** The reporting limits for the first round of groundwater samples collected from the new monitoring wells will be similar to the samples collected in 2007.

**Explanation**

- **HG-27S** New Upper Hawthorn well
- **HG-27D** New Lower Hawthorn well
- ⊕ **HG-10S** Existing Upper Hawthorn well
- ⊕ **HG-10D** Existing Lower Hawthorn well
- Former potential source area
- - - Drainage ditch



TITLE: Locations of existing and new Hawthorn Group wells

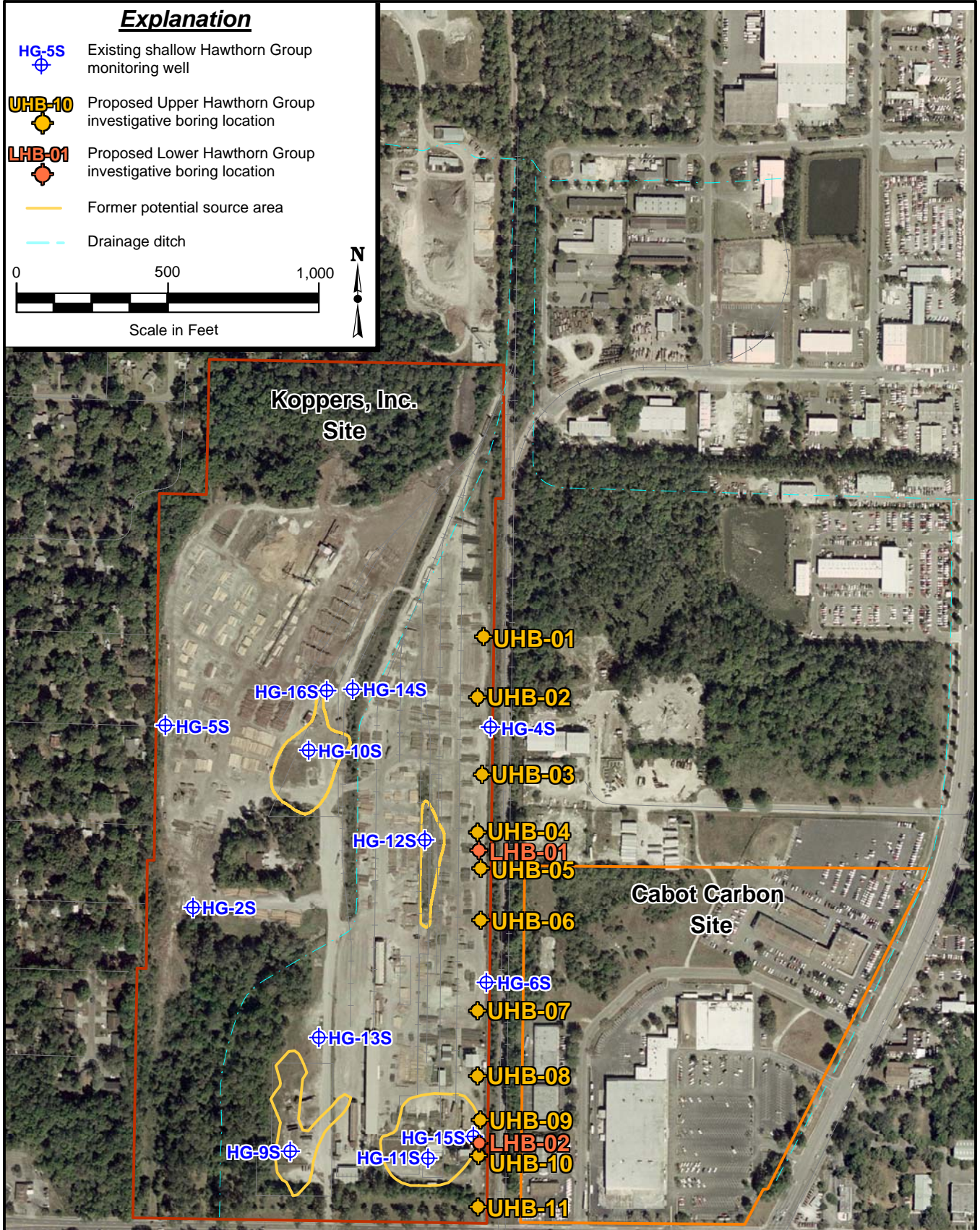
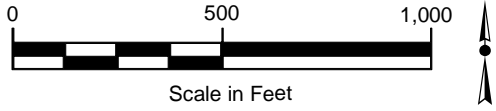
LOCATION: Cabot Carbon/Koppers Superfund Site, Gainesville, Florida

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**Explanation**

- HG-5S** Existing shallow Hawthorn Group monitoring well
- UHB-10** Proposed Upper Hawthorn Group investigative boring location
- LHB-01** Proposed Lower Hawthorn Group investigative boring location
- Former potential source area
- Drainage ditch



TITLE: LOCATIONS OF PROPOSED HAWTHORN GROUP INVESTIGATIVE BORINGS

LOCATION: Cabot Carbon/Koppers Superfund Site, Gainesville, Florida



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DATE	09/08/08

FIGURE:  
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