GeoTrans, Inc.
A TETRA TECH COMPANY

363 Centennial Parkway
Suite 210
Louisville, CO 80027

www.geotransinc.com (303) 665-4390; FAX (303) 665-4391

June 12, 2007

Mr. Scott Miller
Remedial Project Manager
U.S. Environmental Protection Agency
Region IV, Superfund North Florida Section
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Subject: Transmittal of the "Supplemental Hawthorn Group Investigation and Monitoring Well Installation Workplan, Revision #1, Koppers Inc. Site, Gainesville, Florida"

Dear Mr. Miller:

On behalf of Beazer, attached is a revised copy of the workplan entitled "*Supplemental Hawthorn Group Investigation and Monitoring Well Installation Workplan, Koppers Inc. Site, Gainesville, Florida, Revision #1.*" This revised workplan is being submitted per the request of U.S. EPA in their March 1, 2007 letter entitled "*Five-Year Review Recommendations Regarding Additional Hawthorn Investigation, Cabot/Koppers Superfund Site, Gainesville, Florida*" and Alachua County Environmental Protection Department comments dated May 9, 2007. Please feel free to contact me at (303) 665-4390, if you have any comments or questions.

Sincerely,

James R. Erickson

James R. Erickson, P.G.
Principal Hydrogeologist

Enclosure

cc: W. O'Steen, EPA
K. Helton, FDEP
J. Mousa, ACEPD
B. Goodman, GRU
M. Slenska, BEI
M. Brourman, BEI
J. Mercer, GT

SUPPLEMENTAL HAWTHORN GROUP INVESTIGATION AND MONITORING WELL INSTALLATION WORKPLAN

KOPPERS INC. SITE
GAINESVILLE, FLORIDA

Prepared For:

Beazer East, Inc.

Prepared by:

GeoTrans, Inc.
363 Centennial Parkway, Suite 210
Louisville, Colorado 80027

June 12, 2007

Revision #1

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1.0 INTRODUCTION

This workplan presents the proposed investigation and monitoring well installation for the Hawthorn Group (HG) monitoring network at the Koppers Inc. portion of the Cabot Carbon/Koppers Superfund Site in Gainesville, Florida (the Site). The locations of these monitoring wells were determined, in part, based on the following:

1) The U. S. EPA letter to Beazer dated March 1, 2007; and
2) Review of existing Site data and HG well locations to help establish proposed locations for new monitoring wells.

The objective of the proposed monitoring well installation plan is to investigate the lateral and vertical extent of potential Site-related impacts along the eastern and western property boundaries.

The proposed monitoring well installation program presented in this report is based on Site reconnaissance, review of available documentation of regional/Site hydrogeology, and previous monitoring data. Results of the recently completed groundwater Site Model (GeoTrans, 2004b) were also used to help guide the proposed well locations.

1.1 SITE DESCRIPTION

The Site is located in the City of Gainesville, in Alachua County, Florida (Figure 1). The Site encompasses approximately 90 acres and has been used as an active wood-treating facility for approximately 90 years. Adjacent properties include the former Cabot Carbon portion of the Superfund site to the east, private residences to the west and northwest, and commercial facilities and private residences to the north and south.

Detailed descriptions of the Site historical source areas are provided in the GeoTrans (2004a) report. The Site hydrogeologic conceptual model is provided in groundwater flow and transport modeling report (GeoTrans, 2004b).

1.2 HYDROGEOLOGY OF HAWTHORN GROUP

The Hawthorn Group underlies the Surficial Aquifer and consists of a thick sequence of low-permeability unconsolidated sedimentary deposits. These deposits are approximately 120 to 125 feet thick beneath the Site and separate the overlying Surficial Aquifer from the underlying Floridan Aquifer with low-permeability clay, clayey sand, and silt deposits interbedded with higher-permeability sand, silty sand and carbonate deposits. The Hawthorn Group is not a major source of groundwater for this area. Vertical hydraulic head distributions in the Hawthorn are controlled by interbedded low-permeability clay units. The horizontal groundwater flow component for this formation

is only about a factor of two greater than the vertical flow component, when typically in similar interbedded sedimentary deposits the horizontal component is orders of magnitude greater. Hence, vertical groundwater flow, although low, is the most significant flow component for this formation.

The more permeable deposits above the HG middle clay unit and below the HG upper clay unit have been termed the Upper Hawthorn and the deposits below the HG middle clay unit and above the UF Aquifer have been termed the Lower Hawthorn. Lateral groundwater flow within the Upper Hawthorn is generally to the northeast at the Site similar, to the Surficial Aquifer flow direction. Lateral groundwater flow within the Lower Hawthorn is interpreted to be to the northwest and north across a majority of the Site.

1.3 EXISTING HAWTHORN GROUP WELLS

Currently, there are 29 HG wells (Figure 1) completed at or near the Site. A total of 15 HG wells are completed in the Upper Hawthorn and a total of 14 HG wells are completed in the Lower Hawthorn.

2.0 PROJECT OBJECTIVES AND APPROACH

2.1 OBJECTIVE

The primary objective of the proposed monitoring well installation plan is to further investigate the lateral and vertical extent of potential Site-related impacts within the HG deposits. This current workplan addresses the installation of ten additional HG wells into the Upper and Lower Hawthorn.

The technical challenge to the implementation of this program is to prevent new wells and boreholes from inadvertently providing future vertical conduits for the downward migration of Site constituents. One of the lessons learned from Upper Floridan (UF) Aquifer well installations is that even with extraordinary precautions to prevent "drag down" of constituents from overlying deposits, it is difficult to completely eliminate the potential for "drag down." The hydraulic-head differential across the HG deposits is difficult to overcome during well installation at the Site. Similarly, it will be difficult to ensure long-term integrity of the grout seal outside of the casing, where the possibility exists for the wells to become direct conduits for Site constituents to the Lower Hawthorn.

2.2 WELL LOCATIONS AND COMPLETIONS

Monitoring wells at the Site indicate a downward flow component from the Surficial Aquifer to the Upper and Lower Hawthorn. The vertical hydraulic-head difference from the Surficial Aquifer to the Upper Hawthorn is approximately 2 feet and the vertical hydraulic-head difference from the Upper Hawthorn to the Lower Hawthorn is approximately 10 feet.

Continuous coring will be performed in the HG deposits to identify the tops and bottoms of the Upper and Lower Hawthorn. The well completion depth and screen intervals will be based on the depths to these geologic contacts.

The proposed HG wells will be completed as 2-inch diameter schedule 40 PVC monitoring wells. The screen intervals for the wells will be approximately 10-feet in length and will have a 10-slot screen opening. Monitoring wells will be installed off-Site to the east of property and both on-Site and off-Site to the west of the property boundary.

Three Upper Hawthorn and seven Lower Hawthorn wells are proposed as part of this investigation program. The approximate well locations are shown in Figure 1; however, the final locations for all new wells will be dependent on accessibility and permission from off-property landowners. The following is a list of the proposed wells and completion zones for the HG deposits:

1) HG-20S -- Upper Hawthorn, off-Site eastern property boundary;
2) HG-20D -- Lower Hawthorn, off-Site eastern property boundary;
3) HG-21S -- Upper Hawthorn, off-Site eastern property boundary;
4) HG-21D -- Lower Hawthorn, off-Site eastern property boundary;
5) HG-22D -- Lower Hawthorn, off-Site western property boundary;
6) HG-23D -- Lower Hawthorn, off-Site western property boundary;
7) HG-24D -- Lower Hawthorn, off-Site western property boundary;
8) HG-25D -- Lower Hawthorn, off-Site western property boundary;
9) HG-26S -- Upper Hawthorn, off-Site eastern property boundary; and
10) HG-26D -- Lower Hawthorn, off-Site eastern property boundary.

Similar to previously installed HG monitoring wells, monitoring wells with the letter attachment "S" will be completed in the Upper Hawthorn and wells with the letter attachment "D" will be completed in the Lower Hawthorn.

2.2.1 Hawthorn Group Investigations Eastern Site Area

The EPA March 1, 2007 letter (Page 3) expressed concerns that constituent impacts may be present off-Site to the east of the Site property boundary. These concerns are based on the fact that Site constituent impacts are present in on-Site monitoring well nests HG-4S, -4I and -4D, and HG-6S and -6D. Off-Site monitoring wells ITF-2 and ITF-3 are relatively clean; however, the lack of constituent impacts in these wells may be due to their completion depths (screened intervals). Well ITF-2 appears to be completed within what is considered to be a thicker sequence of the HG middle clay unit and well ITF-3 appears to be completed in the upper portion of the Lower Hawthorn.

Monitoring wells proposed to investigate potential impacts to the east of the Site will be installed in both the Upper and Lower Hawthorn. The following six monitoring wells, going from south to north, are proposed to be installed off-Site to the east of the property boundary:

<u>Monitoring Well HG-26S and -26D</u>

Monitoring wells HG-26S and -26D will be installed in the Upper and Lower Hawthorn, respectively, downgradient of the Former Process Area on the former Cabot Carbon property (Figure 1). Therefore, monitoring well HG-26S will be completed above the HG middle clay unit. Monitoring well HG-26D will be completed in the Lower Hawthorn to better define the potential lateral extent of impacts in this area, if present.

<u>Monitoring Wells HG-20S and -20D</u>

Monitoring wells HG-20S and -20D will be installed in the Upper and Lower Hawthorn, respectively, in the vicinity of the existing Cabot Carbon monitoring well ITW-12 (Figure 1). The EPA letter indicates that potential low-level Site impacts have

been observed in monitoring well HG-4S. The proposed location for monitoring well nest HG-20S and -20D is northeast and approximately downgradient of monitoring well nests HG-4 and HG-6 and will investigate if impacts observed in these well nests are present off-Site.

Monitoring Well HG-21S and -21D

Monitoring wells HG-21S and -21D will be installed in the Upper and Lower Hawthorn, respectively, in the vicinity of the existing Cabot Carbon monitoring well ITF-2 (Figure 1). The EPA letter requests that the more permeable deposits above the middle clay unit in this area be investigated for potential Site constituent impacts. Therefore, monitoring well HG-21S will be completed above the HG middle clay unit in the vicinity of monitoring well ITF-2. Monitoring well HG-21D will be completed in the Lower Hawthorn to better define the potential lateral extent of impacts in this area, if present.

The lack of Site-related impacts in ITF-3 and its distant location from the Site property boundary does not warrant additional investigations in this area. Further, ITF-3 is clearly located downgradient of the former Cabot Carbon operations and any potential impacts, if present in this area, should not be the responsibility of Beazer. Hence, no additional monitoring wells are proposed in the vicinity of ITF-3.

2.2.2 Hawthorn Group Investigations Western Site Area

The EPA March 1, 2007 letter (Page 4) expressed concerns that constituent impacts observed in on-Site monitoring wells ITF-1, HG-2D and HG-5D may extend off-Site to the west. The screened intervals for all three of these wells are completed within the Lower Hawthorn. Monitoring wells HG-7 and -8 are located along the western Site property boundary on the northern end of the Site and do not contain Site-constituent impacts. The EPA letter hypothesizes that the lack of impacts in these wells may be due to the deeper screened intervals. The screened interval for monitoring well HG-8 is located within and immediately above the HG lower clay unit and the screened interval for monitoring well HG-7 is located within the HG lower clay unit.

Monitoring wells proposed to investigate potential impacts to the west of the Site will be installed in the Lower Hawthorn. The following four monitoring wells, going from south to north, are proposed to be installed off-Site to the west of the property boundary:

Monitoring Well HG-22D

Monitoring well HG-22D will be installed on-Site in the Lower Hawthorn to the northwest of and approximately downgradient of the Former South Lagoon and monitoring well ITF-1 (Figure 1). This monitoring well will investigate the downgradient lateral extent of the observed impacts in ITF-1 and adjacent to the former Geiersbach well.

Monitoring Well HG-23D

Monitoring well HG-23D will be installed off-Site in the Lower Hawthorn approximately downgradient of monitoring well nest HG-2S and -2D (Figure 1). The only accessible location available for this monitoring well is in the right-of-way of NW 28th Avenue. This monitoring well will investigate the downgradient lateral extent of impacts observed in monitoring well HG-2D.

Monitoring Well HG-24D

Monitoring well HG-24D will be installed off-Site in the Lower Hawthorn approximately downgradient of monitoring well nest HG-5S and -5D (Figure 1). The only accessible location available for this monitoring well is in the right-of-way of NW 30th Avenue. This monitoring well will investigate the downgradient lateral extent of impacts observed in monitoring well HG-5D.

Monitoring Well HG-25D

Monitoring well HG-25D will be installed off-Site in the Lower Hawthorn approximately downgradient of the area between monitoring wells HG-5D and HG-7 (Figure 1). The EPA letter had suggested that a monitoring well be installed on-Site along the property boundary, approximately 200-300 feet southwest of HG-7. The EPA letter also indicated that additional HG wells may be needed off-Site, if impacts were observed in this area. Alternatively, Beazer proposes to locate a well off-Site and downgradient of this area to investigate if potential impacts exist off Site. The only accessible location available for this monitoring well is in the right-of-way of NW 31st Avenue. The combination of new monitoring wells HG-24D and HG-25D and existing monitoring wells HG-17S and -17D will provide adequate data to investigate the potential for off-Site impacts downgradient of HG-5D and HG-7.

3.0 WELL CONSTRUCTION

The proposed Upper and Lower Hawthorn monitoring wells will be constructed as 2-inch ID PVC wells, with 10-foot long screens. Monitoring wells will primarily be installed using the rotasonic-drilling method; however, larger diameter isolation casings for Lower Hawthorn wells to the east of the Site may require the use of an alternative rotary drilling technology.

3.1 DRILLING AND WELL COMPLETION

Continuous 3-inch to 4-inch diameter soil/rock core will be collected from all rotasonic borings and logged by the oversight geologist/engineer to characterize lithology and observable creosote impacts, if any. Core will be described and photographed before disposing of the core with the drill cuttings. Core samples will not be saved and stored, since sufficient on-Site core currently exists for the HG deposits.

A sodium bromide tracer will be used to tag drilling fluid used in the drilling and construction of the final borehole used to construct the well. The tracer will not be used during isolation casing installation, similar to the recent UF Aquifer monitoring well installation programs.

Eastern Off-Site Wells

Monitor wells HG-20S, HG-20D, HG-21S, and HG-21D will be installed north of the former Cabot Carbon property and east of the Site property boundary. Monitoring wells HG-26S, and HG-26D will be located to the east of the former Cabot Carbon western property boundary. Because these wells will be installed in potentially impacted areas, they will require a telescoping cased completion. The Upper Hawthorn monitoring wells (HG-20S, HG-21S, and HG-26S) will be constructed with a single telescopic isolation casing by drilling a nominal 10-inch diameter hole from land surface to approximately 1-2 feet into the HG upper clay unit with a rotasonic override casing. A 6-inch ID isolation casing will be set in the upper clay unit and grouted to land surface. After an appropriate grout set-up period, a nominal 6-inch hole will be advanced through the center of the 6-inch ID casing into the Upper Hawthorn using an approximately 6-inch OD rotasonic override casing. A permanent 2-inch ID well casing and screen will be constructed inside of the override casing (Figure 2a).

The Lower Hawthorn monitoring wells (HG-20D, HG-21D, and HG-26D) will be constructed with two telescoping isolation casings, prior to setting the final 2-inch ID well casing. The first isolation casing will be installed by drilling from land surface to approximately 1-2 feet into the HG upper clay unit. A 10-inch ID isolation casing will be set in the upper clay unit and grouted to land surface. After an appropriate grout set-up period, a nominal 10-inch hole will be advanced through the center of the 10-inch ID casing approximately 5 feet into the HG middle clay unit using a 10-inch ID rotasonic override casing. A permanent 6-inch ID isolation casing will be set inside of the override casing and grouted to land surface. After an appropriate grout set-up period, a nominal 6-

inch hole will be advanced through the center of the 6-inch ID casing into the Lower Hawthorn using an approximately 6-inch OD rotasonic override casing. A permanent 2-inch ID well casing and screen will be constructed inside of the override casing (Figure 2a).

The monitoring well will be completed as per the State of Florida requirements for monitoring wells. The well will be constructed with 2-inch ID schedule 40 PVC screen and casing. The well screen will be 10-feet in length, with a 10-slot screen opening. A PVC casing, with borehole centralizers will extend to land surface. The filter pack will consist of 10 x 20 silica sand and will be poured into the borehole through the override casing. The filter pack will extend approximately 2 feet above the top of the well screen and a 1 to 2-foot thick bentonite plug will be placed above the filter pack. The bentonite will be allowed to hydrate for approximately 2 hours prior to grouting the remainder of the borehole to land surface. All grout will be tremied into the borehole.

Western Off-Site and On-Site Wells

All HG monitor wells proposed to investigate potential Lower Hawthorn groundwater impacts will be installed in adjacent residential areas. Because all of these wells will be installed in areas where the Surficial Aquifer is not impacted and hydraulically upgradient of the Site, no telescoping isolation casing will be required to seal off the Surficial Aquifer before advancing the borehole into the HG deposits. The Lower Hawthorn monitoring wells proposed for this area will only require a single telescoping casing to isolate the Upper Hawthorn prior to drilling into the Lower Hawthorn.

A single 6-inch diameter isolation casing will be installed by drilling a nominal 10-inch diameter hole from land surface to approximately 5 feet into the HG middle clay unit with a rotasonic override casing. A 6-inch ID isolation casing will be set in the middle clay unit and grouted to land surface. After an appropriate grout set-up period, a nominal 6-inch hole will be advanced through the center of the 6-inch ID casing into the Lower Hawthorn using an approximately 6-inch OD rotasonic override casing. A permanent 2-inch ID well casing and screen will be constructed inside of the override casing (Figure 2b).

The monitoring well will be completed as per the State of Florida requirements for monitoring wells. The well will be constructed with 2-inch ID schedule 40 PVC screen and casing. The well screen will be 10-feet in length, with a 10-slot screen opening. A PVC casing will extend to land surface. The filter pack will consist of 10 x 20 silica sand and will be poured into the borehole through the override casing. The filter pack will extend approximately 2 feet above the top of the well screen and a 1 to 2-foot thick bentonite plug will be placed above the filter pack. The bentonite will be allowed to hydrate for approximately 2 hours prior to grouting the remainder of the borehole to land surface. All grout will be tremied into the borehole.

3.2 BOREHOLE AND CASING GROUTING

The grout slurry will consist of ASTM Type I Portland cement, powdered bentonite, and potable city water. The cement will first be mixed into a smooth slurry using 6 to 7 (PER ASTM) gallons of water for each 94-pound bag of cement; 5 pounds of powdered bentonite will be added to the cement mixture to minimize cement shrinkage during the curing process. The annular spacing outside of all telescoping casings will be filled from the bottom up via a tremmie pipe. Where required, casing centralizers will be installed at appropriate distances on the outside of all casings to help minimize grout channeling and to help ensure a complete grout seal. The grout will be allowed to cure a minimum of 12 hours prior to additional work being performed inside of the casing.

3.3 EQUIPMENT DECONTAMINATION

All drilling equipment, rods, bits, tools and rotasonic casing that enter the borehole during the drilling and installation of each of the telescoping casings will be decontaminated prior to advancing the borehole to the next surface/well casing completion depth. Similarly, all drilling equipment and tools will be decontaminated prior to drilling the open hole beneath the lowermost casing and prior to starting a new borehole.

3.4 WELL SURFACE COMPLETION AND DEVELOPMENT

The 2-inch diameter PVC well casing will extend approximately 2.5 ft above grade, where appropriate and a flush mount completion will be installed in areas where an above grade completion is not possible. A protective steel locking casing will be placed over the well casing. The stickup will be spray painted safety yellow with the well ID stenciled with black paint. A 3-foot by 3-foot by 6-inch thick concrete pad will be constructed around the stickup, where appropriate. The pad will be completed 3 inches above existing grade with the apron tapered 2 inches lower such that precipitation runoff will flow away from the well. Bollard poles will be located around casings with stickup for surface protection, as needed. All locks for the wells will be keyed alike and match existing Site locks. After installation, the ground surface, and the top of the inner casing will be surveyed to within 0.01-foot vertical accuracy. As-built well diagram will be constructed for each of the wells.

The wells will be developed no sooner than 24 hours after installation to remove fine material from around the monitored interval of the well. Wells will be developed by bailing or by pumping, as determined by the field geologist, in consultation with the drilling firm. Well development shall consist of over-pumping of the well until the discharge water appears to be visibly clear. The purge water will be monitored for pH, temperature, specific-conductance, turbidity and bromide. Wells will be developed up to a maximum of 1 hour or until the water-quality field measurements become stable and the purge water is visibly free of sand, as documented by the field geologist.

Data collection and recording will follow procedures used in previous fieldwork at the Site. A real-time evaluation of the data and field notes from the drilling of the borehole will be conducted to determine if there is a potential for cross-contamination during construction. The review will include all well-construction field notes, core examination (including FID/PID headspace measurements), and any downhole logs.

3.5 SAMPLING

Groundwater Sampling

Following the development of the wells, a groundwater sample will be collected from each of the wells and analyzed for potential Site constituents. Sample collection procedure and collection criteria will be similar to the existing monitoring program at the Site described in the Soil and Ground Water Sampling Plan (TRC 2002a) and Floridan Aquifer Monitoring Plan (TRC 2004).

The long-term groundwater monitoring program and sampling frequency will be determined after the initial round of groundwater sampling results has been evaluated. A reevaluation of the current monitoring plan and wells included in this program will be performed once a complete analysis of the recent HG data is completed. The reevaluation will include recommendations for future sampling locations and frequency.

3.6 INVESTIGATIVE DERIVED WASTE

All wastewater and mud generated during the activities described in this Work Plan, including wastewater generated from drilling, development, and sampling will be containerized in drums or bulk tanks. The aqueous fractions from drums or bulk tank(s) will be mixed with influent water from the Surficial Aquifer groundwater extraction system and treated on-Site, prior to discharging to the permitted POTW. Soils and rock cuttings will be staged in sealed roll-off containers for characterization and off-Site disposal.

3.7 PROJECT MANAGEMENT PLANS

The project management plans that will be utilized to guide the work outlined in this section will include the following documents:

1) Health and Safety Plan (HASP);
2) Sampling and Analysis Plan (SAP); and
3) Quality Assurance Project Plan (QAPP).

A HSP and QAPP were previously prepared (TRC, 2002b; TRC, 2002c) and incorporated the items listed below:

Health and Safety Plan

A project-specific Health and Safety Plan (HASP) (TRC 2002b) has been prepared to define the health and safety requirements for this project. This HASP establishes the procedures and requirements used to minimize health and safety risks to persons working on the project. The HASP meets the requirements of the Occupational Safety and Health Administration (OSHA) Standard, 29 CFR 1910.120 and 29 CFR 1926.65, "Hazardous Waste Operations and Emergency Response". The HASP includes a discussion of the following:

- Health and safety responsibilities;
- Hazard analysis;
- Personnel training requirements;
- Medical surveillance program;
- Site control procedures;
- Decontamination requirements; and
- Safety procedures and emergency procedures.

Quality Assurance Project Plan

Quality assurance/quality control activities and requirements, including project quality objectives, field data reduction, data validation, and quality assurance objectives for measurements for all groundwater samples collected under this Work Plan, will be performed as specified in Quality Assurance Project Plan (TRC 2002c). The QAPP plan includes the following:

- Quality assurance (QA) objectives;
- Sampling procedures;
- Sampling custody;
- Analytical procedures;
- Calibration and controls and frequency;
- Data reduction validation and reporting;
- Quality Control (QC) procedures;
- Performance and system audits;
- Assessment procedures for data acceptability;
- Preventive maintenance;
- Corrective action;
- QA reports to management;
- SOPs for laboratory sampling control and custody;
- Data validation in analytical reports; and
- Analysis for pentachlorophenol.

Sampling and Analysis Plan

A SAP will be amended to accommodate new procedures needed for this fieldwork. The relevant SAP sections deal with the following:

- Collection procedures;
- Sampling procedures;
- Field measurement procedures;
- Sampling handling;
- Chain-of-Custody procedures;
- Field analytical procedures;
- Sample control; and
- Sample analysis.

4.0 REPORTING AND SCHEDULE

4.1 REPORTING

A letter report documenting the results of activities described in this Workplan will be submitted for Agency review after the completion of the well-drilling program and the results of the groundwater samples are obtained. The letter report will include a description of well completion activities, problems encountered, borehole logs and as-built well completion diagrams.

Groundwater samples will be collected approximately 1 week after the development of the wells. The laboratory results of these analyses will be submitted to the stakeholders as part of the final completion report.

4.2 SCHEDULE

The schedule for implementation of this workplan will be dependent on the time required for stakeholders review, comment and approval of the workplan. In addition, the schedule for the monitoring well installation will be dependent on obtaining access agreements from off-property landowners and on driller availability. Once stakeholder approval of the workplan is received, it will require approximately 5 months to complete the wells. The following is a list of major tasks and estimated time to complete following approval of the workplan:

1) Develop bid documents, solicit bids and contract driller (4 weeks);
2) Schedule driller and mobilize to field (4 weeks);
3) Well installation and development (10 weeks); and
4) Report well completion and groundwater sample results (3 weeks)

5.0 REFERENCES

GeoTrans, 2004a, Addendum to the Floridan Aquifer Monitoring Program, Supplemental Upper Floridan Aquifer Monitoring Well Installation, Koppers, Inc. Site, Gainesville, Florida, June 24, 2004.

GeoTrans, 2004b, Data Report for Additional Investigation of Hawthorn Group DNAPL Source Evaluation for the Koppers Industries Property, Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, September, 2004.

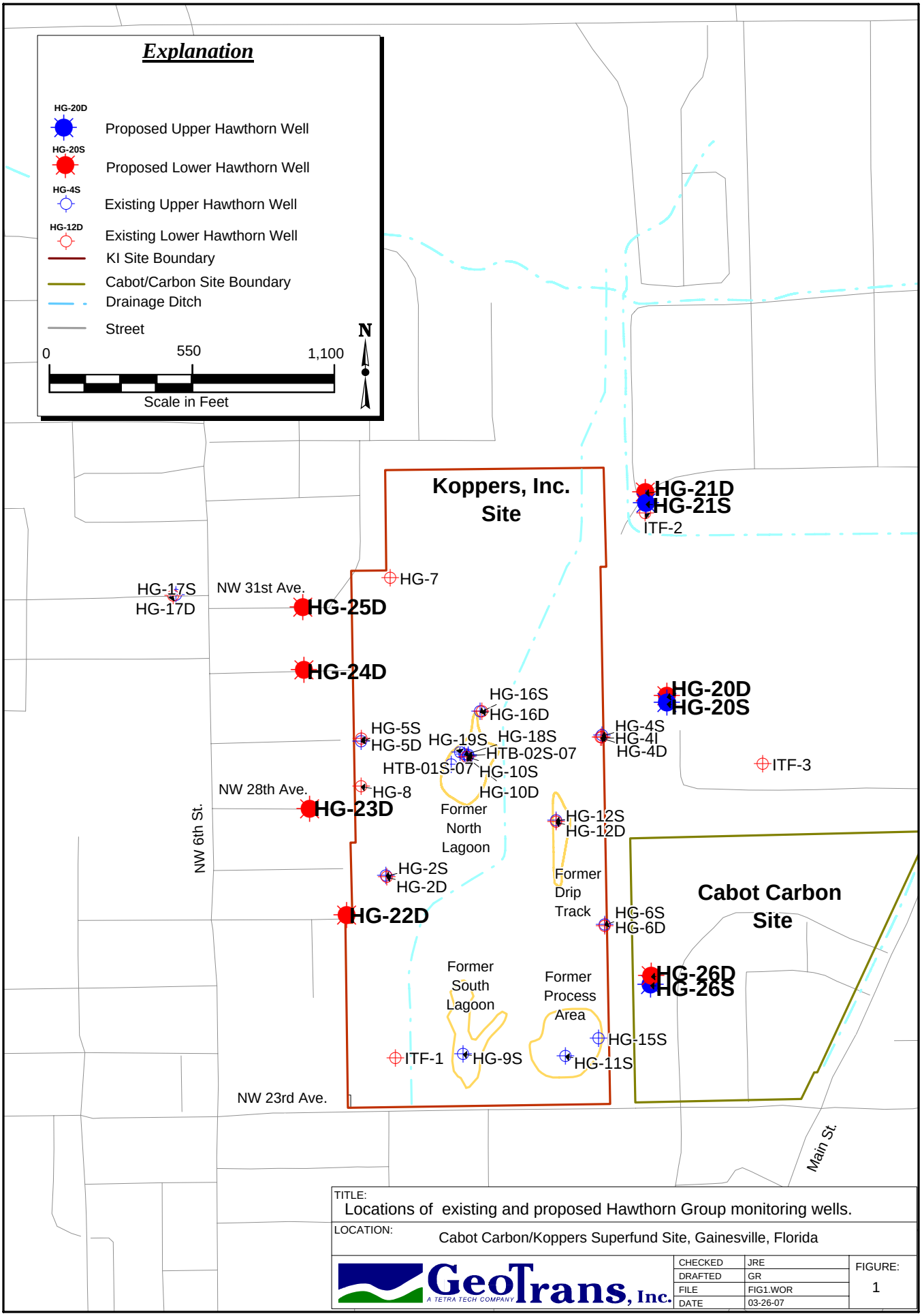
TRC, 1997, Proposed Stage 2 Groundwater Monitoring Program, Initial Groundwater Remedial Action, August 1997.

TRC, 2002a. Soil and Ground Water Sampling Plan. Cabot Carbon/Koppers Superfund Site, Gainesville, Florida. January 2002.

TRC, 2002b. Health and Safety Plan. Cabot Carbon/Koppers Superfund Site, Gainesville, Florida. January 2002.

TRC, 2002c. Quality Assurance Project Plan for the Additional Characterization of the Hawthorn Group Formation Workplan. Cabot Carbon/Koppers Superfund Site, Gainesville, Florida. January 2002.

TRC, 2004, Floridan Aquifer Monitoring Plan, Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, June 2004.



TITLE: Locations of existing and proposed Hawthorn Group monitoring wells.

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

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FIGURE: 1

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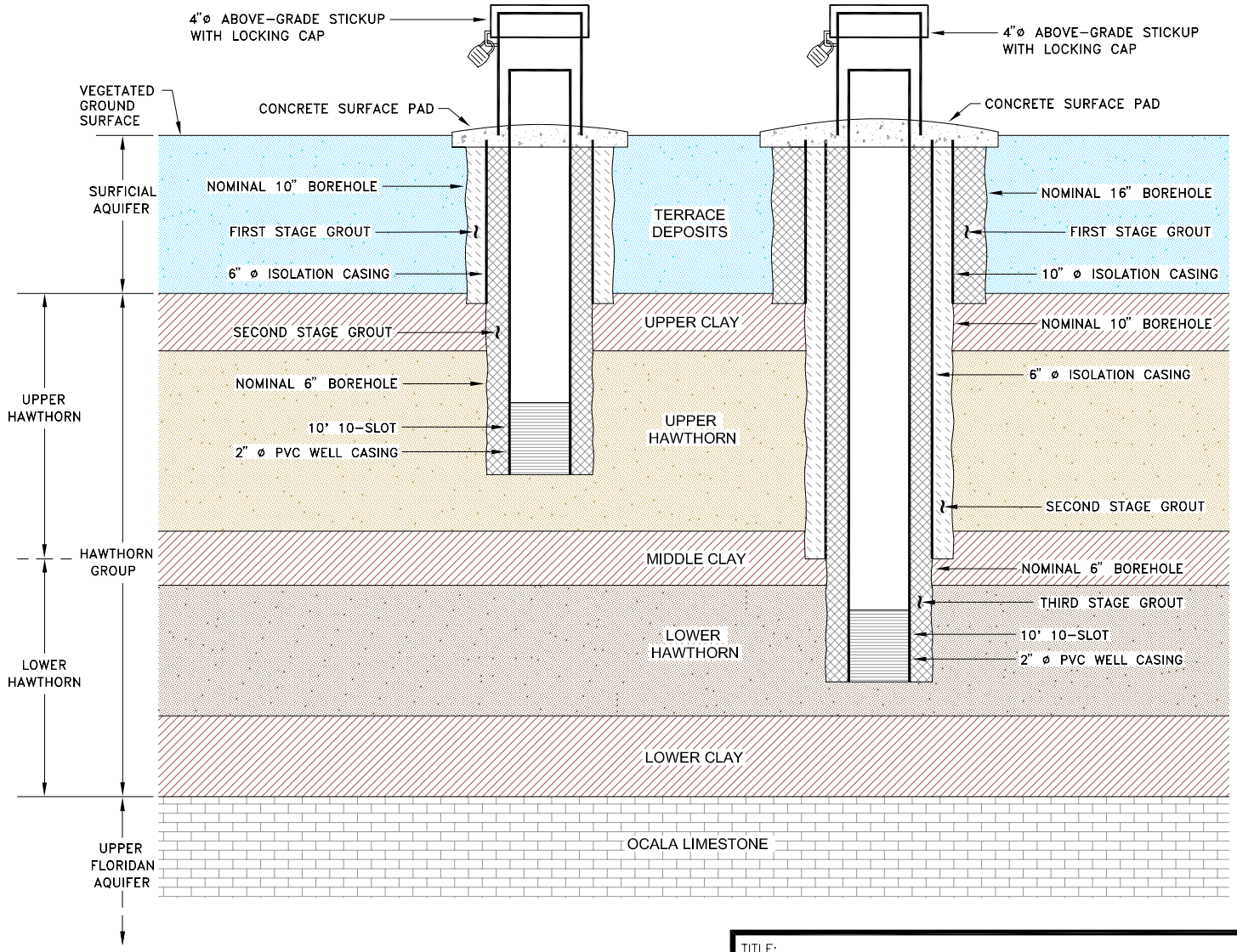

NOT TO SCALE

TITLE:
CONCEPTUAL DESIGN FOR HAWTHORN GROUP MONITORING WELLS EAST OF SITE

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

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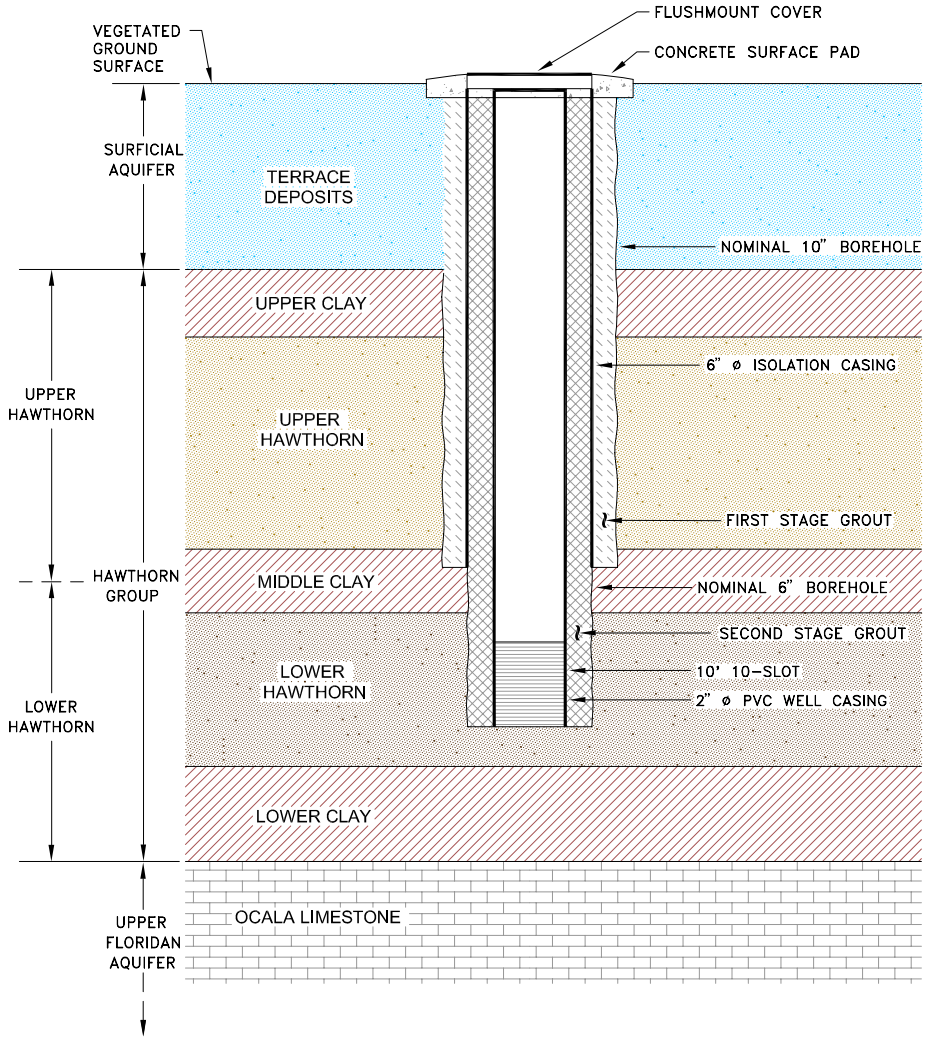
FIGURE: 2a



NOT TO SCALE

TITLE:
CONCEPTUAL DESIGN FOR HAWTHORN GROUP MONITORING WELLS WEST OF SITE

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

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FIGURE: 2b