Fourth Five-Year Review Report
for
Cabot Carbon/Koppers
FLD980709356

Gainesville
Alachua County, Florida

March 2016

United States Environmental Protection Agency
Region 4
Atlanta, Georgia

Approved by:

Franklin E. Hill
Director, Superfund Division

Date:

3/30/16

Fourth Five-Year Review Report
for
Cabot Carbon/Koppers
North Main Street and NW 23rd Avenue
Gainesville
Alachua County, Florida

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List of Acronyms

AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
AROD	Amendment to the Record of Decision
BaP-TEQ	Benzo(a)Pyrene Toxic Equivalence Quotient
Beazer	Beazer East, Inc.
Cabot	Cabot Carbon, Inc.
CCA	Copper chromated Arsenate
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
DNAPL	Dense Non-Aqueous Phase Liquid
EPA	United States Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FDER	Florida Department of Environmental Regulation
FS	Feasibility Study
FYR	Five-Year Review
GCTL	Groundwater Cleanup Target Levels
gpm	Gallons per Minute
GRU	Gainesville Regional Utilities
IC	Institutional Control
MCL	Maximum Contaminant Level
MNR	Monitored Natural Reduction
mg/kg	Milligrams per Kilogram
µg/L	Micrograms per Liter
NAPL	Non-Aqueous Phase Liquid
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
ng/kg	nanograms per kilogram
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PAHs	Polycyclic Aromatic Hydrocarbons
PCP	Pentachlorophenol
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SCTL	Soil Cleanup Target Level
SRI	Superfund Redevelopment Initiative
TBC	To-Be-Considered
TCDD	2,3,7,8-Tetrachlorodibenzo-p-dioxin
TCLP	Toxicity Characteristic Leaching Procedure
TEC	Threshold Effects Concentration
TEQ	Toxic Equivalence Quotient
UAO	Unilateral Administrative Order

Executive Summary

The Cabot Carbon/Koppers Superfund site (the Site) covers 136 acres bridging two properties in Gainesville, Florida. It consists of two areas: the Cabot site covering 50 acres to the east and the Koppers site covering 86 acres to the west. Cabot Carbon operated a pine tar and charcoal production facility from 1911 until 1967 on the Cabot site. A wood-treating operation on the Koppers site was operated from 1916 until December 2009. Waste handling practices resulted in groundwater, soil and off-site surface water contaminated with pentachlorophenol, arsenic, polycyclic aromatic hydrocarbons (PAHs), dioxins/furans, benzene, toluene, ethylbenzene, xylenes, phenols and chromium. The United States Environmental Protection Agency (EPA) proposed the Site for inclusion on the Superfund program's National Priorities List (NPL) in 1983, and the Site was finalized on the NPL in 1984. The triggering action for this Five-Year Review (FYR) was the signing of the previous FYR on March 31, 2011.

The EPA issued a Record of Decision (ROD) in 1990 to address sitewide soil and surficial groundwater contamination. The Cabot site remedy included installing a groundwater trench to intercept contaminated groundwater from the upper Surficial Aquifer and discharge to the publicly owned treatment works (POTW) where the water would be treated. The remedy also called for additional soil sampling at the former Cabot wastewater lagoon area.

The 1990 Koppers site remedy included: extraction of contaminated groundwater from the shallow aquifer; pre-treatment and discharge to the POTW; as well as excavation of contaminated soils from the former North and South Lagoons on the Koppers facility.

Post-ROD remedial investigations revealed that the amount of dense non-aqueous phase liquid (DNAPL) and groundwater impacts were greater than expected. On February 2, 2011, the EPA issued an Amendment to the ROD (AROD), selecting remedies at both the Cabot site and Koppers site for on- and off-site soils and sediments, surface water, and groundwater.

The remedy is expected to be protective of human health and the environment upon completion. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risks in these areas. At the Cabot site, the interceptor trench is effective at capturing groundwater in the shallow aquifer, and exposure pathways that could result in unacceptable risks are being controlled by institutional controls that restrict development and well usage in the area. At the Koppers site, off-site soil remediation is complete, and on-site access is prohibited. Groundwater consumption in the area is prohibited. Alachua County Environmental Protection Department conducts annual sampling of offsite irrigation wells to ensure that Site contamination is not present.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Cabot Carbon/Koppers		
EPA ID: FLD980709356		
Region: 4	**State:** FL	**City/County:** Gainesville/Alachua County
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	**Has the site achieved construction completion?** No	
REVIEW STATUS		
Lead agency: EPA **If "Other Federal Agency" selected above, enter Agency name:**		
Author name: Rusty Kestle (EPA), Johnny Zimmerman-Ward (Skeo Solutions) and Ryan Burdge (Skeo Solutions)		
Author affiliation: EPA and Skeo Solutions		
Review period: 5/01/2015 – 3/31/2016		
Date of site inspection: 6/09/2015		
Type of review: Statutory		
Review number: 4		
Triggering action date: 3/31/2011		
Due date *(five years after triggering action date)*: 3/31/2016		

Five-Year Review Summary Form (continued)

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
None

Issues and Recommendations Identified in the Five-Year Review:

OU(s): 1,2,3,4	**Issue Category: Institutional Controls**			
	Issue: Additional institutional controls will be needed in the future for parcels that will not be cleaned up to unrestricted use and unlimited exposure at both the Cabot and Koppers sites.			
	Recommendation: Beazer East has submitted an institutional controls plan for the Koppers parcels which is being evaluated and will be modified and implemented as needed. For the Cabot parcels, additional institutional controls will be implemented as the need is identified in the final Focused Feasibility Study being prepared for the former Cabot Carbon parcels.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	3/31/2017

OU(s): 1 and 5	**Issue Category: Remedy Performance**			
	Issue: PAH contamination may remain above unrestricted use levels in creek sediments.			
	Recommendation: Conduct additional sampling to eliminate uncertainty about the PAH concentrations in sediment.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	3/31/2017

OU(s): 3	**Issue Category: Remedy Performance**			
	Issue: Investigation of Hawthorn Group groundwater contamination is not yet complete.			
	Recommendation: Complete Hawthorn Group groundwater investigations and implement the remedy selected in the AROD.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	3/31/2017

Protectiveness Statement

Operable Unit:	*Protectiveness Determination:*
Sitewide	Will be Protective

Protectiveness Statement:
The remedy is expected to be protective of human health and the environment upon completion. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risks in these areas. At the Cabot site, the interceptor trench is effective at capturing groundwater in the shallow aquifer, and exposure pathways that could result in unacceptable risks are being controlled by institutional controls that restrict development and well usage in the area. At the Koppers site, off-site soil remediation is complete, and on-site access is prohibited. Groundwater consumption in the area is prohibited.

Environmental Indicators

- *Current human exposures at the Site are under control.*
- *Current groundwater migration is under control.*

Are Necessary Institutional Controls in Place?

☐ All ☒ Some ☐ None

Has EPA Designated the Site as Sitewide Ready for Anticipated Use?

☐ Yes ☒ No

Has the Site Been Put into Reuse?

☒ Yes ☐ No

Fourth Five-Year Review Report
for
Cabot Carbon/Koppers Superfund Site

1.0 Introduction

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy will continue to be protective of human health and the environment. FYR reports document FYR methods, findings and conclusions. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 121 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA Section 121 states:

> "If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews."

The EPA interpreted this requirement further in the NCP, 40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii), which states:

> "If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after initiation of the selected remedial action."

Skeo Solutions, an EPA Region 4 contractor, assisted EPA in conducting the FYR and prepared this report regarding the remedy implemented at the Cabot Carbon/Koppers Superfund site (the Site) in Gainesville, Alachua County, Florida. This FYR was conducted from May 2015 to March 2016. The EPA is the lead agency for developing and implementing the remedy for the potentially responsible party (PRP)-financed cleanup at the Site. Florida Department of Environment (FDEP), as the support agency representing the State of Florida, has reviewed all supporting documentation and provided input to the EPA during the FYR process.

This is the fourth FYR for the Site. The triggering action for this statutory review is the previous FYR. The FYR is required due to the fact that hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure.

Based on the Consent Decree dated July 9, 2013, the Site currently consists of five operable units (OUs), and includes two distinct contaminant sources (Cabot and Koppers) that are addressed separately due the two sources having different PRPs (Cabot Carbon for the Cabot site and Beazer East for the Koppers site).

- **Operable Unit 1 (OU-1)** contains all remedial actions related the Cabot contamination and remediation of contaminated sediments in Hogtown and Springstead Creeks attributable to Cabot.

- **Operable Unit 2 (OU-2)** contains all remedial actions related to on-site soil and the surficial aquifer underlying the Koppers area.

- **Operable Unit 3 (OU-3)** contains all remedial actions related to the Hawthorn Group (i.e. the hydrogeologic unit lying below the surficial aquifer and above the Upper Floridan aquifer) with contamination attributable to either Cabot or Koppers.

- **Operable Unit 4 (OU-4)** contains all remedial actions related to the Upper Floridan aquifer with contamination attributable to the former Koppers facility.

- **Operable Unit 5 (OU-5)** contains all remedial actions to address the areal extent of soil and sediment contamination attributable to Koppers located west and north of the former Koppers facility and remediation of contaminated sediments in Hogtown and Springstead Creeks attributable to Koppers.

The site-wide operable unit created in the 1990 ROD which addressed the remediation of the surface soil and surficial aquifer at both the Cabot and Koppers portions of the Site has now been superseded by Operable Units OU-1 through OU-5 pursuant to the 2011 Amended ROD. This site-wide FYR report addresses all of the OUs at the Site.

2.0 Site Chronology

Table 1 lists the dates of important events for the Site.

Table 1: Chronology of Site Events

Event	Date
Initial problem discovered	November 1979
Industrial activities began at Koppers site	1916
Industrial activities began at Cabot site	1911
Florida Department of Environmental Remediation conducted biological survey of Hogtown Creek and found it devoid of life	October 1977
The EPA proposed the Site for listing on the National Priorities List (NPL)	September 8, 1983
The EPA and FDEP initiated remedial investigation/feasibility study (RI/FS)	January 1984
The EPA added the Site to the NPL	September 21, 1984
FDEP completed the RI/FS	May 31, 1987
FDEP completed the supplemental RI	September 1989
The EPA signed a Record of Decision (ROD)	September 27, 1990
The EPA and Beazer East enter into Unilateral Administrative Order (UAO) to complete the remedy for the Koppers site	March 1991
Cabot and Beazer initiated remedial designs	April 1991
Beazer began remedial action for the Surficial Aquifer	September 1991
Cabot Carbon completed remedial design and initiated remedial action	December 1993
Beazer East started operating the Surficial Aquifer groundwater extraction system at the Koppers site	1995
The EPA and Cabot entered into Administrative Order on Consent (AOC) for removal action at Cabot site	January 1995
Construction of the groundwater interceptor trench at the Cabot site completed	June 1995
Beazer East submitted supplemental FS based on the existing and updated data and an improved understanding of flow and transport mechanisms at the Koppers site	January 1997
The EPA signed first FYR	March 23, 2001
The EPA signed second FYR	April 4, 2006
Cabot submitted a report on off-site surface water and sediment data	June 2008
Koppers ceased wood-treating operations	December 2009
Beazer completed purchase of Koppers property	March 2010
FS for Koppers site completed	May 2010
Beazer completed installation of a Floridan Aquifer extraction well	September 2010
The EPA issued an Amendment to the ROD (AROD) for sitewide cleanup activities	February 2, 2011
The EPA signed third FYR	March 31, 2011
Cabot submitted final report for interim tar removal actions in Springstead and Hogtown creeks	August 2011
Cabot completed a vapor intrusion investigation at the Northside shopping center	May 17, 2013
The EPA and Beazer East entered into an agreement requiring Beazer East to design and implement the selected remedy at the Koppers site	July 2013
Beazer East completed the off-site soil remediation at OU-5	November 14, 2014

3.0 Background

3.1 Physical Characteristics

The Site is located in an urban area of the northern part of the City of Gainesville, Alachua County, Florida (Figure 1). The surrounding area consists of mixed commercial and residential areas. The Site is approximately 136 acres and consists of two areas separated by a rail line: the 50-acre Cabot site to the east and the 86-acre Koppers property and adjacent residential area to the west (Figure 2).

The Cabot site is a former pine tar and charcoal facility and has been redeveloped into a shopping center. The primary original sources of contamination consisted of three unlined lagoons in the northwest area of the former Cabot property, which were used for wastewater storage and for product recovery from the pine distillation processes (Figure 2). Prior to Cabot Carbon taking control of the site in the 1940's, the configuration of the site had evolved over time since 1911 and there were several different waste disposal and product storage areas located throughout the property and in the immediate areas to the north of the Cabot area property boundary. However, the main larger sources of contamination that were present under Cabot operations and ownership were the three unlined lagoons.

The Koppers site is a former wood-treating facility that operated until 2009. The property is fully fenced and includes an active groundwater treatment system. The main source areas include the Former Process Area, the Former South Lagoon, the Former North Lagoon and the Former Drip Track (Figure 2). The property is currently unused.

The Site is underlain by three major hydrogeologic units: the Surficial Aquifer, the Hawthorn Group and the Upper Floridan Aquifer. The Upper Floridan Aquifer is used regionally for water supply. The City of Gainesville drinking water supply at the Gainesville Regional Utilities (GRU) Murphree well field is approximately 2.5 miles northeast and downgradient of the Site, but it is currently unaffected by site contamination.

Runoff from the Koppers site drains to the northeast into Springstead Creek, via a ditch just off-site. Springstead Creek is about 750 feet north of Koppers and flows west and eventually discharges to Hogtown Creek, approximately 3,000 feet west of the Site. The Site lies within the Hogtown Creek drainage basin, which drains 15.6 square miles. Hogtown Creek flows southward across a transition zone into the western plains region, where it ultimately discharges directly to the Upper Floridan Aquifer via Haile sink, located approximately 10 miles downstream of the Site.

3.2 Land and Resource Use

The areas to the north, east and south include zones of residential, commercial and mixed uses. The areas to the west and north are single-family and multi-family residences. A Gainesville Public Works facility and several small businesses are also located to the northeast of the Site. An abandoned railway is located between the Cabot and Koppers sites.

Current uses of the Cabot site include a shopping center with a large parking lot, retail stores, commercial office space and multiple car dealerships. The Cabot site includes parcels zoned for use as light industrial, commercial and mixed uses. No anticipated changes to current land uses were identified.

The Koppers facility was operated on an 86-acre parcel (08250-000-000) located at 200 NW 23rd Avenue. The property is zoned for general industrial use and is currently owned by Beazer East, Inc. The property is no longer used for industrial activity. Reasonably anticipated future land use is likely to be commercial, recreational or mixed use. The findings of a 2010 reuse assessment indicated that the selected remedial components would be compatible stakeholder-developed reuse goals, including mixed-use and open space. The EPA, Beazer East and the City of Gainesville will together identify potential site planning options and considerations.

Residential parcels of the Stephen Foster neighborhood are located west of the Koppers property, including several residential parcels located immediately adjacent to the fence line at the western Koppers property boundary.

The City of Gainesville public water supply wells are located approximately 2.5 miles northeast of the Site. Residents in the area use the public water supply. A private well survey conducted in 2003, and subsequent well sampling, found no contamination in private drinking water wells or private irrigation wells in the area.

3.3 History of Contamination

Cabot Site

The pine tar and charcoal generation facility at the Cabot site began operations in 1911 and operated under various companies. Cabot Carbon, Inc. (Cabot) acquired the property in 1945 and operated it until 1966. Cabot's wastewater was placed in a concrete-lined pond in the northern part of the property and three unlined earthen lagoons later constructed to the north and downstream of the lined pond.

In 1967, the new property owner breached these three lagoons and the contents flowed off-site through an adjacent 50-acre wetland and into a stormwater ditch connecting with Springstead and Hogtown Creeks. In 1977, Florida Department of Environmental Regulation (FDER) (now FDEP) conducted a biological survey in parts of Hogtown Creek and determined it was devoid of life for 1.1 miles downstream from the point of drainage discharge from the Cabot site. Cleanup operations were performed in 1979 to remove some contaminated sediments from the ditch, but there is no documented evidence of the extent of remediation activities.

Koppers Site

The facility operated under various ownerships from 1916 until late 2009 when Koppers, Inc. ceased wood-treatment operations at the facility. The PRP, Beazer, purchased the property from Koppers, Inc., effective March 31, 2010, in order to facilitate remediation and possible redevelopment. Throughout its operational history, the facility used creosote, pentachlorophenol (PCP) and copper chromated arsenate (CCA) in the treatment processes. Use of CCA in the treatment processes continued until operations closed in 2009. Dust generated during site operations led to soil contamination in adjacent residential areas.

3.4 Initial Response

Results from 1983 investigations by the EPA found that: one shallow Koppers well was contaminated with naphthalene; three shallow wells around the Cabot property contained organic chemicals; and soil samples collected near a former Cabot lagoon contained high concentrations of naphthalene, phenanthrene, PCP, phenol, benzene, toluene, ethylbenzene, xylene and copper.

Surface water samples from the North Main Street ditch indicated various organic compound contamination and chemical compounds associated with destructive distillation and creosote wood-preserving processes. Other surface water and sediment contamination was also found at various locations. The EPA proposed the Site for the Superfund program's National Priorities List (NPL) in September 1983, and it was listed as final on the NPL in September 1984. In 1985, under a program run by FDEP called "Operation Jumpstart", an interim groundwater remedy was put in place by FDEP along the eastern edge of the Cabot site. A lift station, installed in the drainage ditch along the west side of North Main Street, collected groundwater, which was then pumped to the GRU publicly owned treatment works (POTW) for treatment and disposal.

3.5 Basis for Taking Action

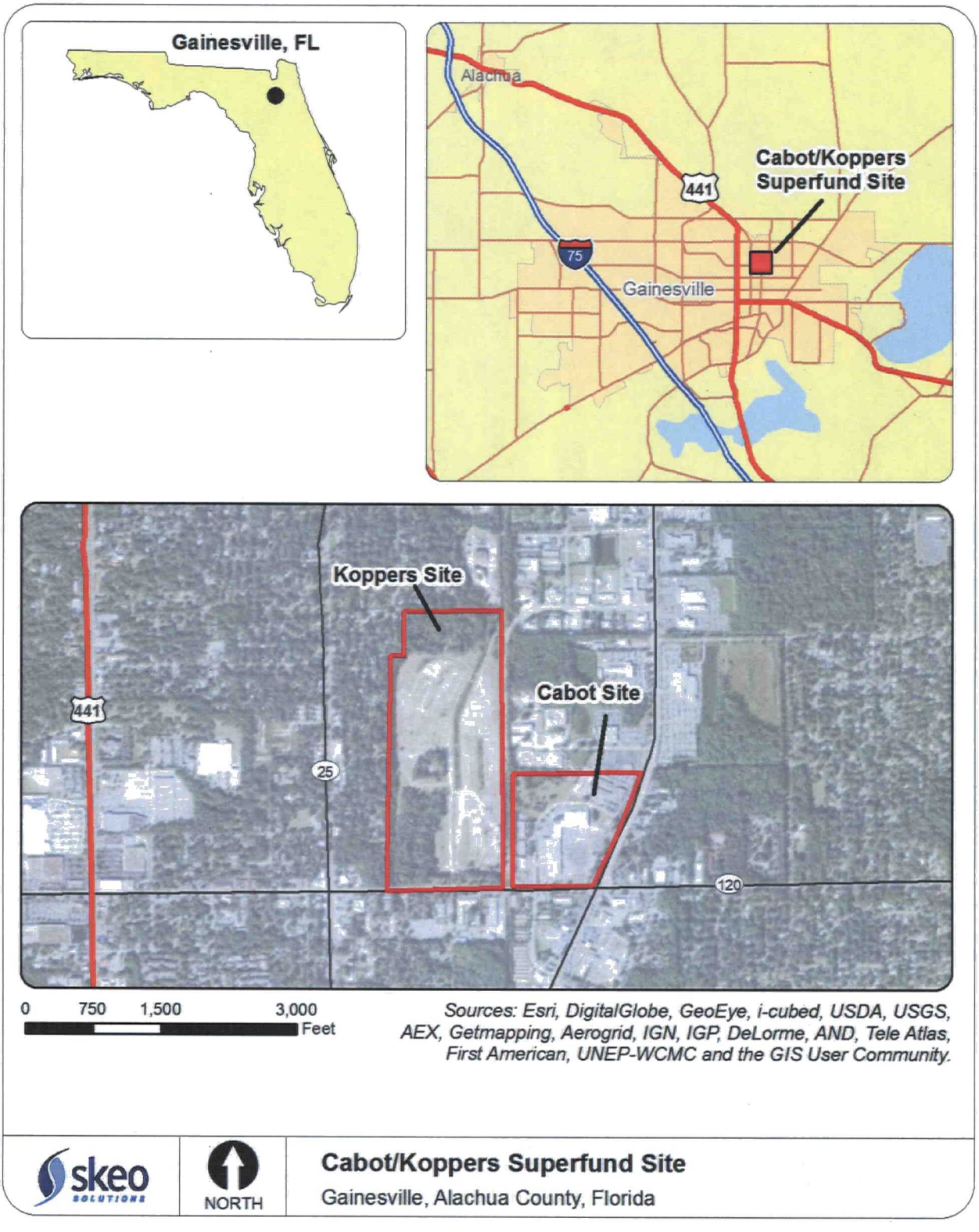
The 1990 Feasibility Study (FS) included a sitewide risk assessment that evaluated potential exposure pathways and risks to potentially exposed populations. The initial media of concern at the Site included soil, groundwater, surface water, sediment and air. Due to the large number of constituents detected in these media, the risk assessment included a limited number of indicator chemicals:

- Arsenic.
- Benzene.
- Hexavalent Chromium.
- Naphthalene.
- Polycyclic aromatic hydrocarbons (PAHs).
- PCP.
- Phenol.

The risk assessment indicated that northern and eastern migration of contaminated surficial groundwater presented a potential health risk from hypothetical future receptors utilizing the shallow aquifer as a potable water source. Site constituents in the on-site source areas were found to contribute to the potential risks only via migration to the groundwater. The ecological risk assessment conducted as part of the 1990 FS identified the environmental exposure pathway of the most potential significance is the exposure of aquatic life in the Springstead Creek and the north Main Street ditch to contaminants in the surface water and sediments.

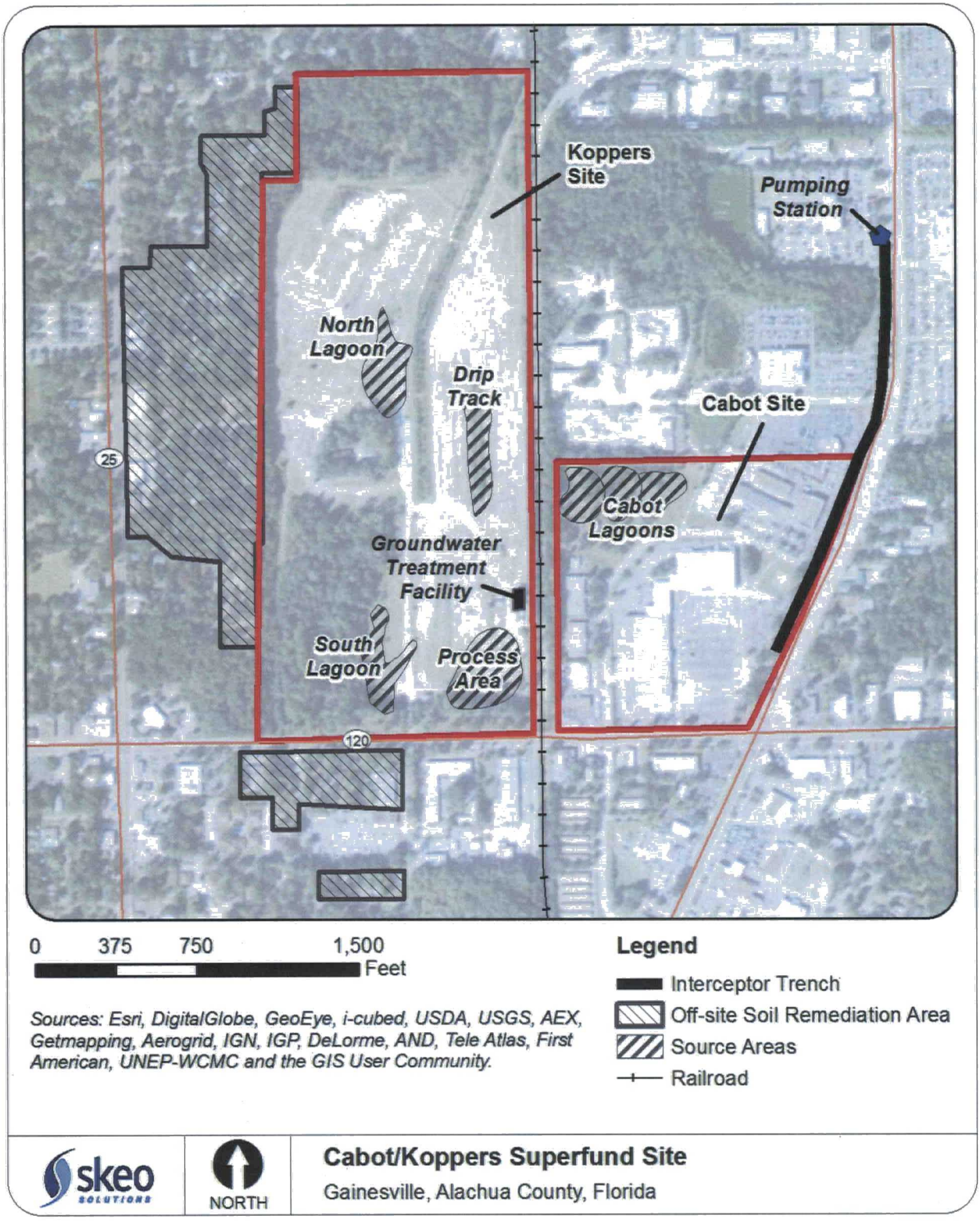
EPA is basing the groundwater cleanup on EPA/FDEP drinking water Maximum Contaminant Levels (MCLs) and has selected default Florida risk-based corrective action soil cleanup levels and default EPA/FDEP sediment levels adjusted for background for sediment cleanups.

Figure 1: Site Location Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding the EPA's response actions at the Site.

Figure 2: Detailed Site Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding the EPA's response actions at the Site.

4.0 Remedial Actions

In accordance with CERCLA and the NCP, the overriding goals for any remedial action are protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARARs). A number of remedial alternatives were considered for the Site, and final selection was made based on an evaluation of each alternative against nine evaluation criteria that are specified in Section 300.430(e)(9)(iii) of the NCP. The nine criteria are:

1. Overall Protection of Human Health and the Environment
2. Compliance with ARARs
3. Long-Term Effectiveness and Permanence
4. Reduction of Toxicity, Mobility or Volume through Treatment
5. Short-Term Effectiveness
6. Implementability
7. Cost
8. State Acceptance
9. Community Acceptance

4.1 Remedy Selection

The EPA signed the Site's Record of Decision (ROD) on September 27, 1990. The 1990 ROD assumed that: (1) the Hawthorn Group was a single clay unit that provided an effective hydrologic boundary for groundwater flow and transport and (2) the potential source zones were primarily in the shallow unsaturated zone with groundwater impacts primarily restricted to the Surficial Aquifer. Therefore, the ROD only addressed contamination in the source areas and Surficial Aquifer and did not include any remedial components for deeper groundwater. The 1990 ROD did not specify Remedial Action Objectives (RAOs).

The major components of the selected remedy in the 1990 ROD include:

<u>Cabot Site</u>

- Lining of the North Main Street ditch to prevent further discharge of leachate into the ditch and Springstead and Hogtown Creeks; to be implemented if the ditch is, in the long term, to remain intact.
- Continued Operation and Maintenance (O&M) of the North Main Street lift station.
- Institutional controls.

<u>Koppers Site</u>

- Extraction of contaminated groundwater from the shallow aquifer; pre-treatment, if necessary; and discharge to a POTW.
- Excavation of contaminated soils from the former North and South Lagoons on the Koppers facility.
- In-situ bioremediation for process areas on the Koppers facility.
- Soil washing of the soils from the former North and South Lagoons; bioremediation; and, if appropriate, solidification/stabilization of residual materials, and deposition of treated soils back on-site.
- Institutional controls.

Contaminants of concern (COCs) and cleanup goals identified in the 1990 ROD are presented in Table 2.

Table 2: Sitewide Cleanup Goals in 1990 ROD

COCs	Groundwater (micrograms per liter [µg/L])	Soil (milligrams per kilogram [mg/kg])
Acenaphthylene	130	72.3
Acenaphthene	260	389
Anthracene	1,310	7,700
Arsenic	50	27
Benzene	1	Not Selected
Chromium	50	92.7
Fluorene	323	323
Naphthalene	18	211
PCP	0.1	2.92
Phenanthrene	130	770
Phenol	2,630	4.28
Pyrene	130	673
Total Potentially Carcinogenic PAHs	0.003	0.59

In March 1991, the EPA issued a Unilateral Administrative Order (UAO) directing development of a remedial design for the Koppers site. Subsequent pre-design investigation revealed conditions that were not contemplated by the 1990 ROD or UAO. Specifically, the volume of contaminated soil at the Koppers site was found to be much greater than indicated in the 1990 investigation, groundwater impacts below the water table were greater than expected, and the amount of dense non-aqueous phase liquid (DNAPL) below the water table was greater than expected. These discoveries called into question the effectiveness and practicality of the ROD-specified removal actions for the Koppers site. A groundwater extraction system was installed in 1995 as the remedial measure selected in the 1990 ROD to prevent off-site migration of COCs through the shallow aquifer.

The EPA modified the remedy in a February 2011 Amendment to the ROD (AROD). The EPA selected a comprehensive sitewide remedy designed to address all remaining contamination at both the Cabot and Koppers portions of the Site. At the Cabot site, the 2011 AROD requires sediment remediation in Hogtown and Springstead Creeks and investigation of Hawthorn Group groundwater contamination. At the Koppers site, the 2011 AROD addresses on-site soils, off-site soils and sediment, and the groundwater in the Surficial Aquifer, Hawthorn Group and the Upper Floridan Aquifer.

The RAOs identified in the 2011 AROD include:

- Eliminate potential risks to receptors exposed to Site-related contaminants in:
  - Surface soils.
  - Groundwater in the Surficial Aquifer, Upper Hawthorn Group, Lower Hawthorn Group and Upper Floridan Aquifer.

    - Subsurface soils.
    - Sediment.
    - Surface water.
- Control and eliminate further migration of impacted groundwater.
- Restore quality of groundwater outside of principal contaminant source areas to beneficial use. Groundwater COC concentrations should be no greater than federal MCLs or Florida groundwater cleanup target levels (GCTLs).
- Reduce the mobility, volume and toxicity of DNAPL to the maximum extent practicable.

Koppers On-Site Media
The major remedial components for on-site media in the 2011 AROD include:

- Establishment of an on-site soil consolidation area that includes:
    - A single, continuous vertical barrier wall (approximately 65 feet deep) encircling all four principal contaminant source areas from land surface to the Hawthorn Group middle clay.
    - Establishment of a low-permeability cap/cover over the consolidation area to protect against rain infiltration and contamination migration.
- In place (in-situ) solidification and stabilization of contamination from ground surface to the upper Hawthorn Group zone (0 to 65 feet below ground surface) at two of the four principal contaminant source areas (the former North Lagoon and the former Drip Track area).
- In-situ geochemical stabilization (also referred to as in-situ biogeochemical stabilization) of DNAPL from ground surface to the bottom of the upper Hawthorn Group zone (0 to 65 feet below ground surface) at two of the four principal contaminant source areas (former Process Area and the former South Lagoon).
- In-situ injection of oxidizing chemicals or in-situ geochemical stabilization treatment in the lower Hawthorn Group in two of the four principal source areas (former Process Area and the former South Lagoon) and along the eastern property boundary through newly installed injection wells.
- Excavation of soil posing a leachability concern outside of the consolidation area; placement of excavated soil in soil consolidation area.
- Surface grading and clean soil covers on approximately 83 of 86 acres on the site property.
- Installation of stormwater controls and improvements (e.g., retention/ detention pond).
- Continued operation of the perimeter wells of the Surficial Aquifer extraction and treatment system (outside of the consolidation area) until cleanup goals are attained.
- Continued operation of the horizontal collection drains of the Surficial Aquifer extraction and treatment system as needed to contain potential migration of groundwater contamination (hydraulic control).
- Expansion of the Surficial Aquifer and Hawthorn Group monitoring network.
- Institutional controls, such as restrictive covenants, to prevent future digging that would result in contact with contaminated media.

Upper Floridan Aquifer
The major remedial components for the Upper Floridan Aquifer in the 2011 AROD include:

- Hydraulic containment of contaminated groundwater through extraction and treatment in areas where COCs exceed cleanup goals.
- Construction of additional extraction wells for the network, as necessary.
- Monitored natural attenuation in areas where there are low-level exceedances of cleanup goals.

Groundwater and soil cleanup goals are listed in Tables 3 and 4.

Table 3: 2011 AROD Groundwater COCs and Cleanup Goals for Koppers Site

COC	Groundwater Cleanup Goal (µg/L)
1,1 biphenyl	0.5
2,4-dimethylphenol	140
2-methylnaphthalene	28
2-methylphenol	35
3/4-methylphenol	3.5
Acenaphthalene	210
Acenaphthene	20
Arsenic	10
Benzene	1
benzo(a)anthracene	0.05
benzo(a)pyrene	0.2
benzo(b)fluoranthene	0.05
benzo(k)fluoranthene	0.5
Bis (2-ethylhexyl) phthalate	6
Carbazole	1.8
Chrysene	4.8
Dibenzofuran	28
Fluoranthene	280
Fluorene	280
Naphthalene	14
n-nitrosodiphenylamine	7.1
PCP	1
Phenanthrene	210
Phenol	10

Table 4: 2011 AROD COCs and Cleanup Goals for On-Site Soil and Sediment

COC	Cleanup Goal (mg/kg)
1,1 Biphenyl	0.2
2,4,5-trichlorophenol	0.07
2,4-dimethylphenol	1.7
2-methylnaphthalene	8.5
3-methylphenol	0.3
4-methylphenol	0.03
Acenaphthene	2.1
Antimony	5.4
Arsenic	c
Potentially carcinogenic PAHs (BaP-TEQ)[a]	8
Benzene	0.007
Carbazole	0.2
Chromium (total)	38
Copper	c
Dibenzofuran	15
Dioxins (TCDD-TEQ)[b]	0.003
Fluoranthene	1,200
Fluorene	160
Lead	c
Naphthalene	1.2
PCP	0.03
Phenanthrene	250

a. Site concentrations for potentially carcinogenic PAHs are converted to Benzo(a)pyrene equivalents (BaP-TEQ) before comparison with the corresponding direct exposure soil cleanup target level (SCTL) for Benzo(a)pyrene.
b. SCTLs are based on the toxicity equivalent (TEQ) of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD).
c. Leachability may be derived using the SPLP test to calculate site-specific cleanup goals or may be determined using TCLP in the event oily wastes are present.

Koppers Off-Site Soil

The major remedial components for residential soil removal and replacement include the following:

- Excavation of surface soil in areas that are not paved or under permanent structures.
- Protection of large or valuable trees (pending owner agreement) by leaving them in place and carefully digging near the tree trunk down to the root mat.
- Allowance of property owners to designate trees to remain and landscaping that should not be disturbed.

- Placement of excavated soil in an on-property soil management area, which will eventually become part of the on-site soil consolidation area that will be under a low permeability cover and within the footprint of a subsurface cutoff wall.
- Backfill of excavation area with clean soil from an off-site borrow source.
- Replacement of landscaping with materials of like kind or like value.
- Installation of clean soil cover (2 feet thick) and restoration of a narrow strip of land along the western edge of the Koppers property, adjacent to off-site remediation parcels.

To prevent future exposure to soil that exceeds the cleanup goals, both engineered and institutional controls may be used, based on the preference of the property owner.

Table 5: 2011 AROD Cleanup Goals for Residential-Property Surface Soil

COC	Cleanup Goal
Arsenic	2.1 mg/kg
PAHs (total benzo-a-pyrene toxic equivalents)	0.1 mg/kg
Dioxin (TCDD-TEQ)	7 nanograms per kilogram (ng/kg)
PCP	7.2 mg/kg

Cabot and Koppers Sediment

- Excavation and removal of impacted sediments in excess of levels shown to likely cause an adverse effect when in direct contact.
- Monitored natural recovery of remaining impacted sediment until concentrations reach threshold effects concentrations or background levels.

4.2 Remedy Implementation

Cabot Site

In 1991, Cabot signed a Consent Decree (CD) that required implementation of the ROD-required actions, including remedial actions and supplemental investigations and studies. Additional sampling determined remedial actions were not necessary for: the former Cabot lagoons, the Hawthorn Group at the Cabot site, Springstead Creek or the former Cabot underground storage tanks.
The CD also required the installation of the surficial groundwater interceptor trench. Remedial design occurred in September 1991. Remedial activities began in December 1993 and were completed in May 1997.

Groundwater Interceptor Trench
In 1995, a permanent subsurface drainage trench and collection pipe installed under North Main Street ditch replaced the interim drainage system. As part of the interceptor trench installation, an engineered concrete-lined swale replaced the earthen North Main Street ditch. The ROD required this to prevent discharge of affected groundwater into the ditch.

PRP contractors conduct quarterly groundwater quality monitoring on selected upgradient and downgradient monitoring wells, and produce the monitoring reports.

Creek Sediment
Based on the 2011 AROD requirements, Cabot submitted a work plan to the EPA in January 2011 for the removal of tar-impacted sediments in Springstead and Hogtown creeks; these tar removals took place based on visual indicators of the presence of tar in the creek beds. Tar removal activities were completed between February and April 2011. Post-excavation confirmation samples indicated that PAHs were either not detected or detected at low concentrations. However, tar could not be removed from a few locations due to property owners denying access or concerns regarding bank slope stability. The planning is currently underway for an additional investigation to take place in 2016 to determine if concentration-based limits of allowable PAHs have been met in the sediments.

Hawthorn Group
As required by the 2011 AROD, Cabot investigated the possible Cabot-related contaminants in groundwater of the Hawthorn Group. Results showed contamination of Hawthorn Group groundwater with Cabot-related contaminants in excess of groundwater cleanup standards included in the 2011 AROD. Therefore, Cabot is required to remediate the contaminated groundwater using an in-place treatment technology.

Koppers Site

In 1991, the EPA issued a UAO to Beazer, the PRP for the Koppers site, to conduct remedial design and remedial action. In 1992, Beazer conducted the field activities in accordance with the UAO. Significant findings included the identification of DNAPL in the soils that represent a significant source of the COCs to groundwater, as well as a greater volume of soils above remedial goals in the former process areas.

Koppers Groundwater
The PRPs installed a groundwater pump-and-treat system for the Surficial Aquifer in 1995. Seventeen extraction wells were installed on the northern and eastern boundary of the Koppers site, with a design extraction rate for each well of 3 gallons per minute (gpm). Currently, 14 wells are operating. The extracted water is treated and discharged to a POTW.

DNAPL is bailed from six Upper Hawthorn wells twice per month, with approximately 0.4 gallons of DNAPL recovered from each well in each sampling event.

Koppers On-Site Media
ISGS Full-scale application has already occurred in the former Process Area in both the Surficial and Hawthorn. The on-site soil consolidation area will contain materials treated in place, as well as soil removed from other on-site and off-site areas. The soil consolidation area will be designed to contain the soil contamination, and to prevent human contact and migration to groundwater off-site. The vertical barrier wall will create a subsurface containment area designed to completely surround the contaminated soil and groundwater in the surficial aquifer and Upper Hawthorn aquifer.

Design of stormwater controls and a vertical, subsurface barrier wall is underway and expected to be completed by 2017. Pre-design planning of the in-situ stabilization of the primary source areas is underway and expected to be complete by 2019.

The PRPs performed a pilot test in the most highly impacted DNAPL area of the former Process Area. This area was specifically chosen based on the elevated DNAPL impacts to ensure that the in-situ stabilization technology would be effective for all DNAPL-impacted areas at the Site.

The full-scale implementation of the site-wide in-situ treatment technologies will follow the same procedures and approaches as documented in the 2014 and 2015 pilot tests. Performance monitoring will consist of immediate-term, short-term, mid-term and long-term performance monitoring. Performance monitoring will begin approximately two weeks following the completion of full-scale treatment and will continue for up to five years.

Koppers Off-Site Residential Soils (OU-5)
Beazer conducted a pilot soil replacement and restoration project between November 11, 2013, and December 6, 2013. Before, during and after this pilot project, Beazer successfully obtained access agreements from the property owners for all 89 parcels in the remediation zone (Appendix F). The full-scale soil replacement project began on February 17, 2014. Work proceeded generally southward from Block H, at the northwest corner the Koppers site.

Beazer made drainage improvements at Northwest 28th Avenue beginning on September 16, 2014. Most of the work was completed by September 30, 2014, with final finish completed on October 23, 2014.

Restoration was considered complete at off-site parcels on November 4, 2014. Implementation was considered complete on November 14, 2014. A Beazer subcontractor continued irrigation at off-site parcels without permanent irrigation systems for at least 180 days after installation of grass and plants. The contractor then removed the temporary irrigation piping. All Beazer-provided temporary irrigation was completed by May 5, 2015.

4.3 Operation and Maintenance (O&M)

Cabot Site

O&M requirements for the trench system include sump maintenance, pump station operation, pump station maintenance and emergency response. O&M activities are to be conducted in accordance with the O&M Manual dated December 1993. A network of monitoring wells exists throughout the Cabot site. These wells are maintained and repaired on an as-needed basis.

Daily flow meter reading, the flow in gpm at the time of meter reading and readings from both pumps are recorded automatically and documented bi-weekly by the lift station operator. GRU receives this information three times per year, along with the results from the effluent discharge analysis. Annual O&M costs are presented in Table 6.

Table 6: Annual O&M Costs for Cabot Site

Year	Total Costs
2010	$266,000
2011	$188,000
2012	$238,000
2013	$304,000
2014	$380,000

Koppers Site

The Koppers site has had regular O&M activities since the 1995 groundwater system was installed; these O&M activities were expanded it in 2010 to include additional capacity and add the Upper Floridan extraction wells. Ongoing activities consist of operation of the groundwater extraction and pre-treatment system, sampling of groundwater, stormwater and surface water sampling, and property maintenance functions. There is a continuous on-site presence. The groundwater pre-treatment system runs constantly, and has an auto dialer that will notify the site contractor of any system anomalies during non-working hours. Contractor staff perform bi-weekly DNAPL collection at five Hawthorn Group monitoring wells and are responsible for site security and maintenance.

Off-Site Soils

Beazer irrigated newly installed landscapes on off-site parcels for at least 180 days after installation. Beazer also conducted some landscape mowing and weed control in the neighborhood during the project as a courtesy. Ongoing maintenance of landscaping is the responsibility of the property owners.

Beazer irrigated the on-property, removed-soil management areas, and vegetation is established. Beazer also irrigated the grass and trees planted just inside the western property boundary. Beazer will continue to irrigate these areas as needed and ensure that they do not generate dust or sediment. No other ongoing operation or maintenance is required.

5.0 Progress Since the Last Five-Year Review

The protectiveness statement from the 2011 FYR for the Site stated the following:

The remedy at the Cabot portion of the Site currently protects human health and the environment. The interceptor trench is effective at capturing groundwater in the shallow aquifer and exposure pathways that could result in unacceptable risks are being controlled by institutional controls that restrict development and well usage in the area.

The current interim remedial measures on the Koppers portion of the Site are protective in the short-term. Since off-site contamination moving away from the former Koppers facility fenceline is being characterized and since contaminant concentrations are declining to levels close to background concentrations with distance, the risk is reasonably understood. The conceptual release model provides no basis to expect Site-related "hot-spots" further away from the former Koppers facility. Detectable soil concentrations do not exceed EPA action levels for dioxin, therefore, human exposure is controlled. Trace concentrations will be addressed in the ensuing remedial actions to eliminate any potential exposures. There is no current exposure to contaminated groundwater from the former Koppers facility. Under the remedy selected in the 2011 ROD, on-site contaminated soils will be consolidated and capped; contaminated groundwater will be treated and monitored; and off-site soils in the Stephen Foster neighborhood, offsite sediments, and surface water will be assessed and remediated. Institutional controls will be added where necessary to ensure that future land uses do not impact the remedy. Currently, interim remedial measures are controlling the on-site exposure pathways.

The 2011 FYR included four issues and recommendations. This report summarizes each recommendation and its current status in Table 7.

Table 7: Progress on Recommendations from the 2011 FYR

Recommendations	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
Continue ongoing investigations to assess if contamination within the Hawthorn Group at the Cabot portion of the Site is attributable to former Cabot operations. Responsibility for implementing the Upper Hawthorn Group cleanup selected in the final ROD will be apportioned accordingly.	Cabot	4/04/2012	Ongoing. In 2013, PRPs conducted initial source characterization and plume delineation in accordance with an EPA-approved work plan. Additional investigations are ongoing.	NA
Evaluate potential human health risk from potential indoor air vapor intrusion due to source area contamination beneath existing structures.	Cabot	4/04/2012	Complete. Cabot conducted a vapor intrusion assessment based on soil gas samples in 2012. The EPA and FDEP approved the report in May 2013.	5/17/2013
Complete off-site soil delineation.	Beazer	12/31/2011	Complete. Eighty-nine parcels were identified and remediated.	11/14/2014

Recommendations	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
Implement the selected remedy in the 2011 ROD.	Beazer, Cabot and the EPA	4/12/2013	Ongoing. The February 2011 AROD selected a remedy for remaining contamination. Remedial activities are ongoing.	2/2/2011

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in April 2015 and scheduled its completion for March 2016. The EPA remedial project managers (RPMs) Scott Miller and Rusty Kestle led the EPA site review team, which also included the EPA site attorney Caroline Philson, the EPA community involvement coordinator (CIC) L'Tonya Spencer and contractor support provided to the EPA by Skeo Solutions. In June 2015, the EPA held a scoping call with the review team to discuss the Site and items of interest as they related to the protectiveness of the remedy currently in place. The review schedule established consisted of the following activities:

- Community notification.
- Document review.
- Data collection and review.
- Site inspection.
- Local interviews.
- FYR Report development and review.

6.2 Community Involvement

In September 2015, the EPA published a public notice in the Gainesville Sun newspaper announcing the commencement of the FYR process for the Site, providing contact information for Rusty Kestle and L'Tonya Spencer and inviting community participation. The press notice is available in Appendix B. No one contacted the EPA as a result of the advertisement.

The EPA will make the final FYR Report available to the public. Upon completion of the FYR, the EPA will place copies of the document in the designated site repository: Gainesville Public Library, located at 401 East University Avenue.

6.3 Document Review

This FYR included a review of relevant, site-related documents including the ROD, remedial action reports, and recent monitoring data. A complete list of the documents reviewed can be found in Appendix A.

ARARs Review

CERCLA Section 121(d)(1) requires that Superfund remedial actions attain "a degree of cleanup of hazardous substance, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment." The

remedial action must achieve a level of cleanup that at least attains those requirements that are legally applicable or relevant and appropriate. Applicable requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, remedial action, location, or other circumstance found at a CERCLA site. Relevant and appropriate requirements are those standards that, while not "applicable," address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well-suited to the particular site. Only those state standards that are more stringent than federal requirements may be applicable or relevant and appropriate. To-Be-Considered (TBC) criteria are non-promulgated advisories and guidance that are not legally binding, but should be considered in determining the necessary remedial action. For example, TBCs may be particularly useful in determining health-based levels where no ARARs exist or in developing the appropriate method for conducting a remedial action.

Chemical-specific ARARs are health- or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in the establishment of numeric values. These values establish an acceptable amount or concentration of a chemical that may remain in, or be discharged to, the ambient environment. Examples of chemical-specific ARARs include MCLs under the Federal Safe Drinking Water Act and ambient water quality criteria enumerated under the Federal Clean Water Act.

Action-specific ARARs are technology- or activity-based requirements or limits on actions taken with respect to a particular hazardous substance. These requirements are triggered by a particular remedial activity, such as discharge of contaminated groundwater or in-situ remediation.

Location-specific ARARs are restrictions on hazardous substances or the conduct of the response activities solely based on their location in a special geographic area. Examples include restrictions on activities in wetlands, sensitive habitats and historic places.

Remedial actions are required to comply with the chemical-specific ARARs identified in the ROD. In performing the FYR for compliance with ARARs, only those ARARs that address the protectiveness of the remedy are reviewed.

Groundwater

According to the 2011 AROD, the selected cleanup goals for groundwater at the Koppers site are based on the MCLs for Drinking Water in Florida contained in Chapter 62-550, Florida Administrative Code and GCTLs contained in Chapter 62-777, FAC. There have been no relevant changes to the MCLs or GCTLs since the AROD was signed in February 2011 (Appendix G).

Soils

According to the 2011 AROD, cleanup goals for on-site soils and sediment are based on the more stringent of Florida default SCTLs for direct contract or Florida default SCTLs for leachability based on groundwater criteria, unless site-specific criteria are developed in the remedial design. There have been no relevant changes to the SCTLs since the AROD was signed in February 2011 (Appendix G).

Institutional Control Review

Skeo Solutions staff conducted research at the Alachua County Public Records and found the deed information pertaining to the Site listed in Table 8.

Table 8: Deed Documents from Alachua County Public Records

Date	Type of Document	Description	Book	Page
4/02/2010	Deed	Beazer deed for the Koppers property.	3946	385
4/17/1992	Certified Judgment	UAO for Cabot Corporation to perform the remedial action.	1857	2416
3/15/1992	UAO	UAO for Beazer East, Inc. to perform the remedial action.	1809	0019

Table 9 lists the institutional controls associated with the Site. The 1990 ROD called for institutional controls for the Cabot site to ensure future land use changes did not affect protectiveness.

In 2005, the City of Gainesville designated the Site and a 500-foot buffer zone as a Special Environmental Concern Area (Appendix I and Figure 3). Under this designation, proposed developments in the area must be reviewed and approved by the EPA, FDEP, the Occupational Safety and Health Administration and the PRP for the remedial action. The additional review is required to ensure that the proposed development of any property in the area will not interfere with any remediation activity at the Site.

The Site is currently within a FDEP Groundwater Delineation Area (Figure 5). Parcels within this area are restricted from installing groundwater wells. The St. Johns River Water Management District is responsible for permitting wells in the area. The Site is also within the tertiary zone of the Alachua County Murphree Wellfield Protection Zone and is subject to the additional county permitting requirements.

The 2011 AROD requires that institutional controls be added to the Koppers property deed to permanently restrict use of on-site groundwater and on-site soils. Institutional controls are also to be implemented for off-site soils, as needed. The EPA routinely receive submittals from the City of Gainesville related to new developments in this area and the EPA reviews them from the standpoint of their potential impacts to the Site cleanups.

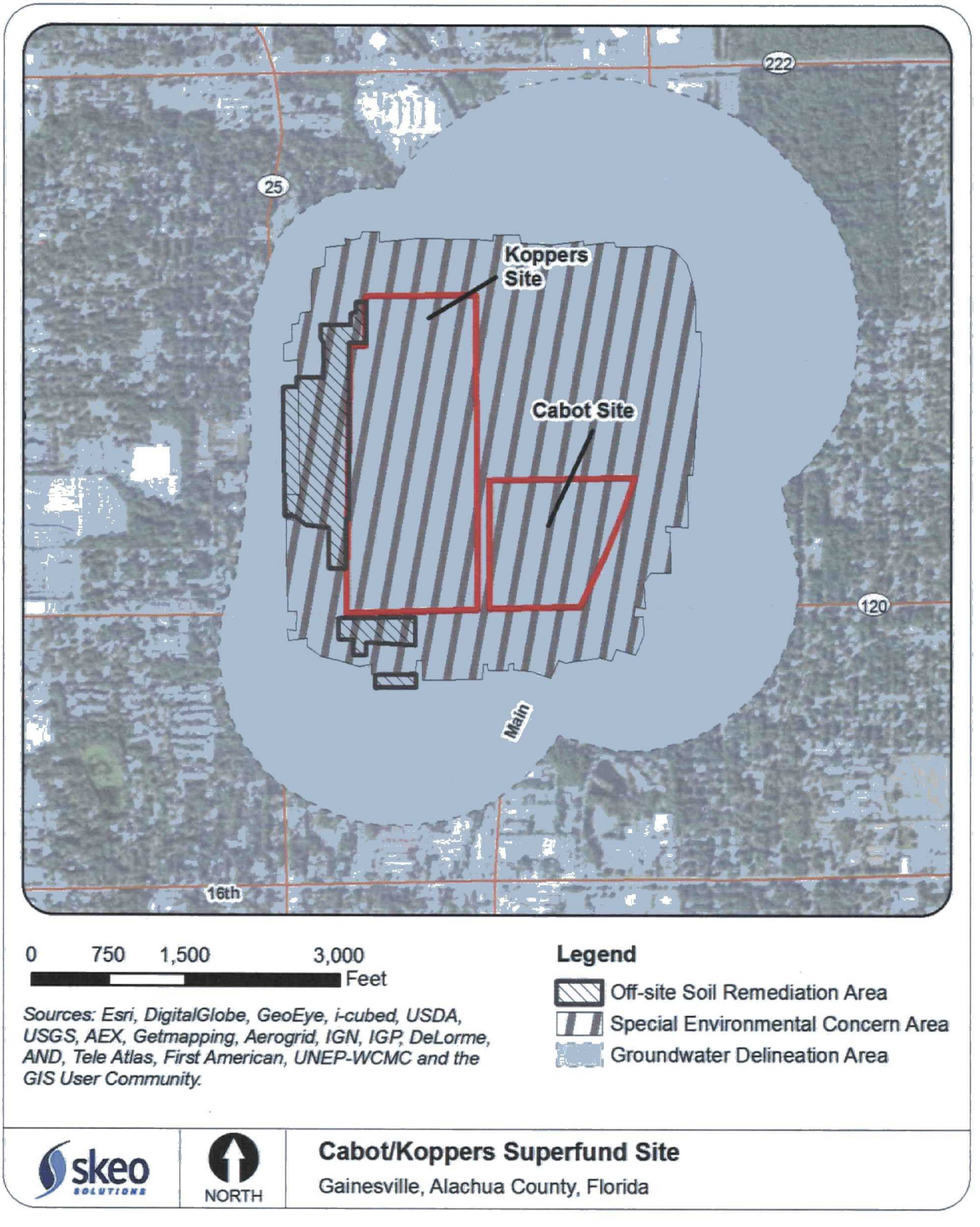
Table 9: Institutional Control (IC) Summary Table

Media	Institutional Controls Needed	Called for in the Decision Documents?	Impacted Parcel(s)	Institutional Controls Objective	Instrument in Place
Sitewide Groundwater	Yes	Yes - 2011 AROD	Greater Site Area (see Figure 3)	Restrict installation of groundwater wells.	Restrictions are called for in the 2011 AROD. The Site lies within a Florida Delineated Area that restricts well placement and the Alachua County Murphree Wellfield Protection Zone.[1,2]

Media	Institutional Controls Needed	Called for in the Decision Documents?	Impacted Parcel(s)	Institutional Controls Objective	Instrument in Place
Cabot Soils	Yes	Yes - 1990 AROD	Greater Site Area (see Figure 3)	Ensure that unacceptable exposure to contaminated soils does not occur in the future due to changing land use.	City of Gainesville Land Development Code, Chapter 30 Section 30-207: Special Environmental Concern Area.[3]
Koppers On-Site Soils	Yes	Yes – 2011 AROD	08250-000-000	To limit and control potential exposure to media with elevated contaminant concentrations and to ensure the effectiveness of engineering controls.	Additional restrictions are called for in the 2011 AROD. City of Gainesville Land Development Code, Chapter 30 Section 30-207: Special Environmental Concern Area.

1. Information about Florida's groundwater delineation areas can be found online at: http://www.dep.state.fl.us/water/groundwater/delineate.htm and https://www.flrules.org/gateway/ruleNo.asp?id=40C-3.035.
2. Information about the Alachua County Murphree Wellfield Protection Zone can be found online at: http://www.alachuacounty.us/Depts/EPD/WaterResources/Documents/Murphree%20Code.pdf.
3. Information about the City of Gainesville Special Environmental Concern Area can be found in Appendix I or online at: https://gainesville.legistar.com/LegislationDetail.aspx?ID=1206254&GUID=858CDCED-83F2-43DA-99E4-0F244A5F83BA&FullText=1

Figure 3: Institutional Control Base Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding the EPA's response actions at the Site.

6.4 Data Review

Cabot Site

Shallow Aquifer
Cabot submits quarterly groundwater monitoring reports for seven monitoring wells: ITW-13, ITW-14, WMW-17E, WMW-18E, ESE-002, ESE-004 and ESE-007, and two upgradient wells, ITW-1 and ITW-2 (Figure 4). Monitoring includes water level measurements from 30 wells, nine piezometers and four sumps. Monitoring well maps and complete sampling data for the past five years are in Appendix H.

Benzene, naphthalene, chromium, phenol, total potentially carcinogenic PAHs, acenaphthylene, phenol and fluorine have been detected above the ROD cleanup goals in the past five years (Appendix H). Benzene was found above ROD cleanup goals in each sampling event in monitoring well ESE-007 during the past five years. Chromium has been below the cleanup goal in ESE-007 since December 2006, and phenol has been below the cleanup goal since June 2008.

Benzene and naphthalene have been consistently detected above the ROD cleanup levels in monitoring wells ITW-13 and ITW-14 (Table 10). Phenol in ITW-13 and acenaphthlylene in ITW-14 had also been consistently detected above ROD cleanup levels, but have been below ROD cleanup levels in recent years. Free product is regularly observed in ITW-14 during sampling. Additional contamination includes intermittent detections of naphthalene and PAHs above cleanup goals in monitoring well ESE-002 and detections of chromium in 2006 in wells WMW-17E and WMW-18E.

Table 10: December 2014 Groundwater Exceedances

Well Number	Screen Interval	COC	ROD Cleanup Goal (µg/L)	Sample Concentration
ITW-13	23-33 feet	Benzene	1	69
		Naphthalene	18	60
ITW-14	5-15 feet	Benzene	1	30
		Naphthalene	18	85

Sediments
Following the 2011 tar removal from Springstead and Hogtown creeks, several post-removal sediment sampling locations in the excavation areas confirmed that total PAH levels remain above the PEC. Additional sampling in those areas, and outside of those areas, will be conducted to demonstrate that remaining areas of the creeks meet the total PAH PEC such that no further excavation is necessary. Additional sampling will also determine if monitored natural reduction (MNR) is appropriate to accomplish final sediment remediation or if remaining areas of the creeks meet the TEC for those same constituents, such that sediment remediation is complete.

Hawthorn Group Investigations
Since the last FYR, Cabot has conducted various efforts to further characterize the impacts to the Hawthorn Group. Sampling indicates a potential presence of tar in the Upper Hawthorn Group, with less contamination in the lower Hawthorn Group. Remedial alternatives are being assessed to address remaining contamination.

Koppers Site

Off-site Soils
The PRPs completed the off-property soils remedial action at OU-5 in 2014. All remediated properties attained the ROD cleanup standards and were backfilled with clean soil.

Groundwater
In the past five years, sampling of the surficial, Upper Hawthorn and Lower Hawthorn wells has been conducted in accordance with the comprehensive groundwater monitoring plan. Monitoring well location and sampling results are presented in Appendix H. Groundwater samples are analyzed for BTEX compounds, PAHs, phenols, arsenic and chromium. The predominant PAH compound detected in groundwater is naphthalene, which is used as the primary indicator compound that represents the presence of COCs in site groundwater. Recent data for each aquifer group are discussed below.

Due to the lack of a completed remedy, the groundwater sampled in many wells at the Koppers portion of the Site remains contaminated above federal MCLs or Florida GCTLs. Once fully implemented, the selected remedy of the 2011 AROD is expected to address this contamination.

Surficial Aquifer
Several of the wells near the source areas and near the eastern Koppers site boundary have naphthalene concentrations greater than the Florida default GCTL of 14 µg/L. Concentrations of other COCs, including PCP, arsenic, benzene, carbazole and dibenzofuran also exceeded the default GCTLs or federal MCLs. The Surficial Aquifer wells represent groundwater impacts that are within the capture zone of the current hydraulic containment system perimeter wells. As groundwater captured at the horizontal trench and drain system becomes more effective with the implementation of a comprehensive remedy, long-term concentrations at the property boundary wells are expected to show a decreasing concentration trend.

Hawthorn Group
Concentrations of BTEX and semi-volatile compounds in 2014 samples were above Florida GCTLs or federal MCLs in three of six upper Hawthorn Group wells and three of eight lower Hawthorn Group wells (Appendix H). All six of these wells are located off-site, to the east of the Koppers property (HG-20S, HG-20D, HG-21S, HG-21D, HG-26S, HG-26D, HG-29S and HG-29D). Monitoring wells HG-29S and HG-29D are located downgradient of the former unlined Cabot lagoons. Investigations are underway to determine if these former lagoons are currently a source of contamination to the Hawthorn Group.

Upper Floridan Aquifer
Water quality in the Upper Floridan Aquifer beneath and downgradient of the Site is measured on a quarterly basis. At two of the four source areas (Former Process Area and Former South Lagoon), inorganic and organic constituents are consistently below federal MCLs and Florida GCTLs in the Upper Floridan Aquifer monitoring wells.

Organic COCs were detected above GCTLs or federal MCLs in three Upper Floridan Aquifer wells (FW-6, FW-20B and FW-21B) located on-site, near source areas. Organic COCs are also present in monitoring wells FW-12B, FW-16B, FW-24B, FW-22B, FW-27B and FW-28B (Appendix X).Organic COCs were not detected in the off-site sentinel wells.

Once fully implemented, the selected remedy of the 2011 AROD is expected to address this contamination. The remedy for the Upper Floridan Aquifer called for in the 2011 AROD includes targeted hydraulic containment of contaminated groundwater through extraction and treatment in areas where COCs exceed cleanup goals, construction of additional extraction wells for the network, as necessary, and monitored natural attenuation in areas where concentrations of COCs do not exceed cleanup goals. This component of the remedial action is ongoing at dedicated Floridan pumping wells FW-6, FW-21B, FW-31BE and FW-32BE.

6.5 Site Inspection

The site inspection was conducted on June 9, 2015. The Site Inspection Checklist is in Appendix D, and site photographs are in Appendix E. The site inspection for the Koppers site included Mitchell Brourman and Greg Council, the PRP site managers operator for all remedial and O&M activities. Attendees included Scott Miller, EPA RPM; Rusty Kestle, EPA RPM; L'Tonya Spencer, EPA CIC; Kelsey Helton, FDEP; Johnny Zimmerman-Ward and Ryan Burdge of Skeo Solutions; Robin Hallbourg of Alachua County; and Richard Hutton of GRU.

The Cabot portion of the site inspection included Mark Taylor, project manager for Weston Solutions, Inc., consultant to Cabot; Wayne Reiber of Cabot; and Manu Shanna of Gradient consulting. Inspection of the Cabot portion included observation of groundwater monitoring wells, piezometers, collection trench and the lift station. The lift station was operational and in good condition. The lift station was fenced and locked. Observed monitoring wells were locked and all were clearly labeled.

The inspection of the Koppers site included observation of the groundwater treatment system, groundwater monitoring wells, in-situ pilot study area and off-site soil removal areas. The monitoring wells and extraction wells were observed to be in good condition. The extraction wells have wooden fabricated pump houses. The treatment plant was observed to be active and in good condition. The perimeter was well fenced. No issues were noted during the inspection.

Skeo Solutions staff visited the designated site repository, Gainesville Public Library, located at 401 East University Avenue, as part of the site inspection. Relevant site documents were available, with the exception of the 2011 FYR and 2011 AROD.

6.6 Interviews

The FYR process included interviews with parties affected by the Site, including the current landowners and regulatory agencies involved in Site activities or aware of the Site. The purpose was to document the perceived status of the Site and any perceived problems or successes with the phases of the remedy implemented to date. The interviews are summarized below. Appendix C provides the complete interviews.

Wayne Reiber, Cabot, believes the remedy at the Cabot site has been implemented successfully and that contamination has declined significantly. Cabot will be submitting a Supplemental Remedial Investigation and Focused Feasibility Study for the Hawthorn Group deposits in the first half of 2016.

John Mousa, Alachua County, would like to see the Hogtown and Springstead Creek sediments further characterized and the human health and ecological impacts of contamination for Cabot and Koppers site, especially dioxins and PAH compounds, be determined in an expeditious manner.

Rick Hutton, GRU, noted the GRU goals are that the health of the surrounding neighborhoods, the community as a whole, and ecological systems are protected; the community's water supply is protected; and the site is remediated and ultimately redeveloped in a way that is compatible with and beneficial to the community. He stressed that for remedy to operate as intended, full characterization of DNAPL and dissolved phase plumes is needed and that downward migration of NAPL and/or dissolved phase contamination into the Floridan Aquifer needs to be prevented.

Dr. Pat Cline served as the technical advisor for the Protect Gainesville Citizens group beginning in 2009. Dr. Cline believes the Koppers off-site soil remedy has been implemented well, but that it is too early to know if the on-site remedy will effectively limit NAPL migration. She expressed concern about potential remaining NAPL in the Cabot site area and that the current government controls requiring the EPA and FDEP approval of development plans may not be adequate in the long term.

7.0 Technical Assessment

7.1 Question A: Is the remedy functioning as intended by the decision documents?

Cabot Site

The remedial action at the Cabot portion of the Site is operating and functioning as designed. The Cabot groundwater interceptor trench is capturing contaminated shallow groundwater from the Site. Extracted groundwater is then pumped to the GRU sewage treatment plant for the removal of excess contamination. Investigations of Hawthorn Group contamination is ongoing and are to be addressed with remedies as specified in the 2011 AROD.

The interim remedial action tar removal activities were completed between February and April 2011. Post-excavation confirmation samples indicated that PAHs were either not detected or detected at low concentrations. However, tar could not be removed from a few locations due to property owners denying access or concerns regarding bank slope stability. Additional investigations are planned for 2016 and are needed to determine if the sediment contaminant concentrations meet concentration-based cleanup goals for PAH.

The City of Gainesville designated the Site and a 500 foot buffer zone as a Special Environmental Concern Area. Under this designation, proposed developments in the area must be reviewed and approved by the EPA, FDEP, OSHA and the PRP for the remedial action. The additional review is required to ensure that the proposed development of any property in the area will not interfere with any remediation activity at the site. In addition, groundwater usage in the area is restricted by FDEP.

Koppers Site

The remedy at the Koppers site is currently under construction. Once completed, the remedy called for in the 2011 AROD will reduce risk to potential receptors from contaminated soils; groundwater in the Surficial, Hawthorn Group, and Upper Floridan aquifers; sediment; and surface water. The remedial schedule expects the remedy to be complete by 2019. The existing remedial features are currently operating and functioning as intended.

Off-site soil removal was completed in 2014. Contaminated soil at all 89 affected parcels was removed and replaced with clean backfill. The need for additional land use controls in off-site areas is being assessed. Excavated soil is currently stored at the Koppers property in soil management areas surrounded by rubber-filled erosion control wattles to prevent soil from washing off of the pile to other areas of the Property. These soils will be added to the future on-site consolidation area.

The most highly impacted DNAPL area of the former Process Area received a successful pilot test of the in situ stabilization technology in 2014 and 2015, and full-scale implementation is underway. Performance monitoring will consist of immediate-term, short-term, mid-term and long-term performance monitoring. Performance monitoring will begin approximately two weeks following the completion of full-scale treatment and will continue for up to five years. Work is expected to be completed by 2017.

Design of stormwater controls and a vertical, subsurface barrier wall is underway and expected to be completed by 2017. Pre-design planning of the in-situ stabilization of the primary source areas is underway and expected to be complete by 2019.

The on-site soil consolidation area will contain materials treated in place, as well as soil removed from other on-site and off-site areas. The soil consolidation area will be designed to contain the soil contamination, and to prevent human contact and migration to groundwater off-site. The vertical barrier wall will create a subsurface containment area designed to completely surround the contaminated soil and groundwater in the surficial aquifer and Upper Hawthorn aquifer.

The shallow aquifer pump-and-treat system is functioning as intended and is containing the surficial contamination on-site. No problems were noted with the existing O&M, and no opportunities for optimization or early indicators of potential issues were identified.

An FDEP groundwater use restriction and City of Gainesville Special Environmental Concern Area designation are in place; additional institutional controls called for in the 2011 AROD are yet to be implemented. However, an institutional control plan as required under the consent decree for remedial design/remedial action has been submitted to FDEP and EPA for review. These reviews have been completed and Beazer is adjusting this plan based on comments received and will resubmit it in the near future. The AROD calls for restrictions to be added to the property deed to specify or limit the types of permissible future Site development and will place health, safety, and materials-management requirements on any future construction activities. Commercial or industrial land use will be permitted on the property, and it is possible that portions of the Site could be developed for other purposes (e.g., recreational or mixed-use with a residential component) as well. The institutional control language will specify certain activities and property uses that are not permitted (e.g., occupied subsurface structures). Certain construction activities or material land-use changes may trigger installation of additional engineering controls to eliminate or reduce potential exposures to levels that are consistent with land use.

7.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of remedy selection still valid?

The exposure assumptions, toxicity data, cleanup levels and RAOs for the 2011 sitewide AROD are still valid. Cleanup levels are based on federal MCLs, Florida GCTLs and Florida SCTLs which have not changed.

In 2013, Cabot completed a vapor intrusion assessment of the Northside Shopping Center, based on soil gas samples in 2012. The assessment did not identify any unacceptable exposures for the vapor pathway. The EPA and FDEP approved the report in May 2013. Additional investigation may be warranted should the currently vacant portion of the former Cabot facility be developed.

7.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No other information has come to light that could call into question the protectiveness of the remedy.

7.4 Technical Assessment Summary

The remedial action at the Cabot portion of the Site is operating and functioning as designed. The Cabot groundwater interceptor trench is capturing contaminated shallow groundwater from the Site. Extracted groundwater is then pumped to the GRU sewage treatment plant for the removal of excess contamination. Investigations of Hawthorn Group contamination is ongoing and are to be addressed with contingency remedies, as specified in the 2011 AROD. Additional investigations of creek sediments may be needed to confirm that the concentrations do not pose a significant risk to human health and the environment.

The remedy at the Koppers site is currently under construction. Once completed, the remedy called for in the 2011 AROD will reduce risk to potential receptors from contaminated soils; groundwater in the Surficial, Hawthorn Group, and Upper Floridan aquifers; sediment; and surface water. The remedial schedule expects the remedy to be complete by 2019. The existing remedial features are currently operating and functioning as intended. Off-site soil removal was completed in 2014. Contaminated soil at all 89 affected parcels was disposed of off-site and replaced with clean backfill. The need for additional land use controls in commercial properties off-site areas is being assessed.

An FDEP groundwater use restriction and City of Gainesville Special Environmental Concern Area designation are in place. However, additional institutional controls called for in the 2011 AROD are yet to be implemented.

The exposure assumptions, toxicity data, cleanup levels and RAOs for the 2011 AROD are still valid. A 2013 vapor intrusion assessment did not identify any unacceptable exposures for the vapor pathway at the Northside shopping center. No other information has come to light that could call into question the protectiveness of the remedy.

8.0 Issues, Recommendations and Follow-up Actions

Table 11: Issues and Recommendations Identified in the Five-Year Review

OU(s): 1,2,3,4	Issue Category: Institutional Controls			
	Issue: Additional institutional controls will be needed in the future for parcels that will not be cleaned up to unrestricted use and unlimited exposure at both the Cabot and Koppers sites.			
	Recommendation: Beazer East has submitted an institutional controls plan for the Koppers parcels which is being evaluated and will be modified and implemented as needed. For the Cabot parcels, additional institutional controls will be implemented as the need is identified in the final Focused Feasibility Study being prepared for the former Cabot Carbon parcels.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	3/31/2017

OU(s): 1 and 5	Issue Category: Remedy Performance			
	Issue: PAH contamination may remain above unrestricted use levels in creek sediments.			
	Recommendation: Conduct additional sampling to eliminate uncertainty about the PAH concentrations in sediment.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	3/31/2017

OU(s): 3	Issue Category: Remedy Performance			
	Issue: Investigation of Hawthorn Group groundwater contamination is not yet complete.			
	Recommendation: Complete Hawthorn Group groundwater investigations and implement the remedy selected in the AROD.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	3/31/2017

9.0 Protectiveness Statement

Table 12: Protectiveness Statement

Protectiveness Statement	
Operable Unit:	*Protectiveness Determination:*
Sitewide	Will be Protective
Protectiveness Statement: The remedy is expected to be protective of human health and the environment upon completion. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risks in these areas. At the Cabot site, the interceptor trench is effective at capturing groundwater in the shallow aquifer, and exposure pathways that could result in unacceptable risks are being controlled by institutional controls that restrict development and well usage in the area. At the Koppers site, off-site soil remediation at OU-5 is complete and will be fully protective once the other OUs are complete and institutional controls for the other OUs are completed. Groundwater consumption in the area is prohibited.	

10.0 Next Review

The next FYR will be due within five years of the signature and approval date of this FYR.

Appendix A: List of Documents Reviewed

EPA. 1990. EPA Superfund Record of Decision: Cabot/Koppers, EPA ID: FLD980709356, OU-00, Gainesville, FL, September 27, 1990.

EPA. 2010. Superfund Proposed Plan: Cabot Carbon/Koppers Superfund Site, Gainesville, Alachua County, Florida, July 15, 2010.

EPA. 2010. Proposed Plan Follow-Up Preferred Remedy Fact Sheet, September 2010.

EPA. 2010. Proposed Plan Follow-Up Off-Site Soil Remedy Fact Sheet, September 2010.

EPA. 2010. Feasibility Study: Cabot Carbon/Koppers Superfund Site, Gainesville, Alachua County, Florida, May 2010.

EPA. 2011. EPA Superfund Record of Decision: Cabot/Koppers, EPA ID: FLD980709356, Gainesville, FL, February 02, 2011.

EPA. 2013. EPA Superfund Consent Decree: Cabot/Koppers, EPA ID: FLD980709356, Gainesville, FL, February 02, 2011.

EPA. 2011. Third Five-Year Review, Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, April 2011.

Field and Technical Services (FTS). 2014. First Semiannual Comprehensive Groundwater Monitoring Report Cabot Carbon/ Koppers Superfund Site Gainesville, Florida (for Koppers portion). January 15, 2015.

Gradient Corporation. 2009. Groundwater Interceptor Trench Effectiveness Monitoring Report Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, July 2, 2009.

Gradient Corporation. 2010. Hawthorn Group Sampling Results Report and Revised Work Plan Cabot Portion of Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, November 15, 2010.

Gradient Corporation. 2013. Revised Soil Gas Investigation Report and Response to Comments Related to Draft Report, Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, Gainesville, Florida, May 2013.

Tetra Tech. 2015. Pre-Final Design for Former Process Area In-Situ Geochemical Stabilization Remediation, Former Cabot Carbon/Koppers, Inc. Site, Gainesville, Florida, Version 2, April 2015.

Tetra Tech. 2015. Pre-Design Investigation Work Plan: Design Track 2, Cabot/Koppers Superfund Site, Gainesville, Florida, May 2015.

Tetra Tech. 2015. Remedial Action Completion Report: Off-Property Soil Replacement, Cabot/Koppers Superfund Site, Gainesville, Florida, July 2015.

US Army Corps of Engineers. 2001. Five-Year Review, Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, March 2001.

US Army Corps of Engineers. 2006. Second Five-Year Review, Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, April 2006.

Weston Solutions, Inc. 2015. Results of Quarterly Ground water Sampling Conducted December 29-30, 2014, for Fourth Quarter 2005, Eastern Portion of the Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, 2015.

Appendix B: Press Notice

The U.S. Environmental Protection Agency, Region 4
Announces the Fourth Five-Year Review for
The Cabot/Koppers Superfund Site,
Gainesville, Alachua County, Florida

Purpose/Objective: EPA is conducting the fourth Five-Year Review of the remedy for the Cabot Carbon/Koppers Superfund Site (the Site) in Gainesville, Florida. The purpose of the Five-Year Review is to make sure the selected cleanup actions effectively protect human health and the environment.

Site Background: There are two main areas of the Site: the Koppers area (86 acres) and the Cabot Carbon area (50 acres). A wood-treating facility on the Koppers area operated from 1916 to December 2009. Cabot Carbon and previous unrelated companies operated a pine tar and charcoal production facility from 1911 to 1967 on the Cabot Carbon area. Waste handling practices resulted in contaminated groundwater, soil, sediment, and surface water. Major contaminants of concern include arsenic, polycyclic aromatic hydrocarbons (PAHs) and dioxins/furans in soil, and benzene, toluene, ethylbenzene, xylenes, PAHs, phenols, arsenic and chromium in groundwater. EPA listed the Site on the Superfund program's National Priorities List (NPL) in 1984.

Cleanup Actions: EPA selected the remedy to address soil, groundwater, surface water, and sediment contamination in the Site's 1990 Record of Decision (ROD). Cleanup of the Cabot Carbon area included installation of a groundwater trench to intercept contaminated groundwater from the Surficial Aquifer and treatment of the extracted water at a local facility. Trench construction finished in June 1995. In 2011, Cabot Carbon removed 116 tons of contaminated sediment from two creeks impacted by waste discharge from operations on the Cabot Carbon area. Post-1990 ROD investigations of the Koppers area found additional contamination. In February 2011, EPA issued an amended ROD to address contamination in deeper groundwater aquifers and add requirements for soil, sediment, and groundwater cleanup that became effective after the initial ROD was published. The amended ROD included remedies for on- and off-site soils, sediments, surface water and groundwater. In 2011, Beazer East, the responsible party for the Koppers Site cleanup, completed the demolition and removal of all former facility structures. It also completed stormwater system improvements, added crushed rock to Site roads and planted grass over much of the Site to control dust. Groundwater remediation is ongoing. In March 2014, off-site soil remediation began in neighborhoods near the former Koppers facility. By completion in November 2014, 103 homes had soils removed and replaced with clean soils and landscaping. Design and construction of the Koppers on-site expanded groundwater remedial components and soil remedies is ongoing. Design and construction of Cabot Carbon's expanded groundwater remedial components is ongoing.

Five-Year Review Schedule: The National Contingency Plan requires review of remedial actions that result in any hazardous substances, pollutants or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure every five years to ensure the protection of human health and the environment. The fourth of the Five-Year Reviews for the Site will be completed by March 2016.

EPA Invites Community Participation in the Five-Year Review Process: EPA is conducting this Five-Year Review to evaluate the effectiveness of the Site's remedy and to ensure that the remedy remains protective of human health and the environment. As part of the Five-Year Review process, EPA staff is available to answer any questions about the Site. Community members who have questions about the Site or the Five-Year Review process, or who would like to participate in a community interview, are asked to contact:

Rusty Kestle, EPA Remedial Project Manager
Phone: (404) 562-8819
Email: kestle.rusty@epa.gov

LaTonya Spencer, EPA Community Involvement Coordinator Phone: (404) 562-8463 | (800) 564-7577 (toll-free)
Email: spencer.latonya@epa.gov

Mailing Address: U.S. EPA Region 4, 61 Forsyth Street, S.W., 11th Floor, Atlanta, GA 30303-8960

Additional site information is available at the Site's local document repository, located at Alachua County Library, 401 East University Avenue, Gainesville, FL 32601, and online at: *http://www.epa.gov/region4/superfund/sites/npl/florida/ckopfl.html*.

Appendix C: Interview Forms

Cabot/Koppers Superfund Site		Five-Year Review Interview Form	
Site Name: Cabot/Koppers		**EPA ID No.:** FLD980709356	
Interviewer Name:		**Affiliation:**	
Subject Name: Wayne Reiber		**Affiliation:** Cabot Corporation	
Subject Contact Information: Tel: 617-342-6023; wayne.reiber@cabotcorp.com			
Time:		**Date:** July 31, 2015	
Interview Location: Written Response			
Interview Format (circle one):	**In Person**	**Phone**	**Mail**	**Other: Written Response**

Interview Category: Potentially Responsible Parties (PRPs)

1. What is your overall impression of the remedial activities at the Site?

With respect to the former Cabot Carbon portion of the Site, remedial activities have been successful. Impacted shallow groundwater at the former Cabot Carbon site has been captured and treated since 1985, or for over 30 years, first using an interim groundwater collection system, and from 1995 onwards using an engineered groundwater interceptor trench that has proven to be remarkably effective and reliable. Site-related compounds have not been detected in two monitoring wells located immediately downgradient of the interceptor trench. An effectiveness evaluation of the groundwater interception trench in 2009 demonstrated that the system is effectively mitigating downgradient migration of contaminated groundwater in the surficial aquifer attributable to the former Cabot Carbon operation as well as contamination associated with the Northeast Lagoon, which was not owned or operated by Cabot. Furthermore, groundwater monitoring demonstrates that contaminants of concern downgradient from the former Cabot lagoons and operation have substantially attenuated across the Site.

When considering remedial activities at the '"Cabot Carbon/Koppers Superfund Site", it is important to remember that the Cabot Carbon and Koppers portions of the Site are distinct in terms of operational history, chemicals of concern (COCs) and remedial response history. This distinction has allowed Cabot to implement a number of important remedial actions over the past 20 years independent of a remedy at the Koppers portion of the Site. Cabot signed a Consent Decree with USEPA in 1991; fully implemented the remedy selected by the Record of Decision (ROD) by 1995, and conducted a number of supplemental activities to address issues as they arose. Lately, supplemental activities include a 2012 assessment of potential vapor intrusion that found no significant risk and the assessment and removal of pine tar deposits from Springstead and Hogtown Creeks in 2011.

2. What have been the effects of this Site on the surrounding community, if any?

Implementation of the remedy on the Cabot Carbon portion of the site has allowed North Main Street to be expanded and for subsequent commercial development of the surrounding area to occur. The implementation of remediation activities at the Cabot portion of the Site has had a positive effect on the community.

3. What is your assessment of the current performance of the remedy in place at the Site?

The engineered groundwater collection system has operated continuously without significant interruption since 1995 and has collected an estimated 160 million gallons of water over the past five years. Routine groundwater monitoring conducted on the Cabot portion of the Site continues to demonstrate that the groundwater interceptor trench system is effective in capturing contaminated groundwater from the shallow aquifer and preventing the off-site migration of that water and eliminating its entry into Springstead and Hogtown Creeks.

Commercial development at the Site has happened without significant impediments or issues. Development plans for properties on the Site are effectively reviewed and managed under a Gainesville Land Development ordinance that requires evaluation and comment on development plans by EPA, and a number of stakeholders, including Cabot.

Potential human health risks associated with Springstead and Hogtown Creek sediments have been evaluated multiple times, *i.e.*, four (including the current) ATSDR-sponsored Health Consultations (FDHRS, 1989; FDHRS, 1993, FDHRS, 1995; FDOH, 2010) and the baseline risk assessment for the Site (Hunter/ESE, 1990). Each of these evaluations, spanning a 20 year period, have concluded that potential human health risks associated with Creek sediments are within the USEPA acceptable risk range. Nevertheless, Cabot removed a number of tar deposits from the creek in 2011.

In 2012, vapor intrusion was assessed at the Site and no significant issues were found.

While not related to the shallow aquifer remedy, Cabot is assessing impacts of contaminants associated with the historical Cabot Carbon operation on the intermediate Hawthorn Group deposits. Cabot will be submitting a Supplemental Remedial Investigation and Focused Feasibility Study for the Hawthorn Group deposits in the first half of 2016.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?

With regards to the Cabot Carbon portion of the site, Cabot received complaints in 2004 regarding odors emanating from the lift station for the groundwater interceptor system. An industrial hygiene worker exposure and ambient air quality assessment were performed and indicated that the low levels of constituents detected were well below OSHA and EPA ambient air quality standards. Nevertheless, the building housing the list station was replaced and upgraded in 2004 and carbon filters installed on the air vents. The filters are changed weekly and are working effectively. Cabot is not aware of any complaints regarding odors emanating from the lift station since the building was replaced and the air filters installed.

In 2014, the owner of a number of contiguous property parcels inquired about his ability to commercially develop this property at the Site. Cabot met with the individual and discussed conceptual development plans.

5. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?

EPA has kept Stakeholders well informed of Site activities and remedial progress.

6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

Cabot/Koppers Superfund Site		Five-Year Review Interview Form	
Site Name: Cabot/Koppers		**EPA ID No.:** FLD980709356	
Interviewer Name:		**Affiliation:**	
Subject Name:	John J. Mousa	**Affiliation:**	Alachua County Environmental Protection
Subject Contact Information:			
Time:		**Date:** July 24, 2015	
Interview Location:	401 W. University Ave. Gainesville, FL		

Interview Format (circle one): **In Person** **Phone** **Mail** **Other:** Email

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?
   Yes, I am aware of and have been involved in following the technical progress and issues involving the remediation plans for the site for several years on behalf of the Alachua County Environmental Protection Department.

2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?
   Yes, I am generally well informed about Site activities and remedial progress due to regular monthly telephone conference calls, occasional face to face meetings with USEPA regulators and responsible parties and special conference calls to discuss particular issues with the local intergovernmental team.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing? I am not aware of any emergency response, vandalism or trespassing issues on the site.

4. Are you aware of any changes to state laws or local regulations that might affect the protectiveness of the Site's remedy? No.

5. Are you aware of any changes in projected land use(s) at the Site? No.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future? Involvement and communication from USEPA has been adequate recently.

7. Do you have any comments, suggestions or recommendations regarding the project?
   ACEPD would like to see the Hogtown and Springstead Creek sediments adequately characterized and the human health and ecological impacts of contamination for Cabot and Koppers site, especially dioxins and PAH compounds, be determined in an expeditious manner.

Cabot/Koppers Superfund Site		Five-Year Review Interview Form	
Site Name:	**Cabot/Koppers**	**EPA ID No.:**	**FLD980709356**
Interviewer Name:		**Affiliation:**	
Subject Name:	**Rick Hutton**	**Affiliation:**	**GRU**
Subject Contact Information:	**(352) 393-1218**		
Time:		**Date:**	**August 12, 2015**
Interview Location:	**GRU Admin Building 301 SE 4th Ave, Gainesville, FL**		

Interview Format (circle one): **In Person** **Phone** **Mail** **Other:**

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date? Yes

2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future? Yes, GRU is an active stakeholder. EPA has been very effective in communicating us, keeping us informed, and in receiving and considering our comments.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing? None that I am aware of

4. Are you aware of any changes to state laws or local regulations that might affect the protectiveness of the Site's remedy? No

5. Are you aware of any changes in projected land use(s) at the Site? Not at this time. It is anticipated that the site will be redeveloped after remediation in complete.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future? Yes, I feel like communication from EPA, citizens groups, Beazer, City of Gainesville, Alachua County and others has been fairly thorough, particularly with regard to the soils cleanup.

7. Do you have any comments, suggestions or recommendations regarding the project? GRU and the City of Gainesville is an active stakeholder. Our goals are that the health of the surrounding neighborhoods, the community as a whole, and ecological systems are protected; the community's water supply is protected; and the site is remediated and ultimately redeveloped in a way that is compatible with and beneficial to the community. We have and will continue to provide technical review and detailed comments to workplans and activities at the site. Some broad comments we have are that:

   - DNAPL and dissolved phase plumes need to be fully characterized and addressed;
   - Particular attention needs to be paid to preventing downward migration of NAPL and/or dissolved phase contamination into the Floridan Aquifer, to monitoring the Floridan Aquifer, and to containing the contamination that exists in the Floridan aquifer to ensure that it does not spread offsite and potentially impact the community's water supply.

- Remediation needs to be monitored closely for effectiveness, and adjustments to the remediation need to be made where necessary to ensure its effectiveness.

Cabot/Koppers Superfund Site		Five-Year Review Interview Form	
Site Name:	**Cabot/Koppers**	**EPA ID No.:**	**FLD980709356**
Interviewer Name:	**L'Tonya Spencer**	**Affiliation:**	**EPA**
Subject Name:	**Yvette Carter**	**Affiliation:**	**Gainesville Community Outreach Liaison**
Subject Contact Information:			
Time:	**2:00 PM**	**Date:**	**6/9/2015**
Interview Location:	**Site office**		

Interview Format (circle one): **In Person** **Phone** **Mail** **Other:**

Interview Category: **Residents**

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Yes.

2. What is your overall impression of the project; including cleanup, maintenance, and reuse activities (as appropriate)?

Beazer heard complaints from community and were able to address them. They control dust. They did extra remediation and restoration in the neighborhood. They're doing what's required in the ROD. Ground work that Beazer did (such as doing off-site work first) made the things that are being done onsite now easier to swallow for community. The education piece was a big deal. We don't hear any complaints about onsite work now. Likely because Beazer modified the normal work plan to fit what the community needed.

3. What have been the effects of this Site on the surrounding community, if any?

Overall a positive experience because the residents in community were empowered because they had organizational stakeholders acting on their behalf (PGC). PGC gave out paint remediated houses. The city help distribute it. There were meetings that PGC put together and the city facilitated. Excellent that there was City Commission buy in. Worked to makes sure residents were heard. The City didn't really have any authority over this process, but since so many citizens came to city commissions, they decided to have someone work alongside other stakeholders working on resident's behalf.

4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

Have not heard of any.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

Yes, during the offsite remediation. EPA has included City, GRU, County and PGC, even though they aren't required to. PGC has had opportunities to comment on site documents and had monthly phone calls. The level of involvement has been great.

Challenging since work continues, but sometimes the community does not get vocal until later. Need to have a process that is sustained. Need to try to identify the people with ongoing contact with community. Could consider a succinct email at a high level with site contacts if folks want more info. This helps people feel connected and informed.

6. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

No.

Cabot/Koppers Superfund Site		Five-Year Review Interview Form	
Site Name:	**Cabot/Koppers**	**EPA ID No.:**	**FLD980709356**
Interviewer Name:	**L'Tonya Spencer**	**Affiliation:**	**EPA**
Subject Name:	**Kate Clarity**	**Affiliation:**	**PGC**
Subject Contact Information:			
Time:	**3:00 PM**	**Date:**	**6/9/2015**
Interview Location:	**Site office**		

Interview Format (circle one): **In Person** **Phone** **Mail** **Other:**

Interview Category: **Residents**

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Yes.

2. What is your overall impression of the project; including cleanup, maintenance, and reuse activities (as appropriate)?

Overall I feel proud of Gainesville for getting organized and engaged and getting something done that may not have been done otherwise. It was a sharp learning curve. None of us knew ahead of time how to do any of it and what EPA could do and what parameters of project was. We just knew there was a large problem that had been going on for a long time and we wanted to fix it. To get best remediation possibly for residents and earth, in some ways happened here.

3. What have been the effects of this Site on the surrounding community, if any?

Because people felt so strongly about it and the limitations on what could be done were so severe, there was discontent within the community. Community members were pretty polarized in a negative way, but that has settled within the last year. I wish EPA had the authority to buy out some of residents who were affected. Would have been nice to make the affected lots into a park or corridor. Many residents would have liked to have moved. Getting 100% cooperation in remediated area was a small miracle. Amazed and impressed with the work done property by property. The work done by PRP and EPA was commendable. The City Liaison was amazing. Pat Kline was on the ground working above and beyond. She had TA work she had to do, but did additional work. The City could have done their upgrade of infrastructure at the same time as other disruptions. City could have come in and fix the roads and add sidewalks, but didn't do it as finding money for infrastructure is not a priority. There are small upgrades that could have been made, but they do not. Offsite remediation was amazing.

4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

No.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

I don't know what part EPA played in making sure everyone was understanding what was going on, but I know that Yvette Carter did. EPA has not been as present as ideal, but likely due to sequestration, which is understood. Would like more EPA involvement, but I understand if there is not enough staffing to do that.

Preferred method of providing site-related information:
Press releases or some kind of mechanism for getting information out to newspaper, local radio, news facilities, etc. about steps along the well, milestones, challenges, etc. Yearly updates would be great. If something unforeseen happens, such as new contamination found at Cabot, would like updates on that as well, possibly as a press release.

6. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

In hindsight, if there had been a way for EPA to play more active role in letting the community know what is and is not possible. Lots of people thought a lot more was possible for many years. Unsure if no one was listening to what EPA was saying. The fact that EPA couldn't make the company stop seems wrong. It is unconscionable that it went on so long. The first few years before they closed was like trudging through quicksand and it was unacceptable. It devastated the Stephen-Foster Neighborhood because it went on so long. It seems that the law in place is ineffective. The City was not supportive and they were still buying telephone poles from the on-site facility.

Cabot/Koppers Superfund Site		Five-Year Review Interview Form	
Site Name: Cabot/Koppers		**EPA ID No.:** FLD980709356	
Interviewer Name:		**Affiliation:**	
Subject Name:	Dr. Pat Cline	**Affiliation:**	PGC
Subject Contact Information:	352 234-3732	6322 SW 37th Way. Gainesville, FL 32608	
Time:		**Date:**	Aug 3, 2015
Interview Location:	E-mail pcline@ufl.edu		

Interview Format (circle one): **In Person** **Phone** **Mail** **Other:**

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

   Yes, I have been active reviewing documents as early as 2009.

2. What is your overall impression of the project; including cleanup, maintenance, and reuse activities (as appropriate)?

   The Superfund process is slow, particular during the decision making process.

   Koppers. Once the decision regarding Kopper's related off-site remediation was finalized, I cannot overstate how well it was implemented. In addition, the consultants are aggressively implementing the onsite remedy as stated in the ROD. Whether the use of ISGS is effective in limiting NAPL migration will be revisited in future performance evaluations – but significant effort and expertise is being applied in the implementation.

   Cabot. The focus has been on groundwater. It was clear in 2010 that additional investigation and remediation was required, however, this process has been very slow. It is likely the remedy in the ROD (ISCS) may not be used, but no FS has been prepared to clarify the likely path forward.

   I am also not totally comfortable at this time with the reuse activities in the Cabot area. I have not revisited the risk assessment done in the 1980's, but there have been occurrences of tar-like materials coming to the surface that are addressed as they appear. There may be NAPL areas remaining on properties that are not owned by Cabot. There does appear to be an informal process in place to review and address issues as new development may be proposed. I am uncertain if this is a long term solution and that activities will be appropriately documented.

   Other. Cabot's groundwater investigation is encountering impacts at the North Lagoon, which is not formally part of the Superfund site. This is currently a state lead site, and there may be several parties involved in addressing the contamination which has been known to exist at least as early as 1995. The overall solution must efficiently incorporate a resolution to remediation activities that may be needed in this area.

3. What have been the effects of this Site on the surrounding community, if any?

This has been very stressful for residents near the site, and has impacted property values. Hopefully, now that the offsite residential soil remediation is completed and we move toward cleanup and reuse of the Kopper's site, these issues will be addressed.

4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?

   Not that I am aware – unless removing tar that has migrated to the surface at former Cabot properties is considered an "emergency response".

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

   EPA has always included the City and County officials in discussions and review of documents, presented information at commission meetings, and held public meetings as required. Since 2010, supporting TAG involvement in meetings and reviews has increased public participation and was much appreciated. Scott Miller met frequently with the PGC board and community members upon request. That was great!

   Communications during the offsite residential cleanup process was a perfect example of how engaging all stakeholders (City, PGC, EPA, Beazer community liaison) can lead to a successful cooperative path to success.

   Recommendation: Members of the community become exhausted with the intensive focus on Superfund. This makes it easy to limit communications (since no one is asking). However, if a remedy changes in the future and public meetings are required, EPA will be criticized for not keeping the community informed.

   A modification of the process used to email residents during residential soil remediation is recommended. The city sent the emails every Friday during this process. Now, monthly, bi-monthly, or as needed short updates could be used. These are brief ("there may be noise next week…", there are new reports you can obtain on the county website) and can include the contact information for EPA, FDEP, or others as appropriate if they have questions. EPA can be designated as a preparer or participant in this process, but I would still recommend the email come from the city.

   Obviously, EPA would continue to update the community involvement plan and hold required meetings. If there is community feedback or concerns raised, EPA and other stakeholders may adapt a strategy to address these as they arise.

6. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

   There will be an ongoing need to address community questions – particularly as litigation continues. Although PGC no longer has the TAG grant, a designated "technical advisor" to the community is very helpful as a trusted advocate for the public. So I hope the TASC moves forward as a mechanism to keep a member of the community involved. (This also helps to demonstrate EPA's intent to keep the community informed.)

We would like to participate in strategies to help with redevelopment options for Koppers (sequencing, public support for bike paths, supporting purchase of the railroad line, etc.).

Currently, the state (FDEP) is the lead for addressing contamination at the north lagoon. This is overlapping with the decisions for the Cabot remediation strategy. Hopefully a streamlined and efficient process will be identified soon.

Additional soil sampling at properties to be developed that may have residual impacts from the former Cabot activities, are recommended.

The ongoing five-year reviews are important – and we appreciate the opportunity to provide input. The next FYR will be extremely important!

Appendix D: Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

I. SITE INFORMATION

Site Name: Cabot-Koppers	**Date of Inspection:** 6/09/2015
Location and Region: Gainesville, Alachua County, Florida	**EPA ID:** FLD980798698
Agency, Office or Company Leading the Five-Year Review: EPA Region 4	**Weather/Temperature:** Sunny and clear sky/85°F

Remedy Includes: (Check all that apply)

- ☐ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☒ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☒ Other: Soil excavation
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☒ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (check all that apply)

1. **O&M Site Manager** _____ (Name) _____ (Title) _____ (Date)
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems, suggestions ☐ Report attached: _____

2. **O&M Staff** _____ (Name) _____ (Title) _____ (Date)
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems/suggestions ☐ Report attached: _____

3. **Local Regulatory Authorities and Response Agencies** (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply.

   Agency Florida Department of Environmental Protection
   Contact Kelsey Helton _____ (Name) _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached: _____

   Agency _____
   Contact _____ (Name) _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached: _____

   Agency _____
   Contact _____ (Name) _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached: _____

   Agency _____
   Contact _____ (Name) _____ (Title) _____ (Date) _____ (Phone No.)
   Problems/suggestions ☐ Report attached: _____

	Agency _____ Contact _____ Name	_____ Title	_____ Date	_____ Phone No.	
	Problems/suggestions ☐ Report attached:_____				
4.	**Other Interviews** (optional) ☒ Report attached: _____				
Master Tenant, Pembroke Business Park					
Property Manager, Pembroke Business Park					
Tenant 1					
III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)					
1.	**O&M Documents**				
	☒ O&M manual	☒ Readily available	☒ Up to date	☐ N/A	
	☒ As-built drawings	☒ Readily available	☒ Up to date	☐ N/A	
	☒ Maintenance logs	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
2.	**Site-Specific Health and Safety Plan**	☒ Readily available	☒ Up to date	☐ N/A	
	☐ Contingency plan/emergency response plan	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
3.	**O&M and OSHA Training Records**	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
4.	**Permits and Service Agreements**				
	☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A	
	☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A	
	☒ Waste disposal, POTW	☒ Readily available	☒ Up to date	☐ N/A	
	☐ Other permits: _____	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
5.	**Gas Generation Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
6.	**Settlement Monument Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
7.	**Ground Water Monitoring Records**	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
8.	**Leachate Extraction Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
9.	**Discharge Compliance Records**				
	☐ Air	☐ Readily available	☐ Up to date	☒ N/A	

☒ Water (effluent) ☒ Readily available ☒ Up to date ☐ N/A

Remarks: _____

10. **Daily Access/Security Logs** ☒ Readily available ☒ Up to date ☐ N/A

Remarks: _____

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for state

☐ PRP in-house ☒ Contractor for PRP

☐ Federal facility in-house ☐ Contractor for Federal facility

☐ _____

2. **O&M Cost Records**

X Readily available ☐ Up to date

☐ Funding mechanism/agreement in place ☐ Unavailable

Original O&M cost estimate: _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	☐ Breakdown attached

3. **Unanticipated or Unusually High O&M Costs during Review Period**

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing Damaged** ☒ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: _____

B. Other Access Restrictions

1. **Signs and Other Security Measures** ☒ Location shown on site map ☐ N/A

Remarks: _____

C. Institutional Controls (ICs)

1. **Implementation and Enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (e.g., self-reporting, drive by): _____

Frequency: _____

Responsible party/agency: _____

Contact _____ _____ _____ _____

Name Title Date Phone no.

Reporting is up to date ☐ Yes ☐ No ☒ N/A

Reports are verified by the lead agency ☐ Yes ☐ No ☒ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☒ N/A

Violations have been reported ☐ Yes ☐ No ☒ N/A

Other problems or suggestions: ☐ Report attached

2. **Adequacy** ☐ ICs are adequate ☒ ICs are inadequate ☐ N/A

Remarks: No ICs are in place to restict land use.

D. General

1. **Vandalism/Trespassing** ☐ Location shown on site map ☐ No vandalism evident

Remarks: _____

2. **Land Use Changes On-site** ☒ N/A

Remarks: _____

3. **Land Use Changes Off-site** ☒ N/A

Remarks: _____

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads Damaged** ☒ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks: _____

B. Other Site Conditions

Remarks: _____

VII. LANDFILL COVERS ☐ Applicable ☒ N/A

A. Landfill Surface

1. **Settlement** (low spots) ☐ Location shown on site map ☐ Settlement not evident

Arial extent: _____ Depth: _____

Remarks: _____

2. **Cracks** ☐ Location shown on site map ☐ Cracking not evident

Lengths: _____ Widths: _____ Depths: _____

Remarks: _____

3.	**Erosion**	☐ Location shown on site map	☐ Erosion not evident
	Arial extent: _____		Depth: _____
	Remarks: _____		
4.	**Holes**	☐ Location shown on site map	☐ Holes not evident
	Arial extent: _____		Depth: _____
	Remarks: _____		
5.	**Vegetative Cover**	☐ Grass	☐ Cover properly established
	☐ No signs of stress	☐ Trees/shrubs (indicate size and locations on a diagram)	
	Remarks: _____		
6.	**Alternative Cover** (e.g., armored rock, concrete)		☐ N/A
	Remarks: _____		
7.	**Bulges**	☐ Location shown on site map	☐ Bulges not evident
	Arial extent: _____		Height: _____
	Remarks: _____		
8.	**Wet Areas/Water Damage**	☐ Wet areas/water damage not evident	
	☐ Wet areas	☐ Location shown on site map	Arial extent: _____
	☐ Ponding	☐ Location shown on site map	Arial extent: _____
	☐ Seeps	☐ Location shown on site map	Arial extent: _____
	☐ Soft subgrade	☐ Location shown on site map	Arial extent: _____
	Remarks: _____		
9.	**Slope Instability**	☐ Slides	☐ Location shown on site map
	☐ No evidence of slope instability		
	Arial extent: _____		
	Remarks: _____		
B. Benches		☐ Applicable	☐ N/A
	(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	**Flows Bypass Bench**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
2.	**Bench Breached**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
3.	**Bench Overtopped**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
C. Letdown Channels		☐ Applicable	☐ N/A
	(Channel lined with erosion control mats, riprap, grout bags or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill		

cover without creating erosion gullies.)

1. **Settlement** (Low spots) ☐ Location shown on site map ☐ No evidence of settlement
   Arial extent: _____ Depth: _____
   Remarks: _____

2. **Material Degradation** ☐ Location shown on site map ☐ No evidence of degradation
   Material type:_____ Arial extent: _____
   Remarks: _____

3. **Erosion** ☐ Location shown on site map ☐ No evidence of erosion
   Arial extent: _____ Depth: _____
   Remarks: _____

4. **Undercutting** ☐ Location shown on site map ☐ No evidence of undercutting
   Arial extent: _____ Depth: _____
   Remarks: _____

5. **Obstructions** Type: _____ ☐ No obstructions
   ☐ Location shown on site map Arial extent: _____
   Size: _____
   Remarks: _____

6. **Excessive Vegetative Growth** Type: _____
   ☐ No evidence of excessive growth
   ☐ Vegetation in channels does not obstruct flow
   ☐ Location shown on site map Arial extent: _____
   Remarks: _____

D. Cover Penetrations ☐ Applicable ☒ N/A

1. **Gas Vents** ☐ Active ☐ Passive
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
   Remarks: _____

2. **Gas Monitoring Probes**
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
   Remarks: _____

3. **Monitoring Wells** (within surface area of landfill)
   ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
   ☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A
   Remarks: _____

4. **Extraction Wells Leachate**

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ Evidence of leakage at penetration ☐ Needs maintenance ☐ N/A

Remarks: _____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☐ N/A

Remarks: _____

E. Gas Collection and Treatment ☐ Applicable ☒ N/A

1. **Gas Treatment Facilities**

☐ Flaring ☐ Thermal destruction ☐ Collection for reuse

☐ Good condition ☐ Needs maintenance

Remarks: _____

2. **Gas Collection Wells, Manifolds and Piping**

☐ Good condition ☐ Needs maintenance

Remarks: _____

3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)

☐ Good condition ☐ Needs maintenance ☐ N/A

Remarks: _____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

1. **Outlet Pipes Inspected** ☐ Functioning ☐ N/A

Remarks: _____

2. **Outlet Rock Inspected** ☐ Functioning ☐ N/A

Remarks: _____

G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A

1. **Siltation** Area extent: _____ Depth: _____ ☐ N/A

☐ Siltation not evident

Remarks: _____

2. **Erosion** Area extent: _____ Depth: _____

☐ Erosion not evident

Remarks: _____

3. **Outlet Works** ☐ Functioning ☐ N/A

Remarks: _____

4. **Dam** ☐ Functioning ☐ N/A

Remarks: _____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident

Horizontal displacement: _____ Vertical displacement: _____

Rotational displacement: _____

Remarks: _____

2. **Degradation** ☐ Location shown on site map ☐ Degradation not evident

Remarks: _____

I. Perimeter Ditches/Off-Site Discharge ☐ Applicable ☒ N/A

1. **Siltation** ☐ Location shown on site map ☐ Siltation not evident

Area extent: _____ Depth: _____

Remarks: _____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A

☐ Vegetation does not impede flow

Area extent: _____ Type: _____

Remarks: _____

3. **Erosion** ☐ Location shown on site map ☐ Erosion not evident

Area extent: _____ Depth: _____

Remarks: _____

4. **Discharge Structure** ☐ Functioning ☐ N/A

Remarks: _____

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

1. **Settlement** ☐ Location shown on site map ☐ Settlement not evident

Area extent: _____ Depth: _____

Remarks: _____

2. **Performance Monitoring** Type of monitoring: _____

☐ Performance not monitored

Frequency: _____ ☐ Evidence of breaching

Head differential: _____

Remarks: _____

IX. GROUND WATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A

A. Ground Water Extraction Wells, Pumps and Pipelines ☒ Applicable ☐ N/A

1. **Pumps, Wellhead Plumbing and Electrical**

☒ Good condition ☒ All required wells properly operating ☐ Needs maintenance ☐ N/A

Remarks: _____

2. **Extraction System Pipelines, Valves, Valve Boxes and Other Appurtenances**

☒ Good condition ☐ Needs maintenance

Remarks: _____

3. **Spare Parts and Equipment**

☒ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks: _____

B. Surface Water Collection Structures, Pumps and Pipelines ☐ Applicable ☒ N/A

1. **Collection Structures, Pumps and Electrical**

   ☐ Good condition ☐ Needs maintenance

   Remarks: _____

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes and Other Appurtenances**

   ☐ Good condition ☐ Needs maintenance

   Remarks: _____

3. **Spare Parts and Equipment**

   ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

   Remarks: _____

C. Treatment System ☒ Applicable ☐ N/A

1. **Treatment Train** (check components that apply)

   ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation

   ☐ Air stripping ☒ Carbon adsorbers

   ☐ Filters: _____

   ☐ Additive (e.g., chelation agent, flocculent): _____

   ☐ Others: _____

   ☒ Good condition ☐ Needs maintenance

   ☐ Sampling ports properly marked and functional

   ☐ Sampling/maintenance log displayed and up to date

   ☐ Equipment properly identified

   ☐ Quantity of ground water treated annually: _____

   ☐ Quantity of surface water treated annually: _____

   Remarks: _____

2. **Electrical Enclosures and Panels** (properly rated and functional)

   ☐ N/A ☒ Good condition ☐ Needs maintenance

   Remarks: _____

3. **Tanks, Vaults, Storage Vessels**

   ☐ N/A ☒ Good condition ☐ Proper secondary containment ☐ Needs maintenance

   Remarks: _____

4. **Discharge Structure and Appurtenances**

   ☐ N/A ☒ Good condition ☐ Needs maintenance

   Remarks: _____

5. **Treatment Building(s)**

☐ N/A ☒ Good condition (esp. roof and doorways) ☐ Needs repair

☐ Chemicals and equipment properly stored

Remarks: _____

6. **Monitoring Wells** (pump and treatment remedy)

☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition

☒ All required wells located ☐ Needs maintenance ☐ N/A

Remarks: _____

D. Monitoring Data

1. **Monitoring Data**

☒ Is routinely submitted on time ☒ Is of acceptable quality

2. **Monitoring Data Suggests:**

☒ Ground water plume is effectively contained ☐ Contaminant concentrations are declining

E. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)

☐ Properly secured/locked ☐ Functioning ☒ Routinely sampled ☒ Good condition

☐ All required wells located ☐ Needs maintenance ☐ N/A

Remarks: _____

X. OTHER REMEDIES

If there are remedies applied at the Site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions).

The remedy for the Cabot site is effective and functioning as designed. The remedy at the Koppers site is expected to be effective and protective of human health.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

No issues noted.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

No issues noted.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. None noted.

Site Inspection Team

Rusty Kestle (EPA Region 4 RPM)
Scott Miller (EPA Region 4 RPM)
Johnny Zimmerman-Ward (Skeo Solutions)
Ryan Burdge (Skeo Solutions)

Appendix E: Photographs from Site Inspection Visit

Entrance to Koppers site.

Newly installed wells at the Cabot site.

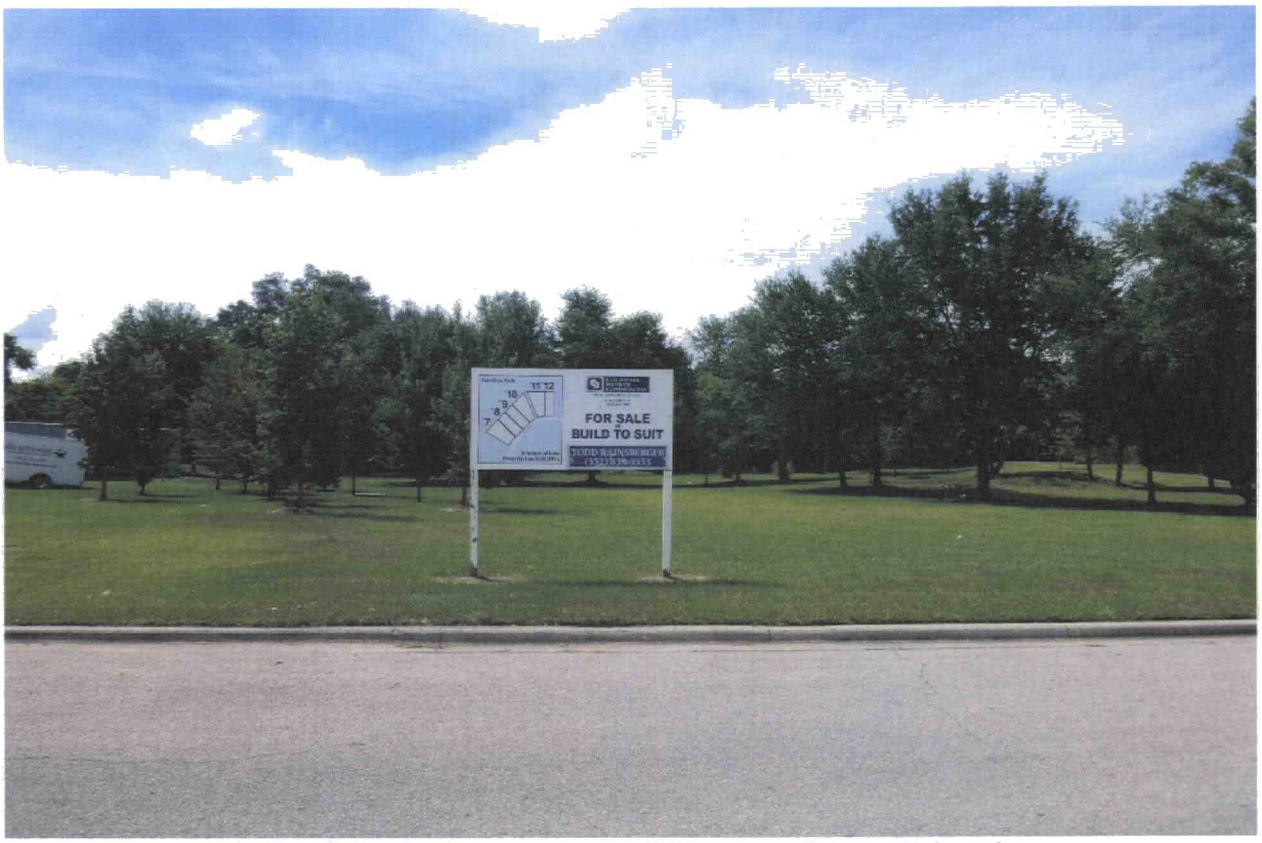
Exterior of Cabot site lift Station.

Interior of Cabot site lift station.

Remediated residences in the Stephen Foster neighborhood.

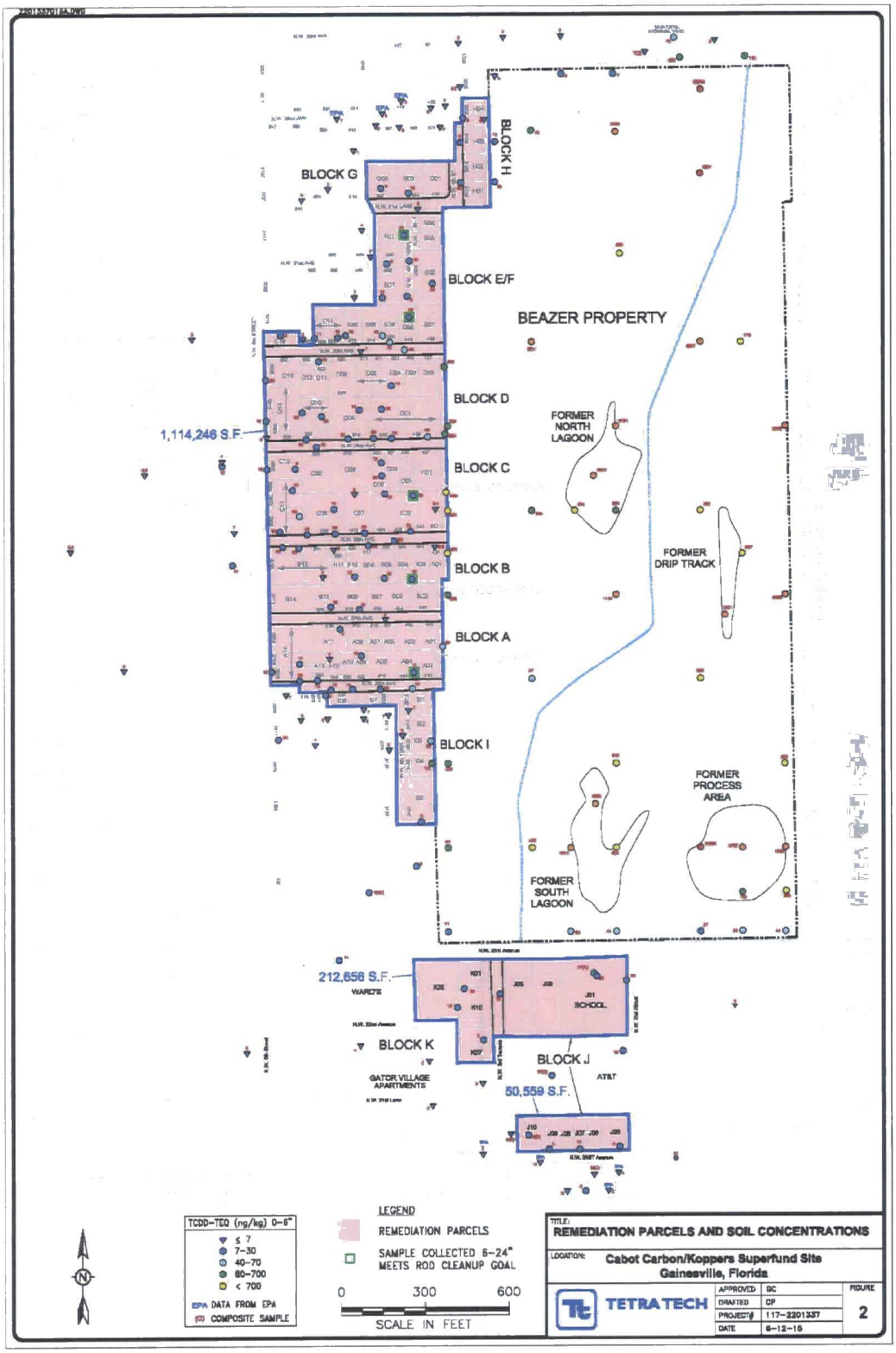
Koppers surficial aquifer treatment system.

Wells at the Koppers site.



For sale signage at part of the vacant former Cabot site.

Appendix F: Residential Soil Cleanup



Appendix G: ARARs Review Tables

Groundwater COC	Groundwater Cleanup Goal (µg/L)	2015 ARARs[a]
1,1 biphenyl	0.5	0.5
2,4-dimethylphenol	140	140
2-methylnaphthalene	28	28
2-methylphenol	35	35
3/4-methylphenol	3.5	3.5
Acenaphthalene	210	210
Acenaphthene	20	20
Arsenic	10	10[b]
Benzene	1	1
benzo(a)anthracene	0.05	0.05
benzo(a)pyrene	0.2	0.2
benzo(b)fluoranthene	0.05	0.05
benzo(k)fluoranthene	0.5	0.5
Bis (2-ethylhexyl) phthalate	6	6
Carbazole	1.8	1.8
Chrysene	4.8	4.8
Dibenzofuran	28	28
Fluoranthene	280	280
Fluorene	280	280
Naphthalene	14	14
n-nitrosodiphenylamine	7.1	7.1
Pentachlorophenol	1	1
Phenanthrene	210	210
Phenol	10	10

a. Florida water standards and GCTLs can be found at: http://www.dep.state.fl.us/waste/quick_topics/rules/#62-777 (accessed 10/15/2015)

Soil COC	Cleanup Goal (mg/kg)	2015 Leachability SCTLs[d]
1,1 Biphenyl	0.2	0.2
2,4,5-trichlorophenol	0.07	0.07
2,4-dimethylphenol	1.7	1.7
2-methylnaphthalene	8.5	8.5
3-methylphenol	0.3	0.3
4-methylphenol	0.03	0.03
Acenaphthene	2.1	2.1
Antimony	5.4	5.4
Arsenic	c	NA
Potentially carcinogenic PAHs (BaP-TEQ)[a]	8	8
Benzene	0.007	0.007
Carbazole	0.2	0.2
Chromium (total)	38	38
Copper	c	NA
Dibenzofuran	15	15
Dioxins (TCDD-TEQ)[b]	0.003	0.003
Fluoranthene	1,200	1,200
Fluorene	160	160
Lead	c	NA
Naphthalene	1.2	1.2
Pentachlorophenol	0.03	0.03
Phenanthrene	250	250

a. Site concentrations for potentially carcinogenic PAHs are converted to Benzo(a)pyrene equivalents (BaP-TEQ) before comparison with the corresponding direct exposure soil cleanup target level (SCTL) for Benzo(a)pyrene.
b. SCTLs are based on the toxicity equivalent (TEQ) of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD).
c. Leachability may be derived using the SPLP test to calculate site-specific cleanup goals or may be determined using TCLP in the event oily wastes are present.
d. Florida SCTLs can be found at: http://www.dep.state.fl.us/waste/quick_topics/rules/documents/62-777/62-777_TableII_SoilCTLs.pdf (accessed 9/15/2015).

Soil COC	Cleanup Goal	2015 Residential SCTLs
Arsenic	2.1 mg/kg	2.1 mg/kg
PAHs (total benzo-a-pyrene toxic equivalents)	0.1 mg/kg	0.1 mg/kg
Dioxin (TCDD-TEQ)	7 nanograms per kilogram (ng/kg)	7 ng/kg
Pentachlorophenol	7.2 mg/kg	7.2 mg/kg

http://www.dep.state.fl.us/waste/quick_topics/rules/documents/62-777/62-777_TableII_SoilCTLs.pdf

Appendix H: Groundwater Monitoring Data

Cabot Groundwater Monitoring Data

Summary of Recent Post-Remedial Action Groundwater Data
Eastern Site, Gainesville, Florida

Well Designation	PARAMETERS	Mar-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Sep-13	Dec-13	Mar-14	Jun-14	Aug-14	Dec-14	ROD Cleanup Goal
ITW-1	Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*100
ITW-1	Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	260
ITW-1	Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,310
ITW-1	Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	323
ITW-1	Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18
ITW-1	Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
ITW-1	Diethylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.14 J	*
ITW-1	1- Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ITW-1	2- Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ITW-2	Benzene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	1
ITW-2	Total Xylenes	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	*
ITW-2	Acenaphthene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	260
ITW-2	Anthracene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	1,310
ITW-2	Fluoranthene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	*
ITW-2	Fluorene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	323
ITW-2	Naphthalene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	18
ITW-2	Phenanthrene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	130
ITW-2	Pyrene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	130
ITW-2	2- Methylnaphthalene	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	ND	*
ITW-2	2,4-Dichlorophenol	Dry	Dry	Dry	Dry	Dry	Dry	NA	NA	NA	2.1	ND	ND	*
ITW-2	Chromium	Dry	Dry	Dry	Dry	Dry	Dry	ND	ND	ND	ND	ND	2.3 J	*100
ITW-13	Acetone	490	1100	1400	860	260	190	360	1300	420	ND	240	240	*
ITW-13	Benzene	75	130	78	91	75	73	86	59	60	96	83	69	1
ITW-13	2 Butanone (MEK)	260	450	250	240	ND	110	120	100	65	51	89	110	*
ITW-13	Cis-1-2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.6 J	*
ITW-13	p-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	230	
ITW-13	Toluene	680	1600	560	570	440	530	410	250	260	370	330	300	*
ITW-13	Ethylbenzene	250	480	250	340	300	340	320	210	210	300	280	250	*
ITW-13	2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33 J	*
ITW-13	Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.5	
ITW-13	4-Methyl-2-Pentanone (MIBK)	ND	ND	ND	ND	ND	ND	440	ND	ND	ND	ND	20 J	*
ITW-13	Total Xylenes	180	310	140	ND	170	190	180	120	120	160	160	160	*
ITW-13	Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	260
ITW-13	Acenaphthylene	54	47	ND	26	24	ND	ND	ND	ND	ND	ND	ND	130
ITW-13	Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7 J	1,310
ITW-13	Benzo (a) anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-13	Benzo (b) fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-13	Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	323

Summary of Recent Post-Remedial Action Groundwater Data
Eastern Site, Gainesville, Florida

Well Designation	PARAMETERS	Mar-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Sep-13	Dec-13	Mar-14	Jun-14	Aug-14	Dec-14	ROD Cleanup Goal
ITW-13	Naphthalene	**35**	**250**	**62**	**53**	**49**	**47**	**97**	ND	**53**	**ND**	ND	**60**	**18**
ITW-13	Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8 J	130
ITW-13	Total Potentially Carcinogenic PAHs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.003**
ITW-13	1- Methylnaphthalene	ND	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	ND	*
ITW-13	2- Methylnaphthalene	ND	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	ND	*
ITW-13	Phenol	**6300**	**3400**	**4000**	**4200**	1300	1100	2,300	1,800	960	640	1,600	1,800	**2630**
ITW-13	2,4- Dimethylphenol	3500	2100	2000	2900	2000	1900	3,300	2,400	3,100	2,300	1,100	2,700	*
ITW-13	2- Methylphenol	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,700	ND	2,000	*
ITW-13	3&4- Methylphenol	NS	NS	NS	NS	NS	NS	NS	NS	NS	4,500	3,400	6,700	*
ITW-13	Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
ITW-13	Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*100
ITW-14	Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ITW-14	Benzene	**47**	**19**	**15**	**26**	**34**	**34**	**36**	**23**	**29**	**35**	ND	**30**	**1**
ITW-14	Chloroethane	ND	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	*
ITW-14	2-Butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
ITW-14	Toluene	900	290	220	560	560	560	550	57	440	470	430	470	*
ITW-14	Ethylbenzene	250	75	69	160	150	150	140	110	140	120	120	150	*
ITW-14	Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	
ITW-14	p-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	430	
ITW-14	Styrene	ND	9.6	9.7	ND	ND	28	ND	8.4	12	8.8	ND	ND	*
ITW-14	Total Xylenes	790	260	240	470	450	480	430	300	410	360	350	430	*
ITW-14	Acenaphthene	ND	ND	ND	ND	ND	ND	16	ND	28	ND	ND	12	260
ITW-14	Acenaphthylene	**660**	**130**	80	**220**	**300**	24	25	ND	ND	ND	ND	13	**130**
ITW-14	Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8 J	1310
ITW-14	Benzo (a) anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-14	Benzo (a) pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-14	Benzo (b) fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-14	Benzo (g,h,i) perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ITW-14	Benzo (k) flouranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-14	Chrysene	130	**39**	**70**	**74**	**35**	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-14	Dibenzo (a,h) anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-14	Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ITW-14	Fluoranthene	320	45	70	39	30	ND	ND	ND	ND	ND	ND	ND	*
ITW-14	Fluorene	78	ND	ND	18	17	ND	ND	ND	ND	ND	ND	ND	323
ITW-14	Naphthalene	**200**	**500**	**40**	**190**	**210**	**180**	**200**	**130**	**270**	**120**	**94**	**85**	**18**
ITW-14	Phenanthrene	60.0	12.0	16.0	11	7.4	ND	10	ND	35	ND	ND	6.7	130
ITW-14	Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
ITW-14	1- Methylnaphthalene	280	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	*

Summary of Recent Post-Remedial Action Groundwater Data
Eastern Site, Gainesville, Florida

Well Designation	PARAMETERS	Mar-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Sep-13	Dec-13	Mar-14	Jun-14	Aug-14	Dec-14	ROD Cleanup Goal
ITW-14	2- Methylnaphthalene	190	NS	NS	NS	NS	NS	NS	ND	ND	45	39	41	*
ITW-14	Total Potentially Carcinogenic PAHs	**130.0**	**39.0**	**70.0**	**74**	**35**	ND	ND	ND	ND	ND	ND	ND	**0.003**
ITW-14	Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,630
ITW-14	2,4- Dimethylphenol	ND	890	640	1900	2400	2300	2,500	1,500	1,200	1,000	1,300	1,100	*
ITW-14	2- Methylphenol	NS	NS	NS	NS	NS	NS	NS	ND	ND	240	ND	ND	*
ITW-14	3&4- Methylphenol	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	80	*
ITW-14	Nitrobenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	140	ND	ND	*
ITW-14	Arsenic	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
ITW-14	Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*100
WMW-17E	Benzene	1.1	2.1	**1.5**	**ND**	ND	ND	ND	ND	ND	ND	ND	0.96 J	1
WMW-17E	Ethylbenzene	ND	4.0	2.7	ND	ND	ND	ND	ND	ND	ND	1.8	0.95 J	*
WMW-17E	Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0	*
WMW-17E	Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
WMW-17E	Total Xylenes	5.5	3.3	ND	2	ND	ND	ND	ND	ND	ND	6.3	3.4	*
WMW-17E	Acenaphthene	ND	ND	ND	ND	ND	0.54	0.51	ND	0.58	0.53	0.39	0.53	260
WMW-17E	Acenaphthylene	3.6	5.0	1.3	1.4	ND	ND	ND	ND	ND	ND	ND	ND	130
WMW-17E	Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,310
WMW-17E	Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	323
WMW-17E	Naphthalene	3.3	**29 E**	4.0	17	2.5	2.3	1.1	2.6	2.7	1.7	3.5	3.6	18
WMW-17E	Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
WMW-17E	Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
WMW-17E	Total Potentially Carcinogenic PAHs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003
WMW-17E	1- Methylnaphthalene	1.0	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	*
WMW-17E	2- Methylnaphthalene	ND	NS	NS	NS	NS	NS	NS	ND	ND	ND	0.35	0.46	*
WMW-17E	2,4- Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	18	7.0	*
WMW-17E	PCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
WMW-17E	Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,630
WMW-17E	Di-n-octyl-phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4	ND	ND	*
WMW-17E	Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*100
WMW-18E	Acetone	35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
WMW-18E	Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
WMW-18E	Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
WMW-18E	Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
WMW-18E	Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.33 J	*
WMW-18E	Acenaphthene	ND	ND	ND	ND	ND	ND	0.47	ND	ND	ND	ND	ND	260
WMW-18E	Acenaphthylene	ND	ND	ND	ND	ND	ND	0.35	ND	ND	ND	ND	ND	130
WMW-18E	Benzo(b)flouranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
WMW-18E	Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	323

Summary of Recent Post-Remedial Action Groundwater Data
Eastern Site, Gainesville, Florida

Well Designation	PARAMETERS	Mar-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Sep-13	Dec-13	Mar-14	Jun-14	Aug-14	Dec-14	ROD Cleanup Goal
WMW-18E	Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18
WMW-18E	Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
WMW-18E	Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
WMW-18E	Total Potentially Carcinogenic PAHs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003
WMW-18E	1- Methylnaphthalene	ND	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	*
WMW-18E	2- Methylnaphthalene	ND	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	*
WMW-18E	PCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
WMW-18E	2,4- Dimethylphenol	15.0	11.0	ND	ND	ND	ND	ND	ND	ND	ND	2.7	1.0	*
WMW-18E	Chromium	10.0	11.0	ND	ND	10	ND	ND	ND	ND	ND	ND	6.7 J	*100
WMW-18E	Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
ESE-002	Acetone	240	ND	ND	ND	ND	ND	130	72	54	ND	ND	ND	*
ESE-002	Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
ESE-002	Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-002	Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-002	Acenaphthene	ND	20	3.8	ND	ND	0.63	2.6	ND	1.5	0.41	0.94	0.2	260
ESE-002	Acenaphthylene	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
ESE-002	Anthracene	ND	0.24	ND	1.7	0.83	0.53	0.72	ND	1.5	0.24	0.43	0.1 J	1,310
ESE-002	Fluorathene	ND	ND	2.4	8.9	3.3	ND	ND	ND	ND	ND	ND	0.98	*
ESE-002	Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ESE-002	Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	PAH
ESE-002	Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	1.0	ND	
ESE-002	Fluoranthene	ND	1.0	8.2	ND	ND	2.2	0.94	ND	5.4	1.7	1.1	ND	*
ESE-002	Fluorene	ND	15	ND	6.4	3.9	0.98	5.7	ND	5.1	0.48	2.1	0.2	323
ESE-002	Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18
ESE-002	Phenanthrene	ND	2.8	19	16	8.6	7.4	7.6	ND	23	ND	ND	1.1	130
ESE-002	Pyrene	ND	0.70	1.50	ND	2.7	1.3	0.73	ND	ND	ND	ND	0.45	130
ESE-002	1- Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-002	2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-002	Phenanthrene	ND	2.8	ND	ND	ND	ND	ND	ND	ND	3.1	5.4	ND	130
ESE-002	Pyrene	ND	ND	ND	4.8	ND	ND	ND	ND	2.6	0.84	0.73	ND	130
ESE-002	Total Potentially Carcinogenic PAHs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.003**
ESE-002	Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,630
ESE-002	2,4- Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-002	Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*100
ESE-004	Acetone	ND	ND	ND	37	ND	ND	ND	50	ND	ND	ND	13	*
ESE-004	Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
ESE-004	Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-004	Acenaphthylene	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130

Summary of Recent Post-Remedial Action Groundwater Data
Eastern Site, Gainesville, Florida

Well Designation	PARAMETERS	Mar-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Sep-13	Dec-13	Mar-14	Jun-14	Aug-14	Dec-14	ROD Cleanup Goal
ESE-004	Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,310
ESE-004	Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	323
ESE-004	Naphthalene	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18
ESE-004	Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
ESE-004	2,4- Dimethylphenol	ND	ND	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	*
ESE-004	Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,630
ESE-004	Chromium	ND	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4 J	*100
ESE-007	Acetone	160	130	36	25	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-007	Benzene	**13.0**	**9.0**	**4.8**	**4.2**	**3.0**	**3.7**	**1.8**	**1.4**	**1.3**	**1.4**	ND	**1.1**	**1**
ESE-007	2-Butanone (MEK)	58.0	56	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
ESE-007	Toluene	110.0	75	18	5.4	ND	ND	ND	ND	ND	ND	ND	0.66 J	*
ESE-007	Ethylbenzene	41.0	31	14	14	7.0	9.0	2.3	2.1	1.8	1.2	ND	1.9	*
ESE-007	Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.51 J	*
ESE-007	Total Xylenes	41	30	14	15	7.6	9.3	3.8	4.3	4.1	2.9	ND	2.8	*
ESE-007	Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	260
ESE-007	Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
ESE-007	Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,310
ESE-007	Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	323
ESE-007	Naphthalene	ND	**70**	2.6	ND	ND	3.7	2.8	ND	2.7	1.4	1.8	1.6 J	18
ESE-007	Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
ESE-007	1-Methylnaphthalene	ND	NS	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	*
ESE-007	2-Methylnaphthalene	ND	NS	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	*
ESE-007	Total Potentially Carcinogenic PAHs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003
ESE-007	Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,630**
ESE-007	Diethyl phthalate	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.0	ND	ND	*
ESE-007	2,4- Dimethylphenol	420	370	150	76	37	28	28	ND	26	16	19	17 J	*
ESE-007	2- Methylphenol	ND	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	*
ESE-007	3&4- Methylphenol	ND	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	*
ESE-007	Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
ESE-007	Chromium	12	13	ND	ND	ND	ND	ND	10	ND	ND	ND	11	*100

All results are in ug/l (micrograms per liter).
ND = Not detected above the MDL.
NS = Not sampled for indicated compound.
NA = Not analyzed
* = No ROD Cleanup Goal for compound.
PAH = Included as Total Potentially Carcinogenic PAHs.
Bolded values meet or exceed indicated ROD cleanup goals.

Koppers Groundwater Monitoring Data

Table 5
Summary of Analytical Data for Surficial Aquifer Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)	Well ID Sample Date Sample Type	ITW-12 8/14/2014 SMP	ITW-22 8/14/2014 SMP	M-03BR 8/16/2014 SMP	M-09AR 8/14/2014 SMP	M-09BR 8/15/2014 SMP	M-12 8/14/2014 SMP
Temperature (°C)	NA	NA		26.35	25.55	25.51	23.3	23.79	28.02
pH (S.U.)	NA	NA		6.56	6.21	5.57	5.83	4.32	6.22
Conductivity (mS/cm)	NA	NA		0.631	0.251	0.134	0.147	0.05	0.17
Oxidation Reduction Potential (mV)	NA	NA		-248.6	-84.6	198.9	-202	-208	-114.1
Dissolved Oxygen (mg/l)	NA	NA		0.52	1.05	0.66	0.56	0.54	3.5
Turbidity (NTU)	NA	NA		0.56	0.44	0.69	1.88	0.71	1.55
METALS									
ARSENIC (dissolved)	10	10		-	-	1.0 U	5.9	5.5	1.0 U
ARSENIC (total)	10	10		-	-	1.0 U	6.0	6.0	1.4
CHROMIUM (dissolved)	100	100		-	-	2.0 U	-	-	2.0 UJ
CHROMIUM (total)	100	100		-	-	2.0 U	-	-	2.0 U
VOCs									
BENZENE	5	1		1.0 U	1.0 U	3.3	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30		1.0 U	1.0 U	3.1	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40		1.0 U	1.0 U	1.7	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20		3.0 U	3.0 U	8.1	3.0 U	3.0 U	3.0 U
SVOCs									
2,4-DIMETHYLPHENOL	-	140		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U
2-METHYLNAPHTHALENE	-	28		5.3 U	5.3 U	21	5.3 U	5.4 U	5.2 U
2-METHYLPHENOL	-	35		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U
3&4-METHYLPHENOL	-	3.5[3]		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U
ACENAPHTHENE	-	20		5.3 U	5.3 U	54	5.3 U	17	5.2 U
ACENAPHTHYLENE	-	210		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U
ANTHRACENE	-	2100		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U
CARBAZOLE	-	1.8		1.9 U	1.9 U	130	1.9 U	2.0 U	1.9 U
DIBENZOFURAN	-	28		5.3 U	5.3 U	81	5.3 U	29	5.2 U
FLUORANTHENE	-	280		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U
FLUORENE	-	280		5.3 U	5.3 U	75	5.3 U	39	5.2 U
NAPHTHALENE	-	14		5.3 U	5.3 U	210	5.3 U	5.4 U	5.2 U
PENTACHLOROPHENOL	1	1		1.2 UJ	1.2 UJ	1.2 U	1.2 UJ	1.2 U	1.2 UJ
PHENANTHRENE	-	210		5.3 U	5.3 U	33	5.3 U	5.4 U	5.2 U
PHENOL	-	10		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U
PYRENE	-	210		5.3 U	5.3 U	5.4 U	5.3 U	5.4 U	5.2 U

Table 5
Summary of Analytical Data for Surficial Aquifer Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)	Well ID Sample Date Sample Type	M-16A 8/14/2014 SMP	M-16B 8/15/2014 SMP	M-17 8/15/2014 SMP	M-20B 8/17/2014 SMP	M-23BR 8/17/2014 SMP	M-23BR 8/17/2014 DUP
Temperature (°C)	NA	NA		25.11	24.34	24.9	23.91	23.96	-
pH (S.U.)	NA	NA		6.53	5.52	5.5	4.95	4.71	-
Conductivity (mS/cm)	NA	NA		0.28	0.268	0.241	0.156	0.184	-
Oxidation Reduction Potential (mV)	NA	NA		-190.1	-241.9	-179.6	-175.1	-201.1	-
Dissolved Oxygen (mg/l)	NA	NA		0.67	0.55	0.73	0.58	0.53	-
Turbidity (NTU)	NA	NA		0.85	1.08	3.09	1.09	0.9	-
METALS									
ARSENIC (dissolved)	10	10		7.5	41	5.4	96	2720	2750
ARSENIC (total)	10	10		8.9	43	6.6	92	2700	2660
CHROMIUM (dissolved)	100	100		-	-	-	-	-	-
CHROMIUM (total)	100	100		-	-	-	-	-	-
VOCs									
BENZENE	5	1		1.0 U	1.6	1.0 U	4.4	6.4	6.5
ETHYLBENZENE	700	30		1.0 U	2.0	1.0 U	11	20	21
TOLUENE	10000	40		1.0 U	1.3	1.0 U	10	15	15
XYLENE (total)	1000	20		3.0 U	8.1	3.0 U	28	50	50
SVOCs									
2,4-DIMETHYLPHENOL	-	140		5.3 U	5.4 U	5.5 U	10	48	49
2-METHYLNAPHTHALENE	-	28		5.3 U	260	5.5 U	290	250	250
2-METHYLPHENOL	-	35		5.3 U	5.4 U	5.5 U	5.5 U	9.3	9.9
3&4-METHYLPHENOL	-	3.5[3]		1.1 U	5.4 U	5.5 U	5.5 U	15	16
ACENAPHTHENE	-	20		5.3 U	220	5.5 U	270	200	210
ACENAPHTHYLENE	-	210		5.3 U	6.4	5.5 U	5.5 U	5.4 U	5.8 U
ANTHRACENE	-	2100		5.3 U	5.4 U	5.5 U	5.6	16	18
CARBAZOLE	-	1.8		7.9	330	2.0 U	130 J	47	58
DIBENZOFURAN	-	28		5.3 U	160	5.5 U	170	140 J	160 J
FLUORANTHENE	-	280		5.3 U	5.4 U	5.5 U	5.5 U	6.1	7.7
FLUORENE	-	280		5.3 U	140	5.5 U	180	150 J	150
NAPHTHALENE	-	14		5.3 U	2200	5.5 U	1000	1800	1600
PENTACHLOROPHENOL	1	1		1.2 UJ	1.2 U	1.2 U	43	1000	1200
PHENANTHRENE	-	210		5.3 U	78	5.5 U	110	190	220
PHENOL	-	10		5.3 U	5.4 U	5.5 UJ	5.5 UJ	5.4 UJ	5.8 UJ
PYRENE	-	210		5.3 U	5.4 U	5.5 U	5.5 U	5.4 U	5.8 U

Table 5
Summary of Analytical Data for Surficial Aquifer Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)	Well ID / Sample Date / Sample Type	M-25B 8/17/2014 SMP	M-33B 8/16/2014 SMP	M-34B 8/16/2014 SMP	M-35B 8/17/2014 SMP	M-36B 8/19/2014 SMP	M-37B 8/16/2014 SMP
Temperature (°C)	NA	NA		24.65	24.91	24.62	25.18	24.09	24.33
pH (S.U.)	NA	NA		5.15	5.02	5.59	5.56	5.97	4.86
Conductivity (mS/cm)	NA	NA		0.295	0.059	0.201	0.364	0.322	0.175
Oxidation Reduction Potential (mV)	NA	NA		-247.3	-187	-164.7	-272	-108.1	-244.6
Dissolved Oxygen (mg/l)	NA	NA		0.51	0.86	0.59	0.82	0.61	0.58
Turbidity (NTU)	NA	NA		1.64	0.94	8.26	1.44	6.33	0.57
METALS									
ARSENIC (dissolved)	10	10		2.1	-	2090	4.9	663	1.1
ARSENIC (total)	10	10		2.4	-	2030	6.1	663	1.2
CHROMIUM (dissolved)	100	100		0.36 J	-	8.7	2.0 UJ	0.29 J	-
CHROMIUM (total)	100	100		0.39 J	-	10	2.0 U	0.43 J	-
VOCs									
BENZENE	5	1		21	3.1	3.1	42	11	15
ETHYLBENZENE	700	30		52	2.3	3.1	390	19	21
TOLUENE	10000	40		22	1.0 U	1.5	110	14	1.5
XYLENE (total)	1000	20		48	6.7	9.5	670	34	21.6
SVOCs									
2,4-DIMETHYLPHENOL	-	140		5.4 U	5.6 U	5.6 U	72	31	5.7 U
2-METHYLNAPHTHALENE	-	28		100	12	92	1200	81	95
2-METHYLPHENOL	-	35		5.4 U	5.6 U	5.6 U	46	12	5.7 U
3&4-METHYLPHENOL	-	3.5[3]		5.4 U	5.6 U	5.6 U	130	24	5.7 U
ACENAPHTHENE	-	20		260	40	100	390	47	82
ACENAPHTHYLENE	-	210		5.4 U	5.6 U	5.6 U	6.4	5.0 U	5.7 U
ANTHRACENE	-	2100		5.4 U	5.6 U	8.4	5.9	5.0 U	5.7 U
CARBAZOLE	-	1.8		230	55	12	360	46	98
DIBENZOFURAN	-	28		190	42	57	240	29	93
FLUORANTHENE	-	280		5.4 U	5.6 U	6.7	5.3 U	5.0 U	5.7 U
FLUORENE	-	280		140	39	59	180	26	92
NAPHTHALENE	-	14		1400	110	340	15000	1400	890
PENTACHLOROPHENOL	1	1		1.2 U	1.3 U	400	4.9 J	55	1.3 U
PHENANTHRENE	-	210		98	7.9	100	130	31	47
PHENOL	-	10		5.4 UJ	5.6 U	5.6 U	33 J	5.0 U	5.7 U
PYRENE	-	210		5.4 U	5.6 U	5.6 U	5.3 U	5.0 UJ	5.7 U

Notes:

U - Indicates analyte was not detected above the method detection limit (MDL)

J - Indicates result is estimated

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL.

[1] Federal Maximum Contaminant Levels (MCLs) represent the National Primary Drinking Water Standards.

[2] Florida Groundwater Cleanup Target Levels (GCTLs) are guidelines as set forth in 62-777 Florida Admin. Code (F.A.C.).

[3] 3-Methylphenol and 4-Methylphenol cannot be quantified separately using USEPA SW-846 Method 8270C.

Table 6a
Summary of Analytical Data for Upper Hawthorn Group Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)	Well ID / Sample Date / Sample Type	HG-4S 8/20/2014 SMP	HG-6S 8/19/2014 SMP	HG-20S 8/19/2014 SMP	HG-21S 8/18/2014 SMP	HG-24S 8/17/2014 SMP	HG-26S 8/19/2014 SMP	HG-27S 8/18/2014 SMP	HG-29S 8/17/2014 SMP	HG-31S 8/20/2014 SMP	HG-32S 8/21/2014 SMP	HG-32S 8/21/2014 DUP	HG-33S 8/20/2014 SMP	HG-34S 8/21/2014 SMP	HG-35S 8/18/2014 SMP
Temperature (°C)	NA	NA		24.5	23.82	23.52	24.26	24.29	25.34	27.38	28.09	24.68	24.68	-	24.65	23.37	23.33
pH (S.U.)	NA	NA		6.8	6.8	6.13	7.36	7.17	6.29	7.6	4.35	8.22	9.32	-	7.43	10.3	7.44
Conductivity (mS/cm)	NA	NA		0.515	0.37	0.353	0.25	0.208	0.519	0.244	6.051	0.345	0.209	-	0.283	0.254	0.277
ORP (mV)	NA	NA		-109.1	-58.6	-135.2	-106.9	-88.2	-189.2	25.1	-118.9	-266.3	-117.4	-	-159.4	-173.6	-117.6
Dissolved Oxygen (mg/l)	NA	NA		0.52	0.86	1.29	1.62	0.89	0.46	0.93	0.37	0.59	0.78	-	0.76	0.71	1.41
Turbidity (NTU)	NA	NA		6.71	0.76	4.03	3.23	8.63	2.39	0.6	9.06	1.11	1.97	-	2.07	3.23	1.29
METALS																	
ARSENIC (dissolved)	10	10		-	-	-	-	-	-	-	-	2.2	1.0 U	1.0 J	0.48 J	0.70 J	1.0 U
ARSENIC (total)	10	10		-	-	-	-	-	-	-	-	1.9	1.0 U	1.0 U	0.42 U	0.44 J	1.0 U
CHROMIUM (dissolved)	100	100		-	-	-	-	-	-	-	-	2.0 UJ	2.0 UJ	2.0 UJ	0.18 U	0.18 U	2.0 UJ
CHROMIUM (total)	100	100		-	-	-	-	-	-	-	-	2.0 U	2.0 U	2.0 U	0.18 U	0.18 U	2.0 U
VOCs																	
BENZENE	5	1		2.0 U	5.4	3.4	1.0 U	1.0 U	17	1.0 U	370	340	430	430	260	650	38
ETHYLBENZENE	700	30		4.6	7.0	3.3	2.1	1.0 U	22	1.0 U	97	120	110	110	75	200	5.4
TOLUENE	10000	40		2.0 U	2.7	1.1	1.0 U	1.0 U	5.0 U	1.0 U	1500	390	440	440	230	700	25
XYLENE (total)	1000	20		11	10.5	6.2	7.5	3.0 U	28	3.0 U	247 J	228	213	213	140	420	11
SVOCs																	
2,4-DIMETHYLPHENOL	-	140		5.2 U	7.4	5.4	18	5.0 U	5.7 UJ	5.2 U	13000	1500	20000	17000	3500	2700	24
2-METHYLNAPHTHALENE	-	28		260	9.2	24	5.0 U	5.0 U	76 J	5.2 U	270 U	49	56	50 U	66	190 J	5.2 U
2-METHYLPHENOL	-	35		5.2 U	5.3 U	5.2 U	5.0 U	5.0 U	5.7 UJ	5.2 U	20000	890 J	11000	9800	220	1400	5.2 U
3&4-METHYLPHENOL	-	3.5[3]		5.2 U	5.3 U	5.2 U	5.0 U	5.0 U	5.8 J	5.2 U	68000	950	20000	17000	99	2200	5.2 U
ACENAPHTHENE	-	20		310	7.0	24	5.0 U	5.0 U	180	5.2 U	270 U	20	50 U	50 U	6.8	73 J	5.2 U
ACENAPHTHYLENE	-	210		6.0	5.3 U	5.2 U	5.0 U	5.0 U	5.7 U	5.2 U	270 UJ	5.3 U	50 U	50 U	5.2 U	5.3 J	5.2 U
CARBAZOLE	-	1.8		160	4.8 J	21	1.8 U	1.8 U	150	1.9 U	97 U	98	66	55	14	67 J	1.9 U
DIBENZOFURAN	-	28		95	5.3 U	17	5.0 U	5.0 U	67	5.2 U	270 U	5.3 U	50 U	50 U	5.2 U	35 J	5.2 U
FLUORANTHENE	-	280		5.2 U	5.3 U	5.2 U	5.0 U	5.0 U	5.7 U	5.2 U	270 U	5.3 U	50 U	50 U	5.2 U	9 J	5.2 U
FLUORENE	-	280		92	5.3 U	16	5.0 U	5.0 U	66	5.2 U	270 UJ	5.3 U	50 U	50 U	5.2 U	43 J	5.2 U
NAPHTHALENE	-	14		7200	140	130	5.0 U	5.0 U	2300 J	5.2 U	270 UJ	3100	3400	2600	720	5000 J	14
PENTACHLOROPHENOL	1	1		1.2 U	1.2 U	1.2 U	1.1 U	1.1 U	1.3 U	1.2 U	60 UJ	3.5 J	290	250	1.2 U	7.7	1.2 U
PHENANTHRENE	-	210		38 J	5.3 U	5.2 U	5.0 U	5.0 U	5.7 U	5.2 U	270 UJ	5.3 U	50 U	50 U	5.2 U	51 J	5.2 U
PHENOL	-	10		5.2 UJ	5.3 UJ	5.2 UJ	5.0 UJ	5.0 UJ	5.7 UJ	5.2 UJ	59000 J	250 J	3100	3200	5.2 UJ	680	5.2 UJ
PYRENE	-	210		5.2 U	5.3 U	5.2 U	5.0 U	5.0 U	5.7 U	5.2 U	270 U	5.3 U	50 U	50 U	5.2 U	5.7 J	5.2 U

Notes:

U - Indicates analyte was not detected above the method detection limit (MDL)

J - Indicates result is estimated

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

[1] Federal Maximum Contaminant Levels (MCLs) represent the National Primary Drinking Water Standards.

[2] Florida Groundwater Cleanup Target Levels (GCTLs) are guidelines set forth in 62-777 Florida Administrative Code (F.A.C.).

[3] *3-Methylphenol and 4-Methylphenol cannot be quantified separately using USEPA SW-846 Method 8270C.*

Table 6b
Summary of Analytical Data for Lower Hawthorn Group Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

		Well ID	HG-2D	HG-4D	HG-5D	HG-6D	HG-6D	HG-12D	HG-20D	HG-20D
		Sample Date	8/20/2014	8/19/2014	8/18/2014	8/20/2014	8/20/2014	8/20/2014	8/19/2014	8/19/2014
		Sample Type	SMP	SMP	SMP	SMP	DUP	SMP	SMP	DUP
Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)								
Temperature (°C)	NA	NA	24.66	23.45	26.53	23.4	-	24.61	23.68	-
pH (S.U.)	NA	NA	7.14	6.99	10.51	7.13	-	11.55	7.19	-
Conductivity (mS/cm)	NA	NA	0.284	0.375	0.162	0.338	-	0.808	0.386	-
ORP (mV)	NA	NA	-98.2	-83.1	-69.2	-105.6	-	-105.2	-96.1	-
Dissolved Oxygen (mg/l)	NA	NA	1.19	0.55	0.91	0.84	-	1.08	0.54	-
Turbidity (NTU)	NA	NA	1.98	6.14	9.04	5.87	-	4.31	4.82	-
VOCs										
BENZENE	5	1	24	23	1.0 U	44	43	40	1.8	1.9
ETHYLBENZENE	700	30	18	23	1.0 U	31	30	64	1.7	1.9
TOLUENE	10000	40	4.8	2.5	1.0 U	20	19	130	1.0 U	1.0 U
XYLENE (total)	1000	20	36	47	3.0 U	66	63	204	3.4	3.6
SVOCs										
2,4-DIMETHYLPHENOL	-	140	320	240	5.2 U	430	420	1000 U	39 J	26 J
2-METHYLNAPHTHALENE	-	28	51	150	5.2 U	300	300	1000 U	5.3 U	5.2 UJ
2-METHYLPHENOL	-	35	110 U	5.3 U	5.2 U	5.2 U	5.2 U	24	5.3 U	5.2 UJ
3&4-METHYLPHENOL	-	3.5[3]	5.3 U	5.3 U	5.2 U	5.2 U	5.2 U	25	5.3 U	5.2 UJ
ACENAPHTHENE	-	20	17	68	5.2 U	100	100	1000 U	5.3 U	5.2 U
ACENAPHTHYLENE	-	210	5.3 U	5.3 U	5.2 U	6.6	6.1	28	5.3 U	5.2 U
CARBAZOLE	-	1.8	34	74	1.9 U	110	110	360 U	1.9 U	1.9 U
DIBENZOFURAN	-	28	5.3 U	11	5.2 U	34	32	1000 U	5.3 U	5.2 U
FLUORANTHENE	-	280	5.3 U	5.3 U	5.2 U	5.2 U	5.2 U	63	5.3 U	5.2 U
FLUORENE	-	280	5.3 U	11	5.2 U	25	24	1000 U	5.3 U	5.2 U
NAPHTHALENE	-	14	960	2000	5.2 U	5400	5200	9900	190 J	140 J
PENTACHLOROPHENOL	1	1	1.2 U	1.2 U	3.2 J	1.2 U	1.2 U	7.5 J	1.2 U	1.2 UJ
PHENANTHRENE	-	210	5.3 U	5.3 U	8.1	5.2 U	5.2 U	1000 U	5.3 U	5.2 U
PHENOL	-	10	5.3 UJ	5.3 UJ	5.2 UJ	5.2 UJ	5.2 UJ	5.0 UJ	5.3 UJ	5.2 UJ
PYRENE	-	210	5.3 U	5.3 U	5.2 U	5.2 U	5.2 U	50	5.3 U	5.2 U

Table 6b
Summary of Analytical Data for Lower Hawthorn Group Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)	Well ID Sample Date Sample Type HG-21D 8/19/2014 SMP	HG-22D 8/17/2014 SMP	HG-23D 8/17/2014 SMP	HG-26D 8/18/2014 SMP	HG-26D 8/19/2014 SMP	HG-27D 8/18/2014 SMP	HG-29D 8/21/2014 SMP
Temperature (°C)	NA	NA	24.69	24.42	24.59	23.9	24.6	25.87	24.64
pH (S.U.)	NA	NA	7.08	7.43	7.64	9.26	7.22	7.4	6.07
Conductivity (mS/cm)	NA	NA	0.351	0.303	0.324	0.25	0.323	0.267	3.841
ORP (mV)	NA	NA	-119.6	-81.3	-118.5	-31.8	-133.4	-75.3	-100.3
Dissolved Oxygen (mg/l)	NA	NA	0.63	1.29	0.96	1.18	0.49	1.13	0.43
Turbidity (NTU)	NA	NA	3.74	7.41	6.71	4.07	8.32	1.49	1.59
VOCs									
BENZENE	5	1	44	1.0 U	1.0 U	1.0 U	15	1.0 U	120 J
ETHYLBENZENE	700	30	32	1.0 U	1.0 U	1.0 U	12	1.0 U	40 J
TOLUENE	10000	40	4.7	1.0 U	1.0 U	1.0 U	9.5	1.0 U	340 J
XYLENE (total)	1000	20	70	3.0 U	3.0 U	3.0 U	23.1	3.0 U	80 J
SVOCs									
2,4-DIMETHYLPHENOL	-	140	1500	5.2 U	5.2 U	5.3 U	220 J	5.9	4100
2-METHYLNAPHTHALENE	-	28	11	5.2 U	5.2 U	5.3 U	51	5.3 U	52 U
2-METHYLPHENOL	-	35	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	5600
3&4-METHYLPHENOL	-	3.5[3]	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	36000
ACENAPHTHENE	-	20	5.0 U	5.2 U	5.2 U	5.3 U	8.6	5.3 U	52 U
ACENAPHTHYLENE	-	210	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	52 U
CARBAZOLE	-	1.8	3.1 J	1.9 U	1.9 U	1.9 U	19	1.9 U	19 U
DIBENZOFURAN	-	28	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	52 U
FLUORANTHENE	-	280	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	52 U
FLUORENE	-	280	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	52 U
NAPHTHALENE	-	14	720	6.6	5.2 U	5.3 U	1100	5.3 U	220
PENTACHLOROPHENOL	1	1	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	12 U
PHENANTHRENE	-	210	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	52 U
PHENOL	-	10	5.0 UJ	5.2 UJ	5.2 UJ	5.3 UJ	5.2 UJ	5.3 UJ	11000
PYRENE	-	210	5.0 U	5.2 U	5.2 U	5.3 U	5.2 U	5.3 U	52 U

Notes:

U - Indicates analyte was not detected above the method detection limit (MDL)

J - Indicates result is estimated

Concentration exceeds Florida GCTL

[ ] Concentration exceeds Federal MCL

[1] Federal Maximum Contaminant Levels (MCLs) represent the National Primary Drinking Water Standards.

[2] Florida Groundwater Cleanup Target Levels (GCTLs) are guidelines set forth in 62-777 Florida Administrative Code (F.A.C.).

[3] 3-Methylphenol and 4-Methylphenol cannot be quantified separately using USEPA SW-846 Method 8270C

Table 7
Summary of Analytical Data for Floridan Aquifer Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)	Well ID Sample Date Sample Type	FW-3 8/16/2014 SMP	FW-4 8/16/2014 SMP	FW-4 8/16/2014 DUP	FW-6 8/21/2014 SMP	FW-21B 8/18/2014 SMP	FW-21B 8/18/2014 DUP	FW-26B 8/12/2014 SMP
Temperature (°C)	NA	NA		25.75	24.36	-	25.79	22.43	-	23.25
pH (S.U.)	NA	NA		10.97	7.56	-	7.63	7.59	-	7.46
Conductivity (mS/cm)	NA	NA		1.554	0.422	-	0.501	0.538	-	0.391
VOCs										
BENZENE	5	1		1.0 U	1.0 U	1.0 U	7.3	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20		3.0 U	3.0 U	3.0 U	5.7	3.0 UJ	3.0 UJ	3.0 U
SVOCs										
2,4-DIMETHYLPHENOL	-	140		48	5.4 U	5.3 U	5.2 U	5.8 U	5.8 UJ	5.3 U
2-METHYLNAPHTHALENE	-	28		5.4 U	5.4 U	5.3 U	100	8.2	5.8 U	5.3 U
2-METHYLPHENOL	-	35		22	5.4 U	5.3 U	5.2 U	5.8 U	5.8 UJ	5.3 U
3&4-METHYLPHENOL	-	3.5[3]		20	1.1 U	1.1 U	1.1 U	1.2 U	1.2 UJ	1.1 U
ACENAPHTHENE	-	20		5.4 U	5.4 U	5.3 U	88	11	6.2	5.3 U
ACENAPHTHYLENE	-	210		5.4 U	5.4 U	5.3 U	5.2 U	5.8 U	5.8 U	5.3 U
ANTHRACENE	-	2100		5.4 U	5.4 U	5.3 U	6.1	5.8 U	5.8 U	5.3 U
CARBAZOLE	-	1.8		2.0 U	2.0 U	1.9 U	52	2.1 U	2.1 U	1.9 U
DIBENZOFURAN	-	28		5.4 U	5.4 U	5.3 U	54	5.8 U	5.8 U	5.3 U
FLUORANTHENE	-	280		5.4 U	5.4 U	5.3 U	5.2 U	5.8 U	5.8 U	5.3 U
FLUORENE	-	280		5.4 U	5.4 U	5.3 U	65	5.8 U	5.8 U	5.3 U
NAPHTHALENE	-	14		5.4 U	5.4 U	5.3 U	1400	120 J	72 J	5.3 U
PHENANTHRENE	-	210		5.4 U	5.4 U	5.3 U	48	5.8 U	5.8 U	5.3 U
PHENOL	-	10		5.4 UJ	5.4 UJ	5.3 UJ	5.2 U	5.8 U	5.8 UJ	5.3 UJ
PYRENE	-	210		5.4 U	5.4 U	5.3 U	5.2 U	5.8 U	5.8 U	5.3 U

Table 7
Summary of Analytical Data for Floridan Aquifer Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Analyte	Federal MCL [1] (ug/l)	Florida GCTL [2] (ug/l)	Well ID Sample Date Sample Type	FW-25C 8/13/2014 SMP	FW-26B 8/13/2014 SMP	FW-26C 8/13/2014 SMP	FW-29B 8/14/2014 SMP	FW-29B 8/14/2014 DUP	FW-29C 8/13/2014 SMP
Temperature (°C)	NA	NA		23.55	23.17	23.46	23.52	-	23.68
pH (S.U.)	NA	NA		7.65	7.36	7.38	8.37	-	8.15
Conductivity (mS/cm)	NA	NA		0.435	0.429	0.443	0.354	-	0.437
VOCs									
BENZENE	5	1		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20		3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
SVOCs									
2,4-DIMETHYLPHENOL	-	140		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
2-METHYLNAPHTHALENE	-	28		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
2-METHYLPHENOL	-	35		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
3&4-METHYLPHENOL	-	3.5[3]		1.1 U	1.1 U	1.1 U	1.1 U	5.6 U	1.1 U
ACENAPHTHENE	-	20		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
ACENAPHTHYLENE	-	210		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
ANTHRACENE	-	2100		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
CARBAZOLE	-	1.8		1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U
DIBENZOFURAN	-	28		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
FLUORANTHENE	-	280		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
FLUORENE	-	280		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
NAPHTHALENE	-	14		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
PHENANTHRENE	-	210		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U
PHENOL	-	10		5.2 UJ	5.3 UJ	5.3 UJ	5.3 U	5.6 U	5.4 UJ
PYRENE	-	210		5.2 U	5.3 U	5.3 U	5.3 U	5.6 U	5.4 U

Notes:

U - Indicates analyte was not detected above the method detection limit (MDL)

J - Indicates result is estimated

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

(1) - Federal Maximum Contaminant Levels (MCLs) represent the National Primary Drinking Water Standards.

(2) - Florida Groundwater Cleanup Target Levels (GCTL) are guidelines set forthen in 62-777 Florida Administrative Code (F.A.C.).

(3) - *3-Methylphenol and 4-Methylphenol cannot be quantified separately using SW846.*

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-10B					WELL ID FW-11B			
			Zone 1	Zone 2	Zone 3	Zone 4	Duplicate	Zone 1	Zone 2	Zone 3	Zone 4
Sample Date:			8/19/2014	8/18/2014	8/19/2014	8/18/2014	8/18/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014
METALS											
ARSENIC (dissolved)	10	10	-	-	-	-	-	-	-	-	-
ARSENIC (total)	10	10	-	-	-	-	-	-	-	-	-
VOCs											
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 UJ	3.0 U	3.0 UJ	3.0 UJ	3.0 U	3.0 U	3.0 U	3.0 U
SVOCs											
2,4-DIMETHYLPHENOL	-	140	5.9 UJ	5.8 U	5.7 UJ	5.8 U	5.8 U	6.0 UJ	5.3 UJ	5.3 UJ	5.7 UJ
METHYLNAPHTHALENE	-	28	5.9 UJ	5.8 U	5.7 UJ	5.8 U	5.8 U	6.0 UJ	5.3 UJ	5.3 UJ	5.7 UJ
2-METHYLPHENOL	-	35	5.9 UJ	5.8 U	5.7 UJ	5.8 U	5.8 U	6.0 UJ	5.3 UJ	5.3 UJ	5.7 UJ
3&4-METHYLPHENOL	-	3.5[3]	1.2 UJ	1.2 U	1.2 UJ	1.2 U	1.2 U	1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
ACENAPHTHENE	-	20	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U
ACENAPHTHYLENE	-	210	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U
ANTHRACENE	-	2100	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U
CARBAZOLE	-	1.8	2.2 U	2.1 U	2.1 U	2.1 U	2.1 U	2.2 U	1.9 U	1.9 U	2.1 U
DIBENZOFURAN	-	28	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U
FLUORANTHENE	-	280	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U
FLUORENE	-	280	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U
NAPHTHALENE	-	14	5.9 UJ	5.8 U	5.7 UJ	5.8 U	5.8 U	6.0 UJ	5.3 UJ	5.3 UJ	5.7 UJ
PHENANTHRENE	-	210	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U
PHENOL	-	10	5.9 UJ	5.8 U	5.7 UJ	5.8 U	5.8 U	6.0 UJ	5.3 UJ	5.3 UJ	5.7 UJ
PYRENE	-	210	5.9 U	5.8 U	5.7 U	5.8 U	5.8 U	6.0 U	5.3 U	5.3 U	5.7 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-12B								WELL ID FW-13B			
			Zone 1	Zone 1	Zone 2	Zone 2	Zone 3	Zone 3	Zone 4	Zone 4	Zone 1	Zone 2	Zone 3	Zone 4
Sample Date:			8/20/2014	12/4/2014	8/20/2014	12/4/2014	8/20/2014	12/4/2014	8/20/2014	12/4/2014	8/19/2014	8/18/2014	8/19/2014	8/18/2014
METALS														
ARSENIC (dissolved)	10	10	-	-	-	-	-	-	-	-	-	-	-	-
ARSENIC (total)	10	10	-	-	-	-	-	-	-	-	-	-	-	-
VOCs														
BENZENE	5	1	2.3	3.7	1.0 U	1.0 U	2.1	4.8	2.1	3.8	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.6	2.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	3.7	5.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.8	16.2 J	3.0 U	3.0 UJ	3.0 U	14.2 J	2.2	15.5 J	3.0 U	3.0 UJ	3.0 U	3.0 UJ
SVOCs														
2,4-DIMETHYLPHENOL	-	140	40	40 J	5.9 U	5.4 R	6.0 U	54 U	5.8 U	54 U	5.9 UJ	5.8 UJ	5.7 UJ	5.4 U
METHYLNAPHTHALENE	-	28	5.9 U	5.4 U	5.9 U	5.4 U	16	54 U	17	54 U	5.9 UJ	5.8 U	5.7 UJ	5.4 U
2-METHYLPHENOL	-	35	39	33 J	5.9 U	5.4 R	6.0 U	54 U	5.8 U	54 U	5.9 UJ	5.8 UJ	5.7 UJ	5.4 U
3&4-METHYLPHENOL	-	3.5[3]	1.2 U	1.1 UJ	1.2 U	1.1 R	1.2 U	11 U	1.2 U	11 U	1.2 UJ	1.2 UJ	1.2 UJ	1.1 U
ACENAPHTHENE	-	20	5.9 U	5.4 U	5.9 U	5.4 U	59	54 U	40	54 U	5.9 U	5.8 U	5.7 U	5.4 U
ACENAPHTHYLENE	-	210	5.9 U	5.4 U	5.9 U	5.4 U	6.0 U	54 U	5.8 U	54 U	5.9 U	5.8 U	5.7 U	5.4 U
ANTHRACENE	-	2100	5.9 U	5.4 U	5.9 U	5.4 U	6.0 U	54 U	5.8 U	54 U	5.9 U	5.8 U	5.7 U	5.4 U
CARBAZOLE	-	1.8	2.2 U	2.0 U	2.1 U	2.0 U	3.6 J	20 U	2.1 U	20 U	2.2 U	2.1 U	2.1 U	2.0 U
DIBENZOFURAN	-	28	5.9 U	5.4 U	5.9 U	5.4 U	41	54 U	28	54 U	5.9 U	5.8 U	5.7 U	5.4 U
FLUORANTHENE	-	280	5.9 U	5.4 U	5.9 U	5.4 U	6.0 U	54 U	5.8 U	54 U	5.9 U	5.8 U	5.7 U	5.4 U
FLUORENE	-	280	5.9 U	5.4 U	5.9 U	5.4 U	48	54 U	27	54 U	5.9 U	5.8 U	5.7 U	5.4 U
NAPHTHALENE	-	14	180 U	210	5.9 U	5.4 U	640	710	510	630	5.9 UJ	5.8 U	5.7 UJ	5.4 U
PHENANTHRENE	-	210	5.9 U	5.4 U	5.9 U	5.4 U	21	54 U	5.8 U	54 U	5.9 U	5.8 U	5.7 U	5.4 U
PHENOL	-	10	5.9 UJ	5.4 UJ	5.9 UJ	5.4 R	6.0 UJ	54 UJ	5.8 UJ	54 UJ	5.9 UJ	5.8 UJ	5.7 UJ	5.4 U
PYRENE	-	210	5.9 U	5.4 U	5.9 U	5.4 U	6.0 U	54 U	5.8 U	54 U	5.9 U	5.8 U	5.7 U	5.4 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-14B				WELL ID FW-15B			
			Zone 1	Zone 2	Zone 3	Zone 4	Zone 1	Zone 2	Zone 3	Zone 4
Sample Date:			8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/18/2014	8/18/2014	8/18/2014	8/18/2014
METALS										
ARSENIC (dissolved)	10	10	-	-	-	-	-	-	-	-
ARSENIC (total)	10	10	-	-	-	-	-	-	-	-
VOCs										
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 U	3.0 U	3.0 U	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ
SVOCs										
2,4-DIMETHYLPHENOL	-	140	6.0 UJ	5.7 UJ	5.7 UJ	5.7 UJ	6.5 U	5.8 U	5.7 U	5.4 U
METHYLNAPHTHALENE	-	28	6.0 UJ	5.7 UJ	5.7 UJ	5.7 UJ	6.5 U	5.8 U	5.7 U	5.4 U
2-METHYLPHENOL	-	35	6.0 UJ	5.7 UJ	5.7 UJ	5.7 UJ	6.5 U	5.8 U	5.7 U	5.4 U
3&4-METHYLPHENOL	-	3.5[3]	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.3 U	1.2 U	1.2 U	1.1 U
ACENAPHTHENE	-	20	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U
ACENAPHTHYLENE	-	210	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U
ANTHRACENE	-	2100	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U
CARBAZOLE	-	1.8	2.2 U	2.1 U	2.1 U	2.1 U	2.4 U	2.1 U	2.1 U	2.0 U
DIBENZOFURAN	-	28	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U
FLUORANTHENE	-	280	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U
FLUORENE	-	280	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U
NAPHTHALENE	-	14	6.0 UJ	5.7 UJ	5.7 UJ	5.7 UJ	6.5 U	5.8 U	5.7 U	5.4 U
PHENANTHRENE	-	210	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U
PHENOL	-	10	6.0 UJ	5.7 UJ	5.7 UJ	5.7 UJ	6.5 U	5.8 UJ	5.7 U	5.4 U
PYRENE	-	210	6.0 U	5.7 U	5.7 U	5.7 U	6.5 U	5.8 U	5.7 U	5.4 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-16B						WELL ID FW-17B						WELL ID FW-18B				
			Zone 1	Zone 1	Zone 2	Zone 3	Zone 4	Duplicate	Zone 1	Zone 2	Zone 2	Zone 3	Zone 4	Zone 4	Zone 1	Zone 2	Duplicate	Zone 3	Zone 4
Sample Date:			8/20/2014	12/4/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/17/2014	8/17/2014	12/3/2014	8/17/2014	8/17/2014	12/3/2014	8/18/2014	8/17/2014	8/17/2014	8/18/2014	8/18/2014
METALS																			
ARSENIC (dissolved)	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARSENIC (total)	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs																			
BENZENE	5	1	2.9	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.7	1.9	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	2.6	3.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.4	14.6 J	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	-	3.0 U	3.0 U	-	3.0 UJ	3.0 U	3.0 U	3.0 UJ	3.0 UJ
SVOCs																			
2,4-DIMETHYLPHENOL	-	140	110	120	5.2 UJ	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	7.5	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
METHYLNAPHTHALENE	-	28	5.3 UJ	5.4 U	5.2 UJ	5.2 UJ	5.3 UJ	5.3 UJ	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
2-METHYLPHENOL	-	*35*	*6.3 J*	*5.5*	*5.2 UJ*	*5.2 UJ*	*5.3 UJ*	*5.3 UJ*	*5.4 U*	*5.8 U*	*6.1 U*	*5.7 U*	*20*	*5.1 U*	*5.7 U*	*5.4 U*	*5.4 U*	*5.6 U*	*5.5 U*
3&4-METHYLPHENOL	-	3.5[3]	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	5.9	1.3 U	1.2 U	44	1.1 U	1.2 U	1.1 U	5.4 U	1.2 U	1.1 U
ACENAPHTHENE	-	20	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
ACENAPHTHYLENE	-	210	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
ANTHRACENE	-	2100	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
CARBAZOLE	-	1.8	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	2.1 U	2.2 U	2.1 U	2.0 U	1.9 U	2.1 U	2.0 U	2.0 U	2.0 U	2.0 U
DIBENZOFURAN	-	28	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
FLUORANTHENE	-	280	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
FLUORENE	-	280	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
NAPHTHALENE	-	14	42 U	54	5.2 UJ	5.2 UJ	5.3 UJ	5.3 UJ	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
PHENANTHRENE	-	210	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U
PHENOL	-	10	5.3 UJ	5.4 UJ	5.2 UJ	5.2 UJ	5.3 UJ	5.3 UJ	5.4 UJ	8.5	6.1 UJ	5.7 U	62	5.1 UJ	5.7 U	5.4 UJ	5.4 UJ	5.6 U	5.5 U
PYRENE	-	210	5.3 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U	5.4 U	5.8 U	6.1 U	5.7 U	5.4 U	5.1 U	5.7 U	5.4 U	5.4 U	5.6 U	5.5 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-19B					WELL ID FW-20B						
			Zone 1	Zone 2	Duplicate	Zone 3	Zone 4	Zone 1	Duplicate	Zone 1	Zone 2	Zone 2	Zone 3	Zone 4
Sample Date:			8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/21/2014	8/21/2014	12/4/2014	8/21/2014	12/4/2014	8/21/2014	8/21/2014
METALS														
ARSENIC (dissolved)	10	10	-	-	-	-	-	-	-	-	-	-	-	-
ARSENIC (total)	10	10	-	-	-	-	-	-	-	-	-	-	-	-
VOCs														
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	14 J	7.6 J	12	5.7	6.9	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	8.4	4.7	16.4 J	4.3	15.4 J	3.0 U	3.0 U
SVOCs														
2,4-DIMETHYLPHENOL	-	140	6.0 UJ	5.7 UJ	5.7 UJ	6.0 UJ	5.7 UJ	5.9 U	5.9 U	61 U	5.9 U	52 U	5.8 U	5.9 U
METHYLNAPHTHALENE	-	28	6.0 UJ	5.7 UJ	5.7 UJ	6.0 UJ	5.7 UJ	160	140	80	65	52 U	5.8 U	5.9 U
2-METHYLPHENOL	-	35	6.0 UJ	5.7 UJ	5.7 UJ	6.0 UJ	5.7 UJ	5.9 U	5.9 U	61 U	5.9 U	52 U	5.8 U	5.9 U
3&4-METHYLPHENOL	-	3.5[3]	1.2 UJ	1.2 UJ	5.7 UJ	1.2 UJ	1.2 UJ	1.2 U	1.2 U	13 U	1.2 U	11 U	1.2 U	1.2 U
ACENAPHTHENE	-	20	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	120	100	70	110	74	5.8 U	5.9 U
ACENAPHTHYLENE	-	210	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	5.9 U	5.9 U	61 U	5.9 U	52 U	5.8 U	5.9 U
ANTHRACENE	-	2100	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	7.3	6.5	61 U	5.9 U	52 U	5.8 U	5.9 U
CARBAZOLE	-	1.8	2.2 U	2.1 U	2.1 U	2.2 U	2.1 U	74	64	45 J	32	23 J	2.1 U	2.1 U
DIBENZOFURAN	-	28	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	79	70	61 U	49	52 U	5.8 U	5.9 U
FLUORANTHENE	-	280	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	7.8	6.5	61 U	5.9 U	52 U	5.8 U	5.9 U
FLUORENE	-	280	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	96	85	61 U	64	52 U	5.8 U	5.9 U
NAPHTHALENE	-	14	6.0 UJ	5.7 UJ	5.7 UJ	6.0 UJ	5.7 UJ	2800	2300	1200	1400	850	5.8 U	5.9 U
PHENANTHRENE	-	210	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	81	71	61 U	27	52 U	5.8 U	5.9 U
PHENOL	-	10	6.0 UJ	5.7 UJ	5.7 UJ	6.0 UJ	5.7 UJ	5.9 UJ	5.9 UJ	310 J	5.9 UJ	52 UJ	5.8 UJ	5.9 UJ
PYRENE	-	210	6.0 U	5.7 U	5.7 U	6.0 U	5.7 U	5.9 U	5.9 U	61 U	5.9 U	52 U	5.8 U	5.9 U

Table 8a
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Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID									
			FW-22B									
			Zone 1	Duplicate	Zone 1	Zone 2	Zone 2	Duplicate	Zone 3	Zone 3	Zone 4	Zone 4
	Sample Date:		8/15/2014	8/15/2014	12/2/2014	8/15/2014	12/2/2014	12/2/2014	8/15/2014	12/2/2014	8/15/2014	12/2/2014
METALS												
ARSENIC (dissolved)	10	10	-	-	-	-	-	-	-	-	-	-
ARSENIC (total)	10	10	-	-	-	-	-	-	-	-	-	-
VOCs												
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 U	3.0 UJ	3.0 U	3.0 UJ	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
SVOCs												
2,4-DIMETHYLPHENOL	-	140	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
METHYLNAPHTHALENE	-	28	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
2-METHYLPHENOL	-	35	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
3&4-METHYLPHENOL	-	3.5[3]	1.1 U	1.1 U	1.1 U	1.3 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U
ACENAPHTHENE	-	20	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
ACENAPHTHYLENE	-	210	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
ANTHRACENE	-	2100	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
CARBAZOLE	-	1.8	1.9 U	1.9 U	1.9 U	2.2 U	2.0 U	1.9 U	2.1 U	2.0 U	2.2 U	1.9 U
DIBENZOFURAN	-	28	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
FLUORANTHENE	-	280	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
FLUORENE	-	280	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
NAPHTHALENE	-	14	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
PHENANTHRENE	-	210	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U
PHENOL	-	10	5.3 U	5.3 U	5.3 UJ	6.1 U	5.5 UJ	5.3 UJ	5.8 U	5.4 UJ	6.0 U	5.3 UJ
PYRENE	-	210	5.3 U	5.3 U	5.3 U	6.1 U	5.5 U	5.3 U	5.8 U	5.4 U	6.0 U	5.3 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-23B							
			Zone 1	Zone 1	Zone 2	Zone 2	Zone 3	Zone 3	Zone 4	Zone 4
Sample Date:			8/14/2014	12/1/2014	8/14/2014	12/1/2014	8/14/2014	12/1/2014	8/14/2014	12/1/2014
METALS										
ARSENIC (dissolved)	10	10	-	-	-	-	-	-	-	-
ARSENIC (total)	10	10	-	-	-	-	-	-	-	-
VOCs										
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 UJ	3.0 U	3.0 UJ	3.0 U	3.0 UJ	3.0 U	3.0 UJ
SVOCs										
2,4-DIMETHYLPHENOL	-	140	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
METHYLNAPHTHALENE	-	28	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
2-METHYLPHENOL	-	35	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
3&4-METHYLPHENOL	-	3.5[3]	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
ACENAPHTHENE	-	20	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
ACENAPHTHYLENE	-	210	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
ANTHRACENE	-	2100	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
CARBAZOLE	-	1.8	2.0 U	1.9 U	2.2 U	1.9 U	1.9 U	2.0 U	1.9 U	2.0 U
DIBENZOFURAN	-	28	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
FLUORANTHENE	-	280	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
FLUORENE	-	280	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
NAPHTHALENE	-	14	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
PHENANTHRENE	-	210	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U
PHENOL	-	10	5.4 U	5.2 UJ	5.9 U	5.3 UJ	5.2 U	5.4 UJ	5.2 U	5.4 UJ
PYRENE	-	210	5.4 U	5.2 U	5.9 U	5.3 U	5.2 U	5.4 U	5.2 U	5.4 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
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Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID							
			FW-24B							
			Zone 1	Zone 1	Zone 2	Zone 2	Zone 3	Zone 3	Zone 4	Zone 4
	Sample Date:		8/20/2014	12/3/2014	8/20/2014	12/3/2014	8/20/2014	12/2/2014	8/20/2014	12/2/2014
METALS										
ARSENIC (dissolved)	10	10	84	85	1.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U
ARSENIC (total)	10	10	88	79	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
VOCs										
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
SVOCs										
2,4-DIMETHYLPHENOL	-	140	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
METHYLNAPHTHALENE	-	28	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
2-METHYLPHENOL	-	35	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
3&4-METHYLPHENOL	-	3.5[3]	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U
ACENAPHTHENE	-	20	5.9 U	5.6 U	6.9	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
ACENAPHTHYLENE	-	210	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
ANTHRACENE	-	2100	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
CARBAZOLE	-	1.8	2.1 U	2.0 U	2.2 U	2.0 U	2.1 U	1.9 U	2.1 U	1.9 U
DIBENZOFURAN	-	28	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
FLUORANTHENE	-	280	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
FLUORENE	-	280	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
NAPHTHALENE	-	14	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
PHENANTHRENE	-	210	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U
PHENOL	-	10	5.9 UJ	5.6 UJ	5.9 UJ	5.5 UJ	5.8 UJ	5.3 UJ	5.8 UJ	5.3 UJ
PYRENE	-	210	5.9 U	5.6 U	5.9 U	5.5 U	5.8 U	5.3 U	5.8 U	5.3 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-27B					
			Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Sample Date:			8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
METALS								
ARSENIC (dissolved)	10	10	1.0 U	6.7	1.0 U	1.0 U	1.0 U	1.0 U
ARSENIC (total)	10	10	1.0 U	8.9	1.0 U	1.0 U	1.0 U	1.0 U
VOCs								
BENZENE	5	1	2.3 J	3.2	4.4	3.3	5.8	3.8 J
ETHYLBENZENE	700	30	1.4 J	3.0	2.9	1.1	8.5	2.7 J
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.7	1.0 UJ
XYLENE (total)	1000	20	3.8 J	5.8	6.0	4.0	11.9	5.4 J
SVOCs								
2,4-DIMETHYLPHENOL	-	140	5.9 U	5.6 U	5.6 U	5.4 U	5.5 U	5.9 U
METHYLNAPHTHALENE	-	28	65	81	130	83	120	100
2-METHYLPHENOL	-	35	5.9 U	5.6 U	5.6 U	5.4 U	5.5 U	5.9 U
3&4-METHYLPHENOL	-	3.5[3]	1.2 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U
ACENAPHTHENE	-	20	79	110	93	82	92	95
ACENAPHTHYLENE	-	210	5.9 U	5.6 U	5.6 U	5.4 U	5.5 U	5.9 U
ANTHRACENE	-	2100	5.9 U	8.0	6.0	5.4 U	5.5 U	5.9 U
CARBAZOLE	-	1.8	4.7 J	27	21	12	32	21
DIBENZOFURAN	-	28	39	70	56	44	57	50
FLUORANTHENE	-	280	5.9 U	9.0	6.1	5.4 U	5.5 U	5.9 U
FLUORENE	-	280	47	75	61	54	66	59
NAPHTHALENE	-	14	1100	1500	1700	1300	1800	1600
PHENANTHRENE	-	210	25	73	47	34	47	37
PHENOL	-	10	5.9 UJ	5.6 U	5.6 U	5.4 U	5.5 U	5.9 UJ
PYRENE	-	210	5.9 U	5.6 U	5.6 U	5.4 U	5.5 U	5.9 U

Table 8a
Summary of Analytical Data for Westbay Upper Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-28B					WELL ID FW-30B			
			Zone 1	Zone 2	Zone 3	Duplicate	Zone 4	Zone 1	Zone 2	Zone 3	Zone 4
Sample Date:			8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014
METALS											
ARSENIC (dissolved)	10	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ARSENIC (total)	10	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
VOCs											
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
SVOCs											
2,4-DIMETHYLPHENOL	-	140	5.9 U	5.9 UJ	5.7 U	5.9 U	5.7 U	5.3 U	5.4 UJ	5.3 U	5.2 U
METHYLNAPHTHALENE	-	28	5.9 UJ	5.9 UJ	5.7 UJ	5.9 UJ	5.7 UJ	5.3 U	5.4 UJ	5.3 U	5.2 U
2-METHYLPHENOL	-	35	5.9 UJ	5.9 UJ	5.7 UJ	5.9 UJ	5.7 UJ	5.3 U	5.4 UJ	5.3 U	5.2 U
3&4-METHYLPHENOL	-	3.5[3]	1.2 U	1.2 UJ	1.2 U	5.9 U	1.2 U	1.1 U	1.1 UJ	1.1 U	1.1 U
ACENAPHTHENE	-	20	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U
ACENAPHTHYLENE	-	210	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U
ANTHRACENE	-	2100	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U
CARBAZOLE	-	1.8	2.2 U	2.1 U	2.1 U	2.2 U	2.1 U	1.9 U	2.0 U	1.9 U	1.9 U
DIBENZOFURAN	-	28	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U
FLUORANTHENE	-	280	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U
FLUORENE	-	280	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U
NAPHTHALENE	-	14	5.9 UJ	5.9 UJ	5.7 UJ	5.9 UJ	5.7 UJ	5.3 U	5.4 UJ	5.3 U	5.2 U
PHENANTHRENE	-	210	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U
PHENOL	-	10	5.9 UJ	5.9 UJ	5.7 UJ	5.9 UJ	5.7 UJ	5.3 UJ	5.4 UJ	5.3 UJ	5.2 UJ
PYRENE	-	210	5.9 U	5.9 U	5.7 U	5.9 U	5.7 U	5.3 U	5.4 U	5.3 U	5.2 U

Notes:

U - Indicates analyte was not detected above the method detection limit (MDL)

J - Indicates result is estimated

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

[1] - Federal Maximum Contaminant Levels (MCLs) represent the National Primary Drinking Water Standards.

[2] - Florida Groundwater Cleanup Target Levels (GCTL) are guidelines set forthen in 62-777 Florida Administrative Code (F.A.C.).

[3] - 3-Methylphenol and 4-Methylphenol cannot be quantified separately using SW846.

* - Arsenic results were sampled on August 29, 2011.

Table 8b
Summary of Analytical Data for Westbay Lower Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-4C			WELL ID FW-22C		
			Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
		Sample Date:	8/16/2014	8/16/2014	8/16/2014	8/16/2014	8/16/2014	8/16/2014
Metals								
Arsenic (dissolved)	10	10	--	--	--	--	--	--
Arsenic (total)	10	10	--	--	--	--	--	--
VOCs								
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
SVOCs								
2,4-DIMETHYLPHENOL	-	140	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
2-METHYLNAPHTHALENE	-	28	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
2-METHYLPHENOL	-	35	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
3&4-METHYLPHENOL	-	3.5[3]	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
ACENAPHTHENE	-	20	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
ACENAPHTHYLENE	-	210	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
ANTHRACENE	-	2100	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
CARBAZOLE	-	1.8	1.9 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U
DIBENZOFURAN	-	28	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
FLUORANTHENE	-	280	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
FLUORENE	-	280	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
NAPHTHALENE	-	14	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
PHENANTHRENE	-	210	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
PHENOL	-	10	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U
PYRENE	-	210	5.2 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U

Table 8b
Summary of Analytical Data for Westbay Lower Transmissive Zone Monitoring Wells
2014 Second Semiannual Comprehensive Groundwater Monitoring Report
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)	WELL ID FW-23C			WELL ID FW-24C						
			Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Duplicate	Zone 3	Zone 3	Duplicate	Zone 4
		Sample Date:	8/16/2014	8/16/2014	8/16/2014	8/17/2014	8/17/2014	8/17/2014	8/17/2014	12/3/2014	12/3/2014	8/17/2014
Metals												
Arsenic (dissolved)	10	10	--	--	--	1.0 U	--	--	--	--	--	--
Arsenic (total)	10	10	--	--	--	1.0 U	--	--	--	--	--	--
VOCs												
BENZENE	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
ETHYLBENZENE	700	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
TOLUENE	10000	40	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
XYLENE (total)	1000	20	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	--	--	3.0 U
SVOCs												
2,4-DIMETHYLPHENOL	-	140	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
2-METHYLNAPHTHALENE	-	28	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
2-METHYLPHENOL	-	35	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	12	5.5 U	5.6 U	5.3 U
3&4-METHYLPHENOL	-	3.5[3]	1.1 U	1.2 U	1.1 U	2.1 J	1.1 U	5.4 U	26	1.1 U	1.2 U	1.1 U
ACENAPHTHENE	-	20	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
ACENAPHTHYLENE	-	210	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
ANTHRACENE	-	2100	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
CARBAZOLE	-	1.8	1.9 U	2.0 U	1.9 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.9 U
DIBENZOFURAN	-	28	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
FLUORANTHENE	-	280	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
FLUORENE	-	280	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
NAPHTHALENE	-	14	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
PHENANTHRENE	-	210	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U
PHENOL	-	10	5.2 U	5.6 U	5.3 U	5.4 U	5.4 UJ	5.4 UJ	36	5.5 UJ	5.6 UJ	5.3 UJ
PYRENE	-	210	5.2 U	5.6 U	5.3 U	5.4 U	5.4 U	5.4 U	5.4 U	5.5 U	5.6 U	5.3 U

Notes:

U - Indicates analyte was not detected above the method detection limit (MDL)

J - Indicates result is estimated

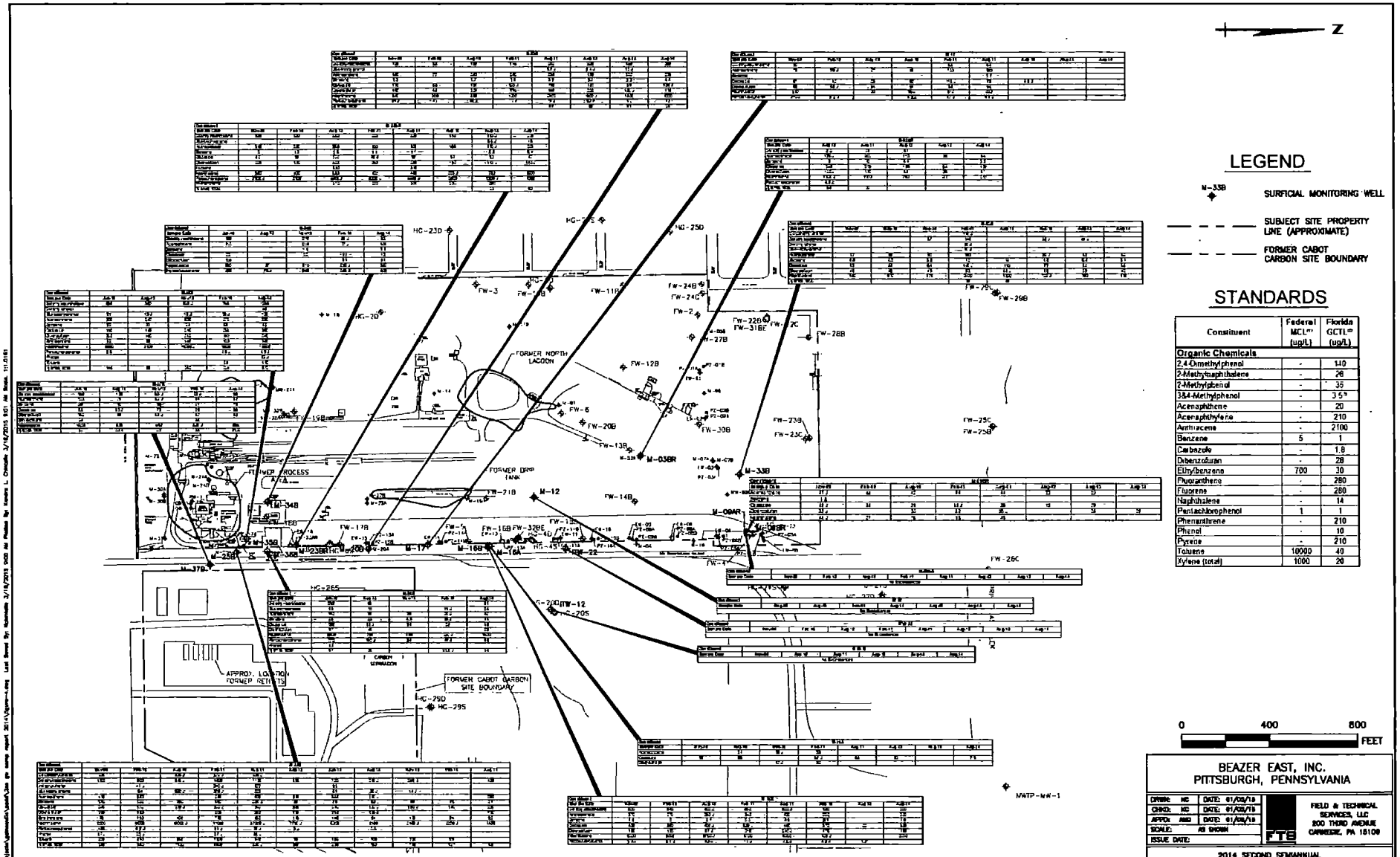
Concentration exceeds Florida GCTL

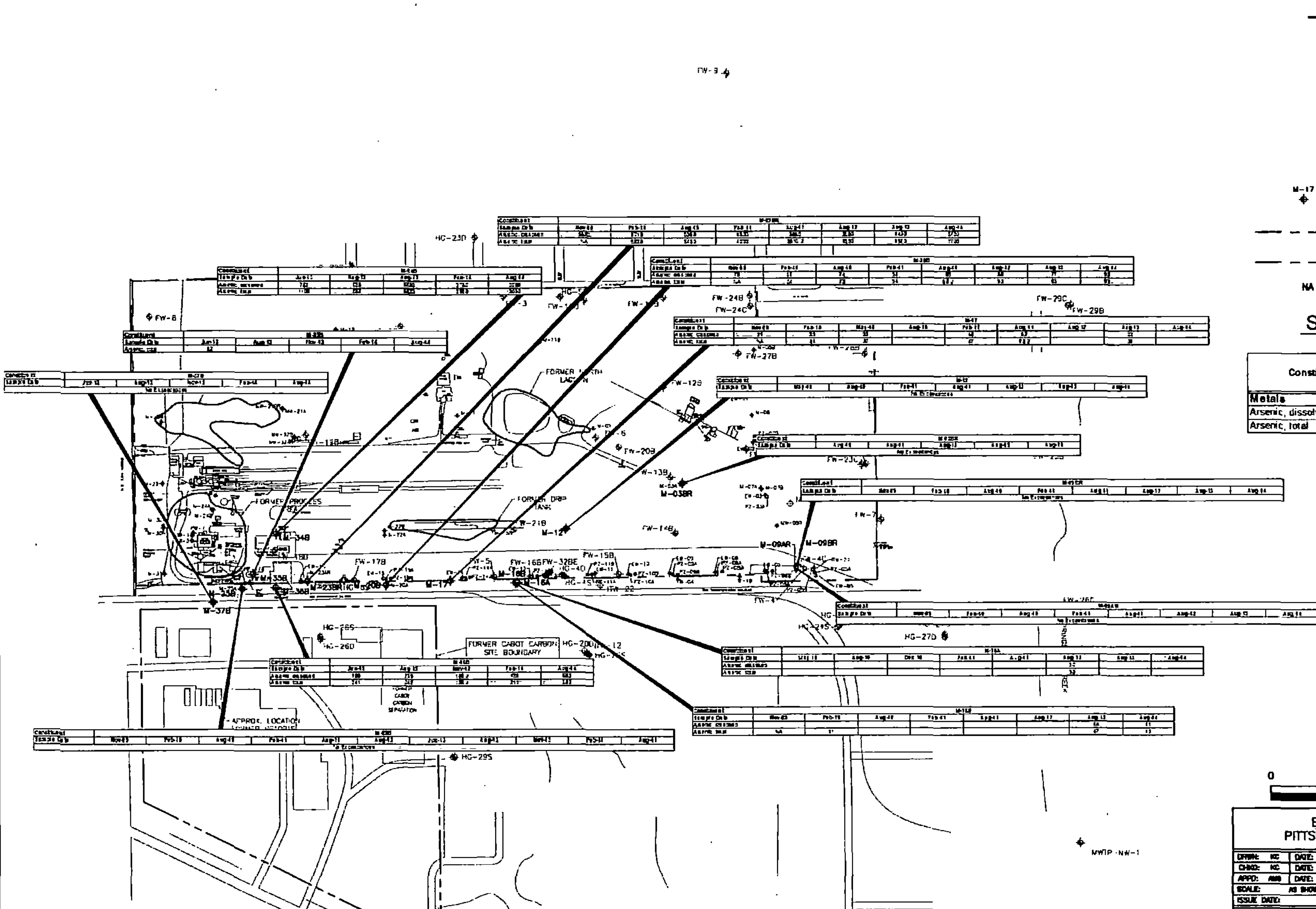
Concentration exceeds Federal MCL

(1) Federal Mazimum Contaminant Levels (MCLs) represent the National Primary Drinking Water Standards.

(2) Florida Groundwater Cleanup Target Levels (GCTLs) are guidelines set forth in 62-777 Florida Administrative Code (F.A.C.).

(3) 3-Methylphenol and 4-Methylphenol cannot be quantified separately using USEPA SW-846 Method 8270C.


N
LEGEND
M-33B
SURFICIAL MONITORING WELL
SUBJECT SITE PROPERTY LINE (APPROXIMATE)
FORMER CABOT CARBON SITE BOUNDARY
STANDARDS
Constituent | Federal MCL[1] (ug/L) | Florida GCTL[2] (ug/L)
Organic Chemicals
2,4-Dimethylphenol | - | 140
2-Methylnaphthalene | - | 28
2-Methylphenol | - | 35
3&4-Methylphenol | - | 3.5[3]
Acenaphthene | - | 20
Acenaphthylene | - | 210
Anthracene | - | 2100
Benzene | 5 | 1
Carbazole | - | 1.8
Dibenzofuran | - | 28
Ethylbenzene | 700 | 30
Fluoranthene | - | 280
Fluorene | - | 280
Naphthalene | - | 14
Pentachlorophenol | 1 | 1
Phenanthrene | - | 210
Phenol | - | 10
Pyrene | - | 210
Toluene | 10000 | 40
Xylene (total) | 1000 | 20
FORMER NORTH LAGOON
FORMER PROCESS AREA
FORMER DRIP TANK
APPROX. LOCATION FORMER RETORTS
FORMER CABOT CARBON SITE BOUNDARY
NWTP-MW-1
0
400
800
FEET
NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS
REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.
Concentration exceeds Florida GCTL
Concentration exceeds Federal MCL
All results are in the units ug/L
(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.
* - RESULT IS TAKEN FROM DUPLICATE ANALYSIS.
REV # | DATE | DESCRIPTION | APPD
BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
DRWN: MC DATE: 01/05/15
CHKD: MC DATE: 01/05/15
APPD: ABD DATE: 01/05/15
SCALE: AS SHOWN
ISSUE DATE:
FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106
2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA
SURFICIAL AQUIFER MONITORING WELLS
ORGANIC ANALYTICAL EXCEEDANCES
PROJECT NO: GMS48014
DRAWING NUMBER
FIGURE 4



LEGEND

- M-17 — SURFICIAL MONITORING WELL
- SUBJECT SITE PROPERTY LINE (APPROXIMATE)
- FORMER CABOT CARBON SITE BOUNDARY
- NA — ANALYTE NOT ANALYZED

STANDARDS

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)
Metals		
Arsenic, dissolved	10	10
Arsenic, total	10	10

0 400 800 FEET

NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN: AUGUST 4, 2010.

Concentration exceeds Florida GCTL
Concentration exceeds Federal MCL
All results are in the units ug/L.

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

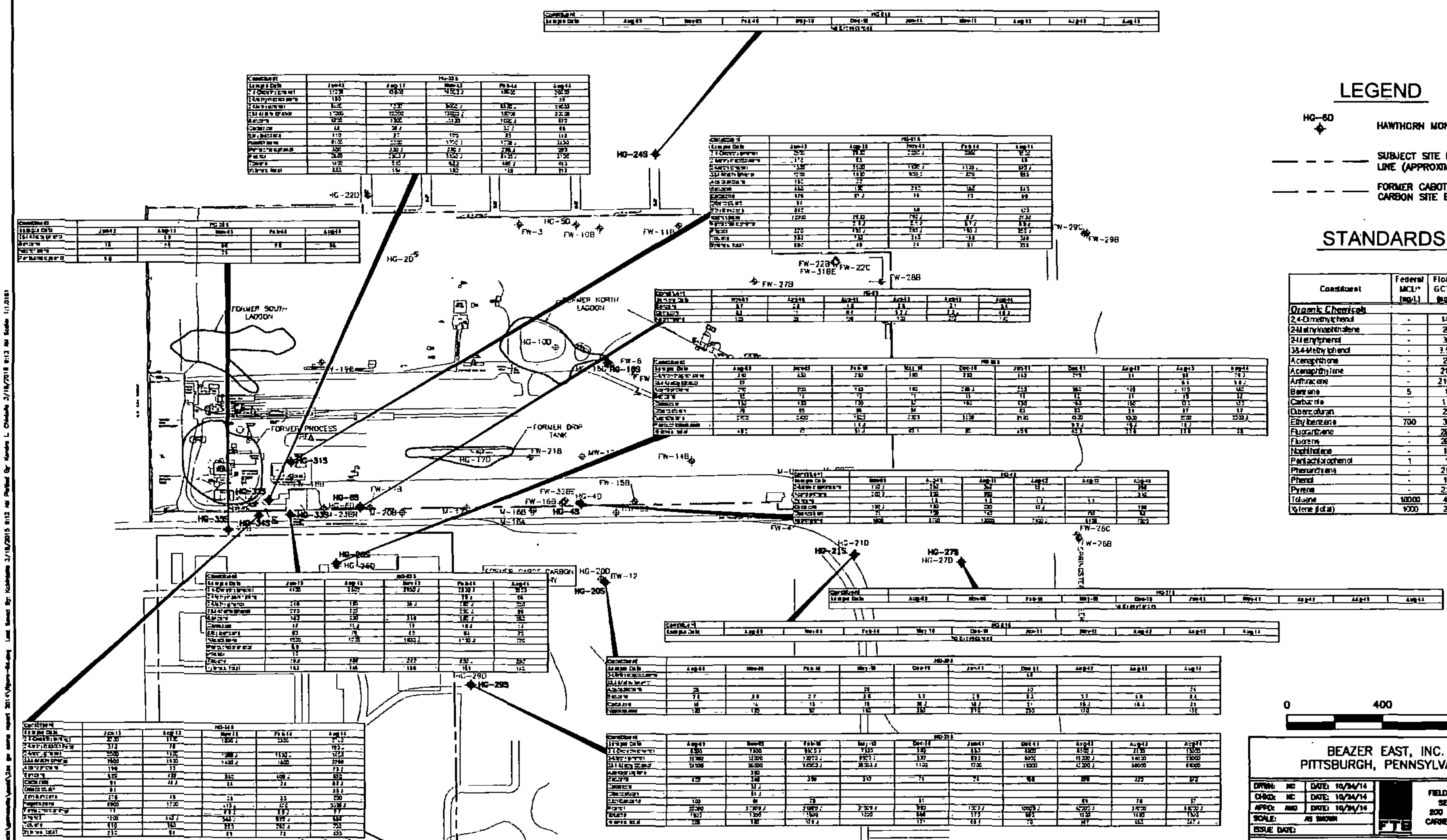
DRWN: KC	DATE: 01/06/15
CHKD: KC	DATE: 01/06/15
APPD: AMB	DATE: 01/06/15
SCALE: AS SHOWN	
ISSUE DATE:	

FTS
FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

SURFICIAL AQUIFER MONITORING WELLS
INORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO: GM046014
DRAWING NUMBER
FIGURE 5



LEGEND

HG-6D — HAWTHORN MONITORING WELL

SUBJECT SITE PROPERTY LINE (APPROXIMATE)

FORMER CABOT CARBON SITE BOUNDARY

STANDARDS

Constituent	Federal MCL⁽¹⁾ (ug/L)	Florida GCTL⁽²⁾ (ug/L)
Organic Chemicals		
2,4-Dimethylphenol	-	140
2-Methylnaphthalene	-	28
2-Methylphenol	-	35
3&4-Methylphenol	-	3.5⁽³⁾
Acenaphthene	-	20
Acenaphthylene	-	210
Anthracene	-	2100
Benzene	5	1
Carbazole	-	1.8
Dibenzofuran	-	28
Ethylbenzene	700	30
Fluoranthene	-	280
Fluorene	-	280
Naphthalene	-	14
Pentachlorophenol	1	1
Phenanthrene	-	210
Phenol	-	10
Pyrene	-	210
Toluene	10000	40
Xylene (total)	1000	20

0 400 800 FEET

NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.

Concentration exceeds Florida GCTL.

Concentration exceeds Federal MCL.

All results are in the units ug/L.

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.

REV #	DATE	DESCRIPTION	APPD

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

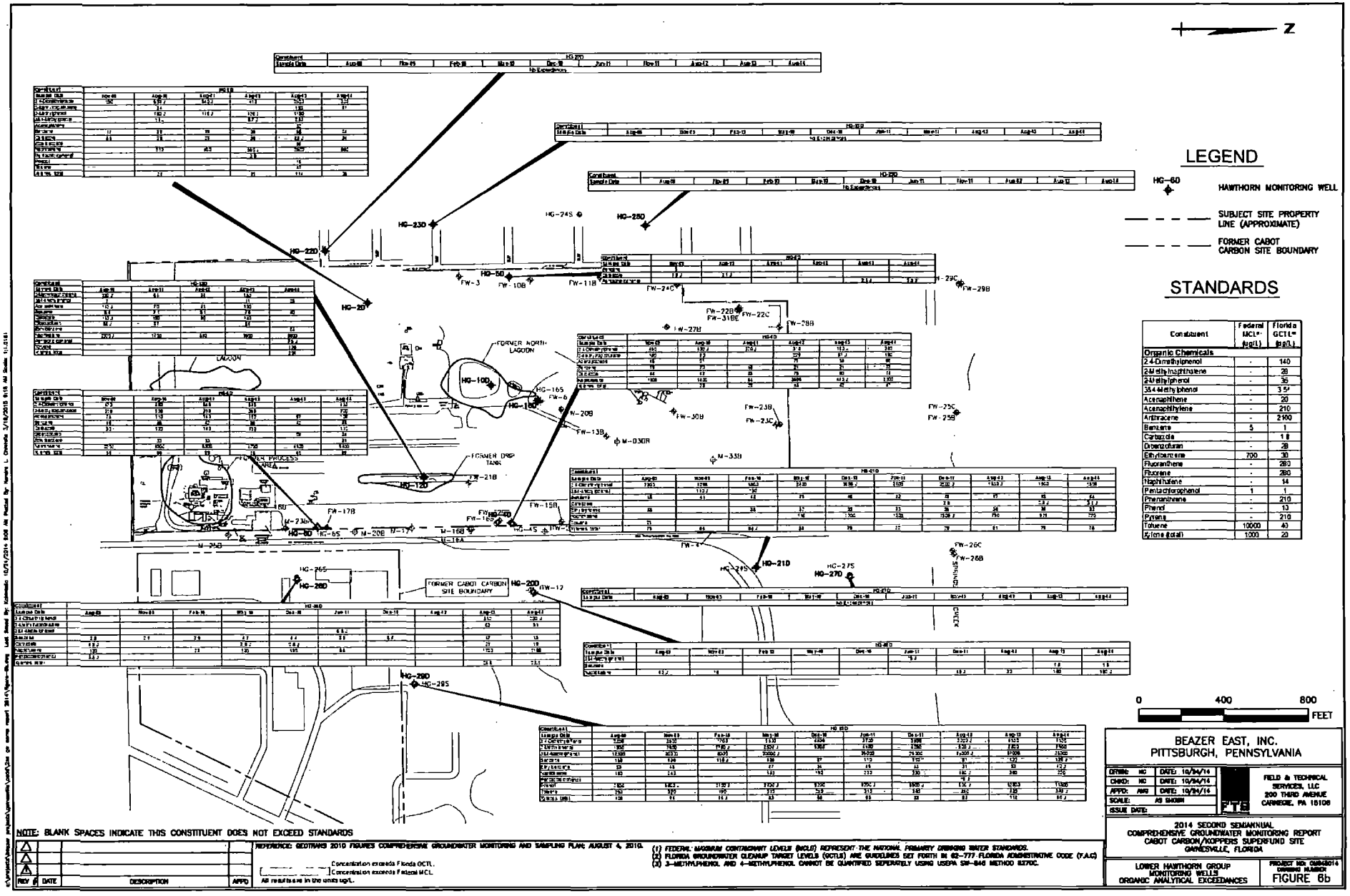
DRWN: KC	DATE: 10/24/14
CHKD: KC	DATE: 10/24/14
APPD: AMD	DATE: 10/24/14
SCALE: AS SHOWN	
ISSUE DATE:	

FTS — FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

UPPER HAWTHORN GROUP MONITORING WELLS
ORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO: [illegible]
DRAWING NUMBER
FIGURE 6a



Constituent	Federal MCL* (ug/L)	Florida GCTL** (ug/L)
Organic Chemicals		
2,4-Dimethylphenol	-	140
2-Methylnaphthalene	-	28
2-Methylphenol	-	35
3&4-Methylphenol	-	3.5#
Acenaphthene	-	20
Acenaphthylene	-	210
Anthracene	-	2100
Benzene	5	1
Carbazole	-	1.8
Dibenzofuran	-	28
Ethylbenzene	700	30
Fluoranthene	-	280
Fluorene	-	280
Naphthalene	-	14
Pentachlorophenol	1	1
Phenanthrene	-	210
Phenol	-	10
Pyrene	-	210
Toluene	10000	40
Xylene (total)	1000	20

NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN, AUGUST 4, 2010.

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

All results are in the units ug/L

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C.)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

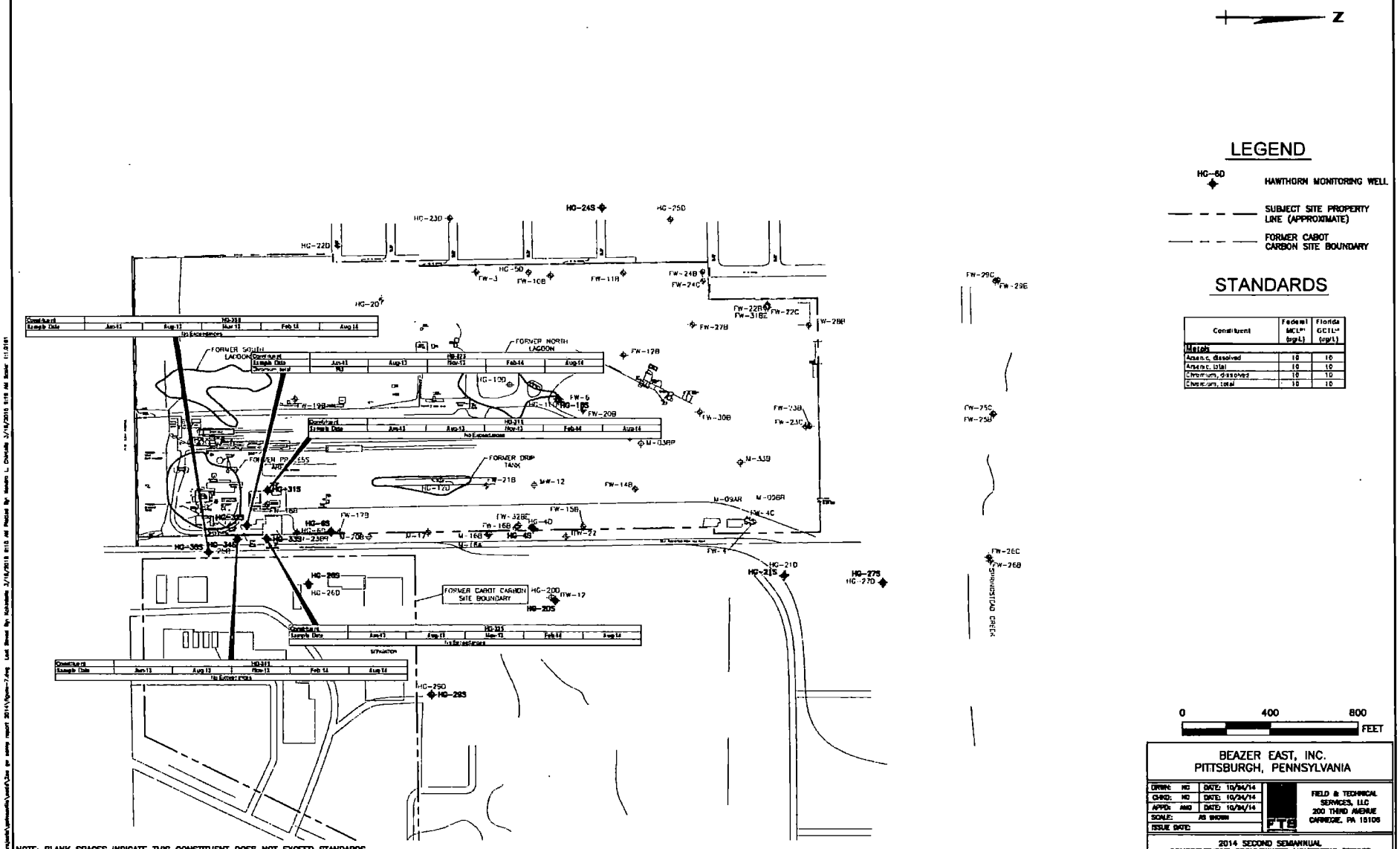
DRWN:	MC	DATE: 10/24/14
CHKD:	MC	DATE: 10/24/14
APPD:	AWS	DATE: 10/24/14
SCALE:	AS SHOWN	
ISSUE DATE:		

FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

LOWER HAWTHORN GROUP
MONITORING WELLS
ORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO: 0364014
DRAWING NUMBER
FIGURE 6b



NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

All results are in the units ug/L.

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

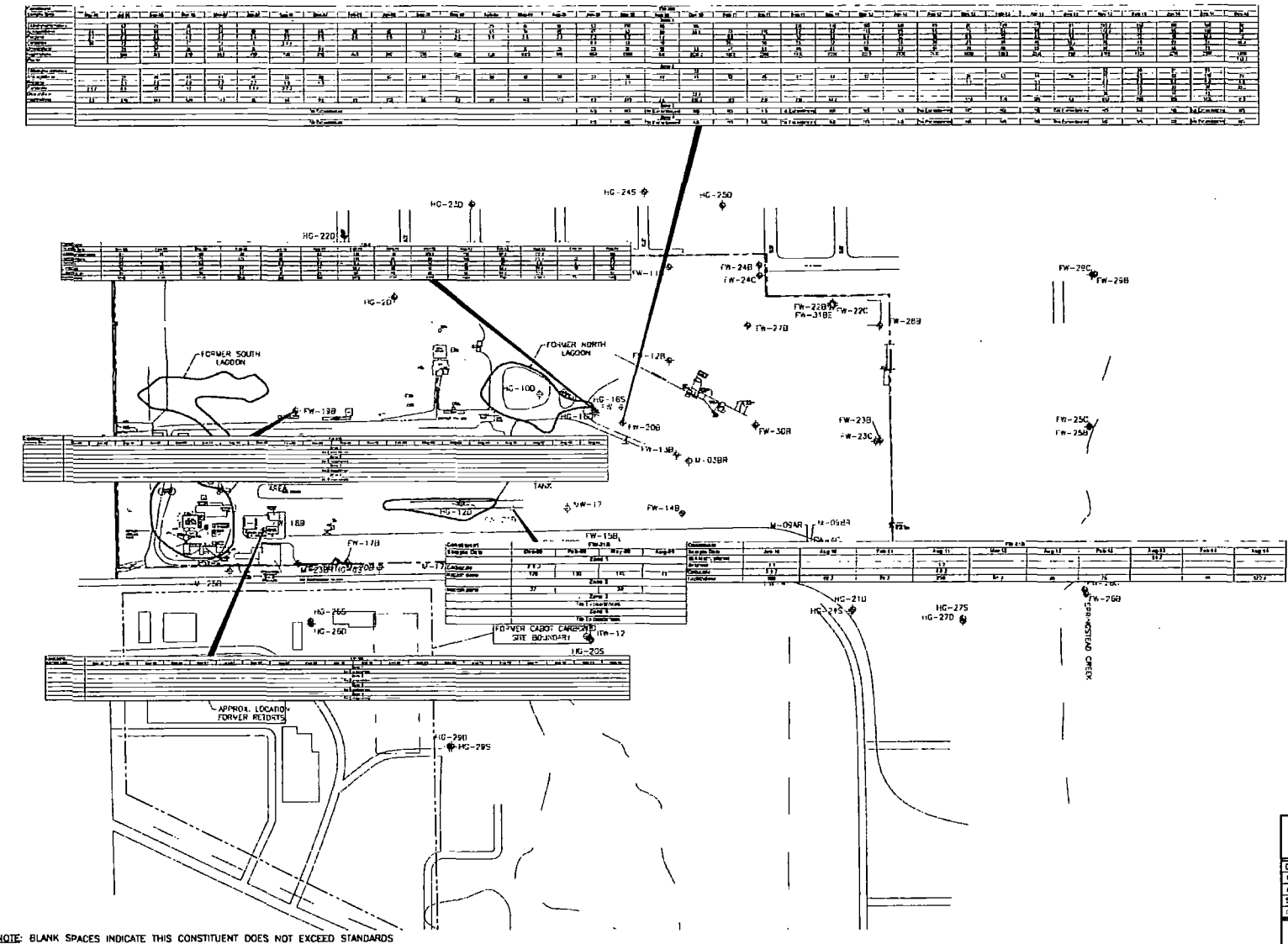
DRWN:	MD	DATE:	10/24/14
CHKD:	MD	DATE:	10/24/14
APPD:	AMD	DATE:	10/24/14
SCALE:	AS SHOWN		
ISSUE DATE:			

FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

UPPER HAWTHORN GROUP MONITORING WELLS
INORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO: CM046014
DRAWING NUMBER
FIGURE 7



LEGEND

- FW-20B — FLORIDAN WESTBAY MONITORING WELL
- FW-19A — FLORIDAN STANDARD CONSTRUCTION MONITORING WELL
- SUBJECT SITE PROPERTY LINE (APPROXIMATE)
- FORMER CABOT CARBON SITE BOUNDARY
- NS — NOT SAMPLED
- * — DEDICATED PUMPING EQUIPMENT INSTALLED

STANDARDS

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)
Organic Chemicals		
2,4-Dimethylphenol	-	140
2-Methylnaphthalene	-	28
2-Methylphenol	-	35
3&4-Methylphenol	-	3.5[3]
Acenaphthene	-	20
Acenaphthylene	-	210
Anthracene	-	2100
Benzene	5	1
Carbazole	-	1.8
Dibenzofuran	-	28
Ethylbenzene	700	30
Fluoranthene	-	280
Fluorene	-	280
Naphthalene	-	14
Pentachlorophenol	1	1
Phenanthrene	-	210
Phenol	-	10
Pyrene	-	210
Toluene	10000	40
Xylene (total)	1000	20

0 200 400 FEET

NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

All results are in the units ug/L.

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C.)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

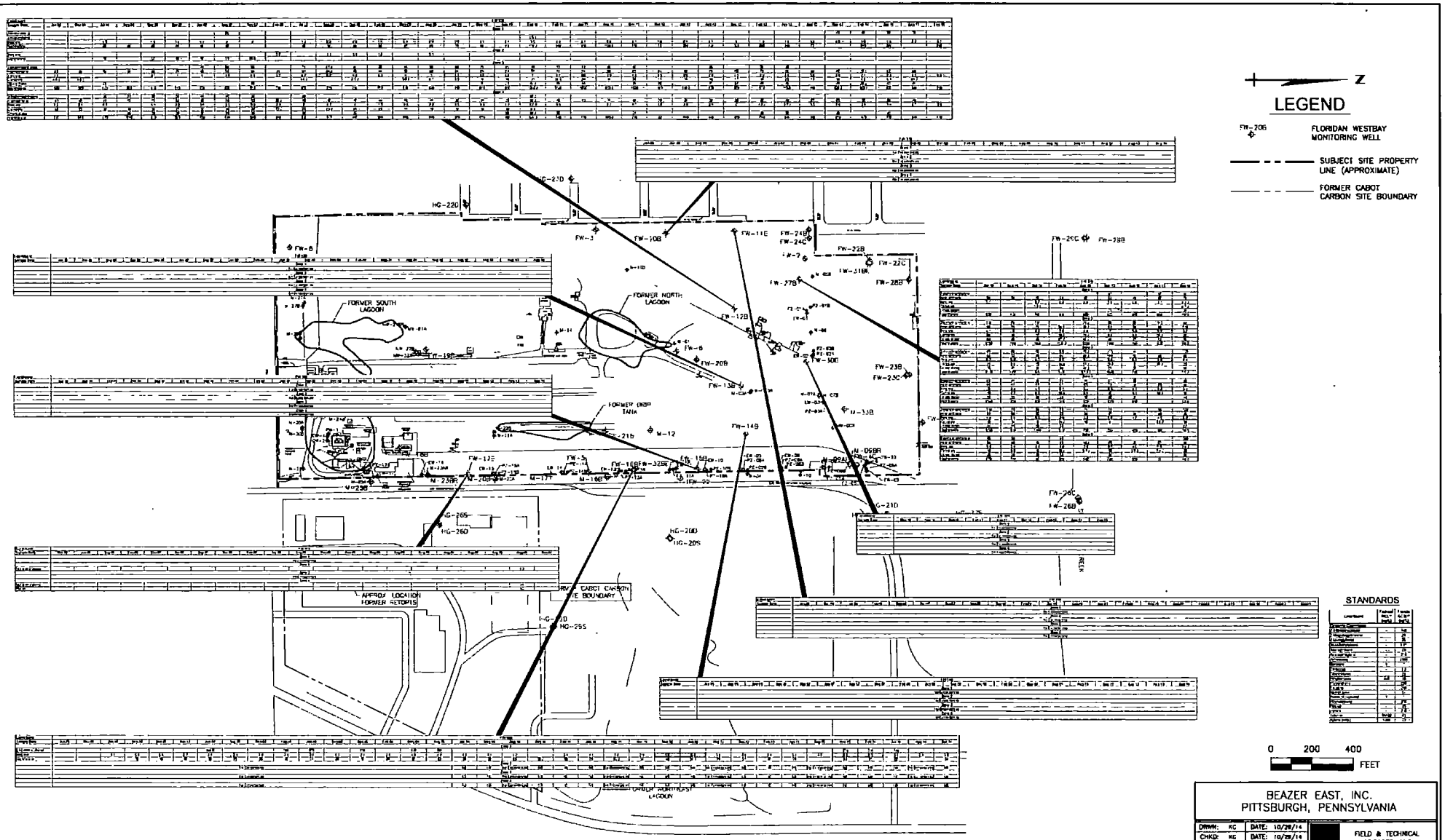
DRWN:	KC	DATE: 10/28/14
CHKD:	KC	DATE: 10/28/14
APPD:	AMG	DATE: 10/28/14
SCALE:	AS SHOWN	
ISSUE DATE:		

FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

FLORIDAN AQUIFER SOURCE AREA MONITORING WELLS
ORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO. 0M0435014
DRAWING NUMBER
FIGURE 8



BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.

J: The quantity is an estimated value.

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

All results are in the units ug/L

NS = NOT SAMPLED

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARITY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

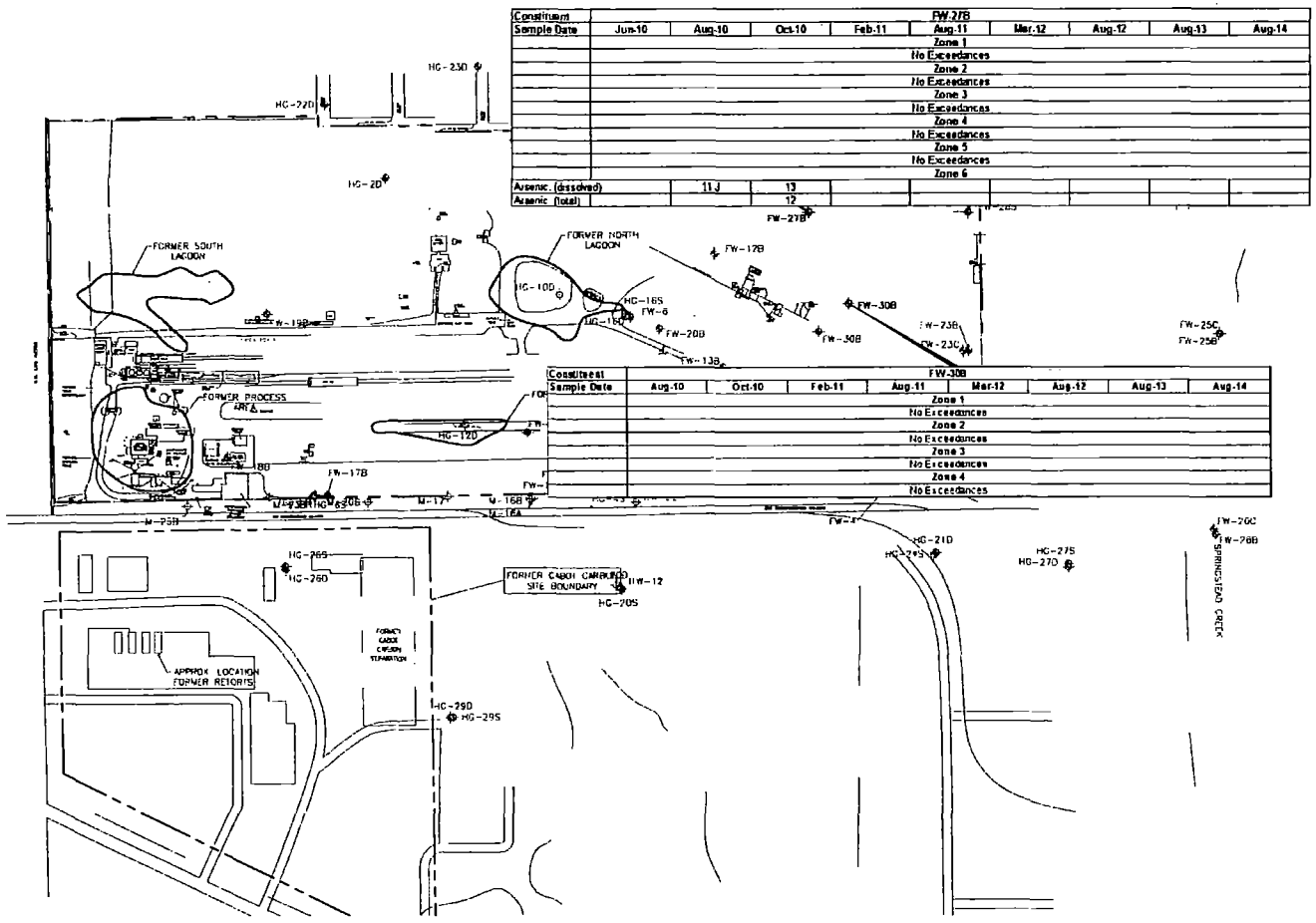
DRWN:	KC	DATE: 10/29/14
CHKD:	KC	DATE: 10/29/14
APPD:	AMD	DATE: 10/29/14
SCALE:	AS SHOWN	
ISSUE DATE:		

FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

FLORIDAN AQUIFER TRANSECT AREA
MONITORING WELLS
ORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO. 06843016
DRAWING NUMBER
FIGURE 9



Constituent	FW-27B								
Sample Date	Jun-10	Aug-10	Oct-10	Feb-11	Aug-11	Mar-12	Aug-12	Aug-13	Aug-14
	Zone 1								
	No Exceedances								
	Zone 2								
	No Exceedances								
	Zone 3								
	No Exceedances								
	Zone 4								
	No Exceedances								
	Zone 5								
	No Exceedances								
	Zone 6								
Arsenic, (dissolved)		11 J	13						
Arsenic, (total)			12						

Constituent	FW-30B							
Sample Date	Aug-10	Oct-10	Feb-11	Aug-11	Mar-12	Aug-12	Aug-13	Aug-14
	Zone 1							
	No Exceedances							
	Zone 2							
	No Exceedances							
	Zone 3							
	No Exceedances							
	Zone 4							
	No Exceedances							

LEGEND

- FW-27B — FLORIDAN WESTBAY MONITORING WELL
- SUBJECT SITE PROPERTY LINE (APPROXIMATE)
- FORMER CABOT CARBON SITE BOUNDARY

STANDARDS

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)
Metals		
Arsenic, dissolved	10	10
Arsenic, total	10	10

0 400 800 FEET

NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURE COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

All results are in the units ug/L

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C.)

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

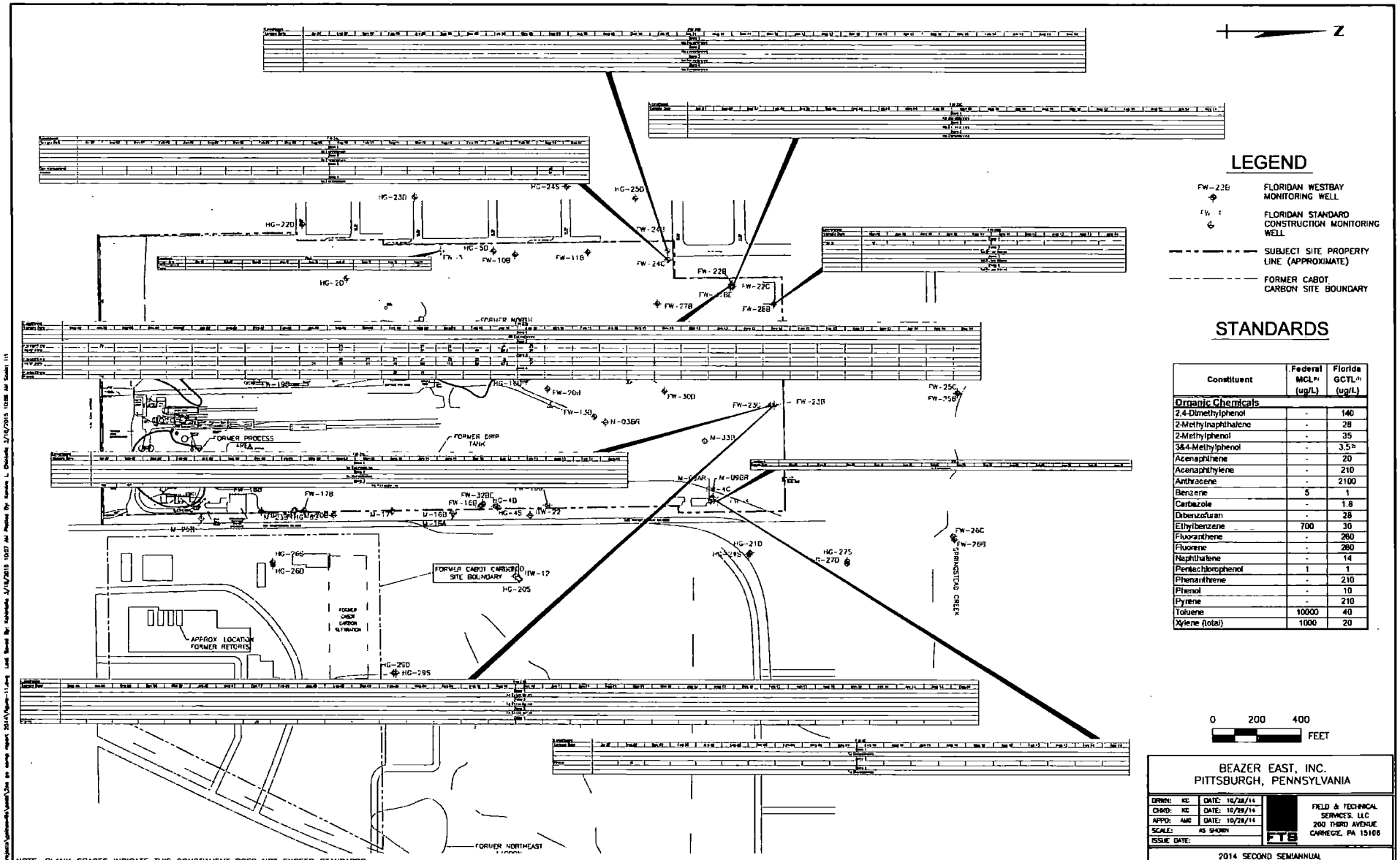
DRWN:	KC	DATE: 10/29/14
CHKD:	MC	DATE: 10/29/14
APPD:	AMB	DATE: 10/29/14
SCALE:	AS SHOWN	
ISSUE DATE:		

FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

FLORIDAN AQUIFER TRANSECT AREA
MONITORING WELLS
INORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO. 0604814
DRAWING NUMBER
FIGURE 10



LEGEND

- FW-22B — FLORIDAN WESTBAY MONITORING WELL
- FW-[illegible] — FLORIDAN STANDARD CONSTRUCTION MONITORING WELL
- SUBJECT SITE PROPERTY LINE (APPROXIMATE)
- FORMER CABOT CARBON SITE BOUNDARY

STANDARDS

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)
Organic Chemicals		
2,4-Dimethylphenol	-	140
2-Methylnaphthalene	-	28
2-Methylphenol	-	35
3&4-Methylphenol	-	3.5[3]
Acenaphthene	-	20
Acenaphthylene	-	210
Anthracene	-	2100
Benzene	5	1
Carbazole	-	1.8
Dibenzofuran	-	28
Ethylbenzene	700	30
Fluoranthene	-	280
Fluorene	-	280
Naphthalene	-	14
Pentachlorophenol	1	1
Phenanthrene	-	210
Phenol	-	10
Pyrene	-	210
Toluene	10000	40
Xylene (total)	1000	20

0 200 400 FEET

NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.

Concentration exceeds Florida GCTL
Concentration exceeds Federal MCL
All results are in the units ug/L.

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.

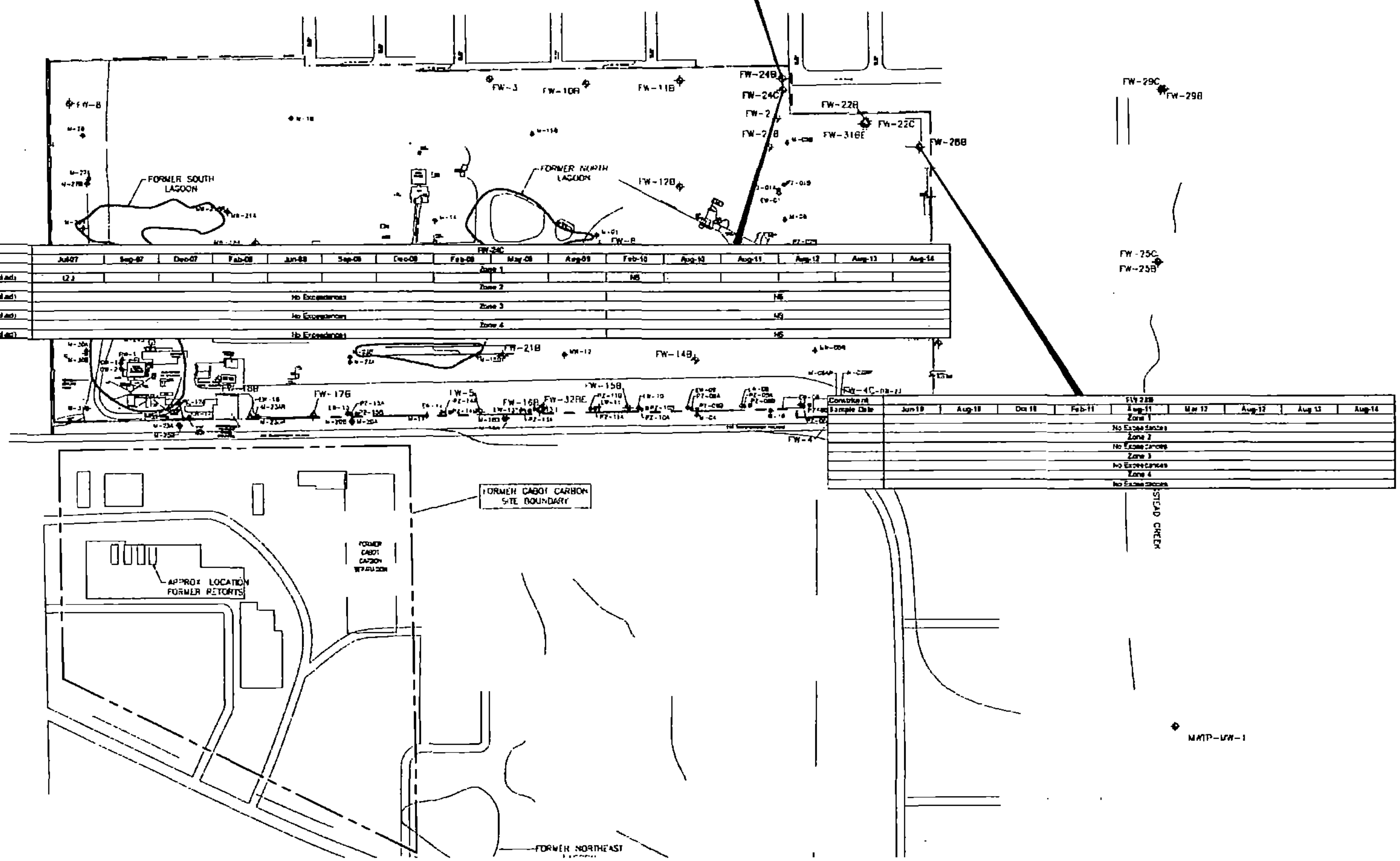
BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: KC	DATE: 10/28/14	FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106
CHKD: KC	DATE: 10/28/14	
APPD: AMG	DATE: 10/28/14	
SCALE: AS SHOWN		
ISSUE DATE:		

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

FLORIDAN AQUIFER BOUNDARY MONITORING WELLS ORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO: 0M043014
DRAWING NUMBER
FIGURE 11



FW-22B

Constituent	Jul-07	Sep-07	Dec-07	Feb-08	Jun-08	Sep-08	Dec-08	Feb-09	May-09	Aug-09	Jun-10	Aug-10	Dec-10	Feb-11
Zone 1														
Arsenic, (dissolved)	140	73	85	73	147	131	77	105	134	173	156	139	178	186
Arsenic, (total)											158	182	184	174
Zone 2														
Arsenic, (dissolved)	48	38	18	31	50	26	30	18	12	24	40	21	25	26
Arsenic, (total)											42	20	24	29
Zone 3														
Arsenic, (dissolved)	11													
Zone 4														
Arsenic, (dissolved)	No Exceedances													

Constituent	Jun-11	Aug-11	Nov-11	Mar-12	Jun-12	Aug-12	Dec-12	Feb-13	Aug-13	Nov-13	Feb-14	Jun-14	Aug-14	Dec-14
Zone 1														
Arsenic, (dissolved)	166	127	207	122	129	180	182	186	124	175	173	101	94	65
Arsenic, (total)	174	211	[illegible]	165	180	157	133	157	131	138	179	82	86	78
Zone 2														
Arsenic, (dissolved)	16	14	14		12									
Arsenic, (total)	19	21	15	11	13	22								
Zone 3														
Arsenic, (dissolved)														
Zone 4														
Arsenic, (dissolved)	No Exceedances													

LEGEND

FW-22B FLORIDAN WESTBAY MONITORING WELL

SUBJECT SITE PROPERTY LINE (APPROXIMATE)

FORMER CABOT CARBON SITE BOUNDARY

NS NOT SAMPLED

STANDARDS

Constituent	Federal MCL[1] (ug/L)	Florida GCTL[2] (ug/L)
Metals		
Arsenic, dissolved	10	10
Arsenic, total	10	10

FW-24C

Constituent	Jul-07	Sep-07	Dec-07	Feb-08	Jun-08	Sep-08	Dec-08	Feb-09	May-09	Aug-09	Feb-10	Aug-10	Aug-11	Aug-12	Aug-13	Aug-14
Zone 1																
Arsenic, (dissolved)	12.3										NS					
Zone 2																
Arsenic, (dissolved)	No Exceedances										NS					
Zone 3																
Arsenic, (dissolved)	No Exceedances										NS					
Zone 4																
Arsenic, (dissolved)	No Exceedances										NS					

FW-22B

Constituent	Jun-10	Aug-10	Oct-10	Feb-11	Aug-11	Mar-12	Aug-12	Aug-13	Aug-14
Zone 1									
	No Exceedances								
Zone 2									
	No Exceedances								
Zone 3									
	No Exceedances								
Zone 4									
	No Exceedances								

NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN: AUGUST 4, 2010.

Concentration exceeds Florida GCTL

[ ] Concentration exceeds Federal MCL

All results are in the units ug/L.

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.

(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: RC	DATE: 10/29/14
CHKD: RC	DATE: 10/29/14
APPD: AWO	DATE: 10/29/14
SCALE: AS SHOWN	
ISSUE DATE:	

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FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

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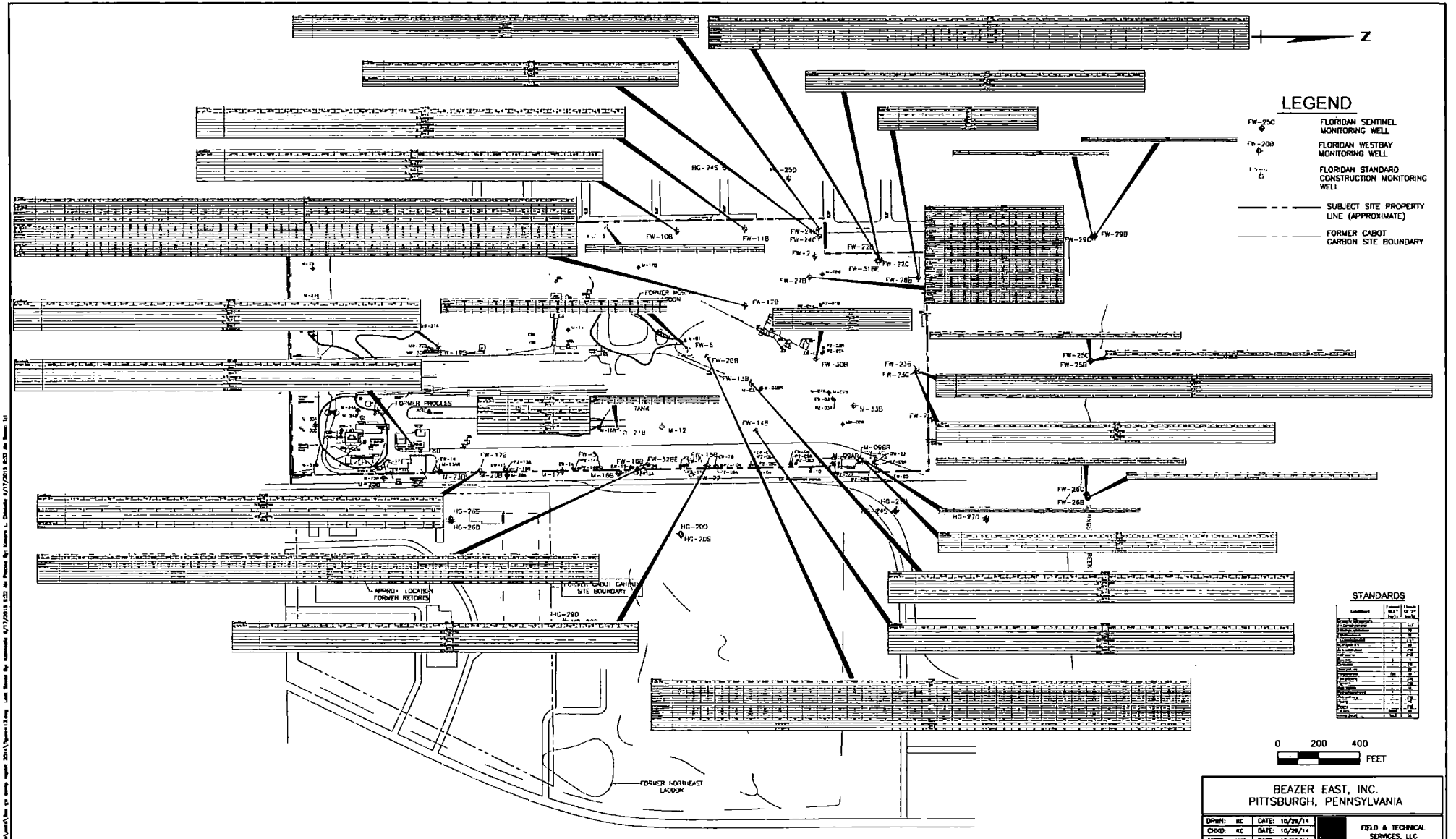
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

FLORIDAN AQUIFER BOUNDARY
MONITORING WELLS
INORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO. OMD45014
DRAWING NUMBER
FIGURE 12



BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN; AUGUST 4, 2010.

J: The quantity is an estimated value

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

All results are in the units ug/L.

NS = NOT SAMPLED

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C)
(3) 3-METHYLPHENOL AND 4-METHYLPHENOL CANNOT BE QUANTIFIED SEPERATELY USING USEPA SW-846 METHOD 8270C.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN:	MC	DATE: 10/29/14
CHKD:	KC	DATE: 10/29/14
APPD:	AMG	DATE: 10/29/14
SCALE:	AS SHOWN	
ISSUE DATE:		

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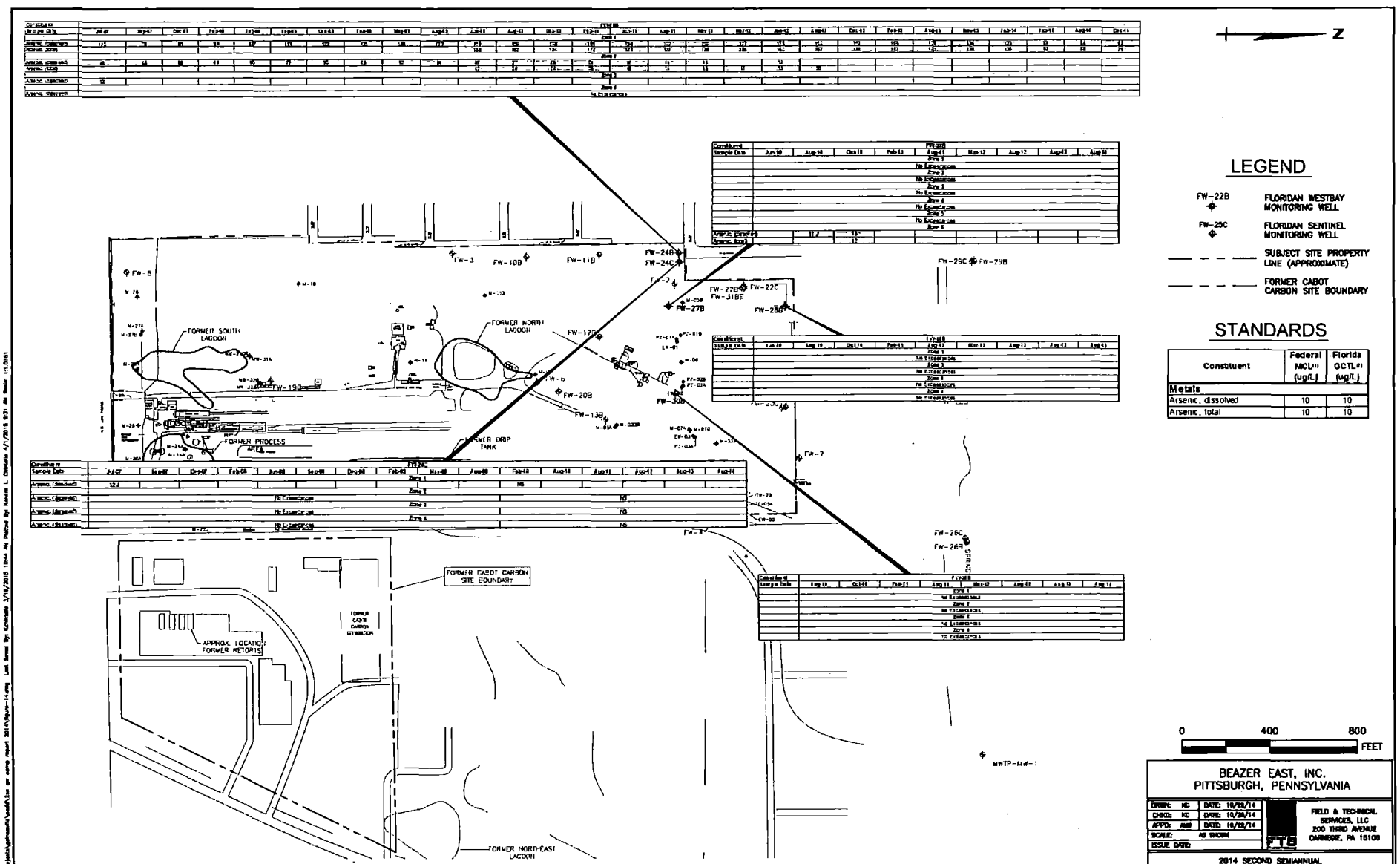
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

SUMMARY OF FLORIDAN WELLS ORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO: 0M045014
DRAWING NUMBER
FIGURE 13



NOTE: BLANK SPACES INDICATE THIS CONSTITUENT DOES NOT EXCEED STANDARDS

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE: GEOTRANS 2010 FIGURES COMPREHENSIVE GROUNDWATER MONITORING AND SAMPLING PLAN, AUGUST 4, 2010.

Concentration exceeds Florida GCTL

Concentration exceeds Federal MCL

All results are in the units ug/L.

(1) FEDERAL MAXIMUM CONTAMINANT LEVELS (MCLS) REPRESENT THE NATIONAL PRIMARY DRINKING WATER STANDARDS.
(2) FLORIDA GROUNDWATER CLEANUP TARGET LEVELS (GCTLS) ARE GUIDELINES SET FORTH IN 62-777 FLORIDA ADMINISTRATIVE CODE (F.A.C.)

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN:	KD	DATE:	10/28/14
CHKD:	KD	DATE:	10/28/14
APPD:	AMB	DATE:	10/28/14
SCALE:	AS SHOWN		
ISSUE DATE:			

FIELD & TECHNICAL SERVICES, LLC
200 THIRD AVENUE
CARNEGIE, PA 15106

2014 SECOND SEMIANNUAL
COMPREHENSIVE GROUNDWATER MONITORING REPORT
CABOT CARBON/KOPPERS SUPERFUND SITE
GAINESVILLE, FLORIDA

SUMMARY OF FLORIDAN WELLS INORGANIC ANALYTICAL EXCEEDANCES

PROJECT NO. 0384B014
DRAWING NUMBER
FIGURE 14

Appendix I: Institutional Controls

ORDINANCE NO. 031014
0-04-44

An ordinance of the City of Gainesville, Florida, amending the City of Gainesville Land Development Code, Chapter 30; creating a new section 30-207, entitled Special Environmental Concern Area; establishing overlay district regulations for a Special Environmental Concern Area; providing directions to the codifier; providing a severability clause; providing a repealing clause; and providing an immediate effective date.

WHEREAS, the City Plan Board authorized the publication of notice of a Public Hearing that the text of the Land Development Code of the City of Gainesville, Florida, be amended; and

WHEREAS, notice was given and publication made as required by law and a Public Hearing was then held by the City Plan Board on March 25, 2004; and

WHEREAS, at least 10 days notice has been given once by publication in a newspaper of general circulation notifying the public of this proposed ordinance and of a public hearing to be held in the City Commission Auditorium, City Hall, City of Gainesville; and

WHEREAS, the Public Hearings were held pursuant to the published notice described at which hearings the parties in interest and all others had an opportunity to be and were, in fact, heard.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF GAINESVILLE, FLORIDA:

Section 1. Section 30-207, City of Gainesville Land Development Code, is created and added to read as follows:

Sec. 30-207. *Special Environmental Concern Area.*

(a) *Purpose.* This overlay is established for the purpose of protecting the immediate and long-term potable water supply by creating a procedure for projects going through development review in any area designated by the U.S. Environmental Protection

Agency as a superfund area, and that certain area adjacent to the superfund area, hereinafter referred to as a Special Environmental Concern Area (Area). Additionally, this overlay is established for the purpose of providing special review and care for any development in the Area.

(b) *New construction.* In the Area, all new construction projects (except for the construction of a single-family home on a lot of record) are required to follow the process as stated below:

1. The applicant/owners of all development projects in the Area shall schedule and attend a pre-application conference. This pre-application conference is mandatory.

2. The applicant shall schedule and hold a neighborhood workshop in accordance with the neighborhood workshop guidelines.

3. Following the neighborhood workshop, and as a condition precedent to proceeding with a development project in the Area, the applicant shall file an application for development review and a wellfield special use permit pursuant to sections 30-203 and 30-204 of this Code.

4. A completed copy of the above-referenced application shall be submitted by the applicant to the following agencies for review and comment:

   a. United States Environmental Protection Agency
   b. Florida Department of Environmental Protection
   c. Gainesville Regional Utilities
   d. Responsible Party for Remedial Action
   e. Occupational Health and Safety Administration (OSHA) (Health and Safety Plan Review)
   f. Alachua County Department of Environmental Protection

5. Following the period allowed for receipt of comment from the agencies listed above and from the City Manager or designee, the applicant may proceed through the development review and wellfield special use permit process as described in the Code. The applicant shall respond to all comments and concerns of the reviewing agencies throughout the development review process and prior to receiving final approval.

6. Hold harmless and indemnification agreement. By filing an application for development in the Special Environmental Concern Area, the owner(s) shall be required to sign a Hold Harmless and Indemnification Agreement with the City, releasing the City from any liability associated with the development of the site.

(c) *Reuse of existing buildings and interior remodeling.* All reuse projects that do not involve the excavation of soil or the drilling of wells are exempt from the

requirements of subsection (b) above, but shall otherwise comply with the development review and wellfield protection processes stated in the Code.

(d) *Conflict with Other Laws.* In the event of a conflict between the provisions of this ordinance and any state or federal law, rule or regulation, the more stringent requirement will apply.

Section 2. It is the intention of the City Commission that the provisions of Section 1 of this ordinance shall become and be made a part of the Code of Ordinances of the City of Gainesville, Florida, and that the Sections and Paragraphs of this Ordinance may be renumbered or relettered in order to accomplish such intentions.

Section 3. If any section, sentence, clause or phrase of this ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this ordinance.

Section 4. All ordinances, or parts of ordinances, in conflict herewith are to the extent of such conflict hereby repealed.

Section 5. This ordinance shall become effective immediately upon final adoption.

PASSED AND ADOPTED this 12th day of September, 2005.

CHARLES S. CHESTNUT, IV
MAYOR-COMMISSIONER PRO TEMPORE

ATTEST:

KURT M. LANNON
CLERK OF THE COMMISSION

Approved as to form and legality

MARION J. RADSON
CITY ATTORNEY

SEP 15 2005

This Ordinance passed on first reading this 22nd day of August. 2005.

This Ordinance passed on second reading this 12th day of September. 2005.

ORDINANCE NO. 050308
0-05-70

An ordinance of the City of Gainesville, Florida, amending the Zoning Map Atlas and imposing the Special Environmental Concern Area overlay on certain property commonly known as the Cabot Carbon/Kopper's site, and that certain area around this site located in the vicinity of NE 9th Street on the east, NW 35th Avenue on the north, NW 6th Street on the west, and NE 21st Avenue on the south, as more specifically described in this ordinance; providing directions to the City Manager; providing directions to the codifier; providing a severability clause; providing a repealing clause; and providing an immediate effective date.

WHEREAS, the City Plan Board authorized the publication of notice of a Public Hearing that the text of the Land Development Code of the City of Gainesville, Florida, be amended; and

WHEREAS, notice was given and publication made as required by law and a Public Hearing was then held by the City Plan Board on March 25, 2004; and

WHEREAS, pursuant to law, an advertisement no less than two columns wide by 10 inches long was placed in a newspaper of general circulation notifying the public of this proposed ordinance and of a Public Hearing in the City Commission meeting room, City Hall, City of Gainesville to be held at least 7 days after the day this first advertisement was published; and

WHEREAS, a second advertisement no less than two columns wide by 10 inches long was placed in a newspaper of general circulation notifying the public of the second Public Hearing to be held at the adoption stage at least 5 days after the day this second advertisement was published; and

WHEREAS, the Public Hearings were held pursuant to the published notice described at which hearings the parties in interest and all others had an opportunity to be and were, in fact, heard;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF GAINESVILLE, FLORIDA:

Section 1. The Zoning Map Atlas of the City of Gainesville is amended by imposing the Special Environmental Concern Area overlay on following described properties:

See Special Environmental Concern Area Map,
attached hereto as Exhibit A and made a part hereof by reference.

The Special Environmental Concern Area map is attached hereto and identifies the Area. If any part of a single parcel is included in the Area and is so designated on this map, the Special Environmental Concern Area regulations will apply as to the part of the parcel included within the Area to the extent that this part of the parcel is included in the development plan for the entire parcel.

Section 2. *Effect of Classification.* The underlying zoning district categories on the above-described properties are neither abandoned nor repealed; the existing zoning regulations remain in effect. The Special Environmental Concern Area overlay classification shall not modify existing zoning requirements except to the extent that they conflict with the provisions of the Special Environmental Concern Area overlay requirements. In the event of conflict, the regulations of the Special Environmental Concern Area shall govern and prevail. The requirements, regulations, and procedures

set forth in Chapter 30 of the Gainesville Code of Ordinances shall otherwise remain applicable to the properties so classified.

Section 3. The City Manager is authorized and directed to make this changes in the zoning map in order to comply with the ordinance and to administer the provisions of the Special Environmental Concern Area within this urban area, as provided in the Land Development Code.

Section 4. All ordinances, or parts of ordinances, in conflict herewith are to the extent of such conflict hereby repealed.

Section 5. This ordinance shall become effective immediately upon final adoption.

PASSED AND ADOPTED this 12th day of September, 2005.

CHARLES S. CHESTNUT, IV
MAYOR-COMMISSIONER PRO TEMPORE

ATTEST:

KURT M. LANNON
CLERK OF THE COMMISSION

Approved as to form and legality

MARION J. RADSON
CITY ATTORNEY

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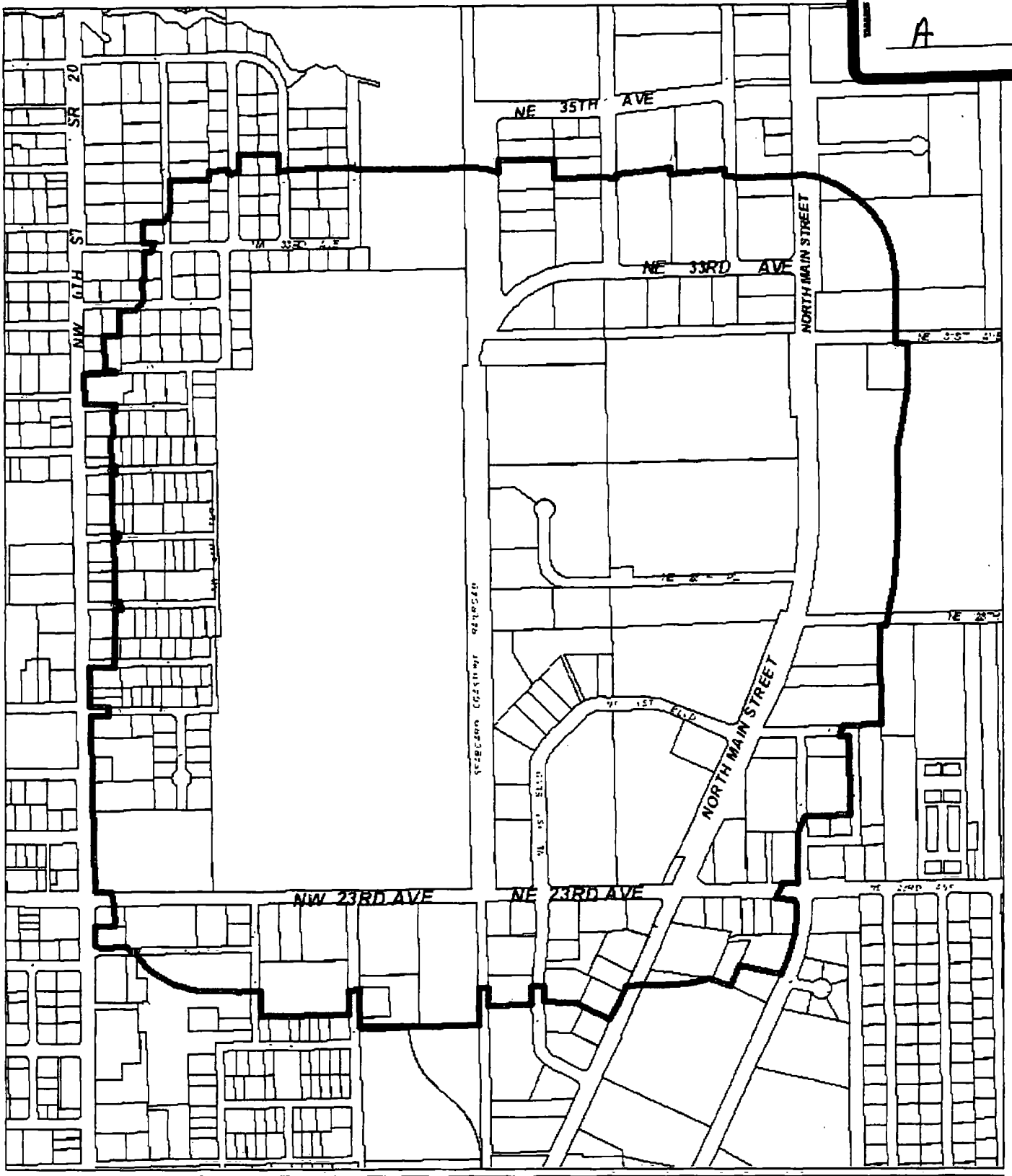
EXHIBIT

A



SPECIAL ENVIRONMENTAL CONCERN AREA

GAINESVILLE, FLORIDA

Special Environmental Concern Area

N

0 250 500 1,000

Feet

City of Gainesville, Florida
Dept of Community Development/GIS
File Cabot/Koppers_082205

ORDINANCE NO: 050076
0-05-75

An ordinance of the City of Gainesville, Florida, amending subsection (a) of section 30-311 of the Land Development Code, relating to violations, enforcement and penalties pertaining to stormwater management regulations; providing directions to the codifier; providing a severability clause; providing a repealing clause; and providing an immediate effective date.

WHEREAS, the City Plan Board authorized the publication of notice of a Public Hearing that the text of the Land Development Code of the City of Gainesville, Florida, be amended; and

WHEREAS, notice was given and publication made as required by law and a Public Hearing was then held by the City Plan Board on June 16, 2005; and

WHEREAS, at least 10 days notice has been given once by publication in a newspaper of general circulation notifying the public of this proposed ordinance and of a Public Hearing to be held in the City Commission Auditorium, City Hall, City of Gainesville; and

WHEREAS, the Public Hearings were held pursuant to the published notice described at which hearings the parties in interest and all others had an opportunity to be and were, in fact, heard; and

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF GAINESVILLE, FLORIDA:

Section 1. Subsection (a) of Section 30-311, Land Development Code of the City of Gainesville, is hereby amended to read as follows:

Sec. 30-311. Violations, enforcement and penalty.

(a) *Stormwater management.* As regards the provisions of the stormwater management sections of this article, and in addition to the provisions of Article X:

(1) Stormwater facilities shall function as per the approved final development plan/final plat. Failure to comply with this provision shall be a violation of this Code.

(2) During construction if ~~If~~ the ~~public works department~~ City Manager or designee observes that the stormwater facilities are not functioning ~~properly~~ in accordance with the permitted site plan or subdivision construction design plan, in addition to other remedies provided for in this section, no certificate of occupancy shall be issued until such time as the facilities are corrected and are functioning properly.

(3) Any stormwater facility that is found by the City Manager ~~city manager~~ or designee to be contributing to ~~exacerbating~~ mosquito control problems is in violation of this article and the property owner shall ~~must be~~ immediately correct~~ed~~ the problem ~~by the owner~~ at the owner's expense.

(4) a. Prior to construction of a stormwater facility, a pollution prevention plan shall be submitted to the City Manager or designee for approval. The pollution prevention plan shall detail specific Best Management Practices for installation on a construction site and that when installed have the net effect of preventing a deposit, obstruction, damage or process problem to any of the City's stormwater management facilities or to the surface waters of the state. If such deposit, obstruction, damage or process problem occurs this occurrence shall be a violation of this article and the property owner shall cause the deposit or obstruction to be immediately removed or cause the damage or process problem to be immediately repaired.

b. Discharge from any facility that causes a deposit, obstruction, damage or process problem to any of the City's stormwater management facilities or to the surface waters of the state is a violation of this article and the property owner shall cause the deposit or obstruction to be immediately removed or cause the damage or process problem to be immediately repaired.

(5) Any temporary or permanent erosion or sedimentation control device that is unable to perform continuous effective control shall be a ~~in~~ violation of this article and the property owner shall immediately correct the control device so that it performs continuous effective control. Such correction or repair shall be taken at the owner's expense.

(6)~~(5)~~ If an ~~the~~ approved maintenance plan is not being adhered to, ~~as approved~~ the property owner shall be in violation of this article and shall immediately resume adherence to the approved maintenance plan.

(7) Should any person violate the provisions of this section, the City Manager or designee shall require the violator to take corrective measures. In the event the violator does not immediately correct the violation, the city may, depending upon the severity of the violation, take the following actions:

(a) If the City Manager or designee finds a violation of this article or a violation of any provision of a property owner's pollution prevention plan, which has been provided to the City, is not immediately rectified, the City Manager or designee shall notify the property owner of the violation within five days of inspection and shall give the property owner a reasonable time to correct the violation. Should the violation continue beyond the time specified for correction, the City Manager or designee shall issue a notice of violation to the alleged violator and shall notify the Code Enforcement Board to request a hearing. The Board, through its clerical staff, shall schedule a hearing, and written notice of such hearing shall be hand delivered or mailed to the property owner as provided in section 2-390 of the Code of Ordinances. In the case of notice provided under section 2-390(a), notice shall be given at least seven days in advance of the hearing, not counting the day of the hearing. If the violation is corrected and then recurs or if the violation is not corrected by the time specified for correction by the inspector, the case may be presented to the board even if the violation has been corrected prior to the board hearing.

(b)1. Notwithstanding any other provision of this section, if the City Manager or designee finds a violation of this article in relation to a City-issued permit or finds a violation of the pollution prevention plan has occurred that presents an imminent risk to the environment, the City Manager or designee may issue a cease and desist order for any and all development on the site related to the permit. Any person receiving such an order for cessation of operations shall immediately comply with the requirements thereof. It shall be a violation of this Code for any person to fail to or refuse to comply with a cease and desist order issued once written notice of the cease and desist order is delivered by hand delivery or by certified mail, return receipt requested, to the person to whom the permit is issued.

(b)2. If the City Manager or designee issues a cease and desist order pursuant to this Code, the property owner shall immediately cease all work on the site until the violation is corrected or mitigated. The property owner shall have the right to appeal to the Board of Adjustment the administrative decision of the City Manager or designee to issue a cease and desist order and shall show cause why the cease and desist order should be lifted. Any appeal to the Board of Adjustment shall not stay the cease and desist order.

(8) The City Manager or designee may enter into consent agreements, assurances or voluntary compliance documents establishing an agreement with any user responsible for noncompliance. Such documents shall include specific action to be taken by the user to correct the noncompliance within the time period as specified in the document. Such documents may provide for judicial enforcement.

(9) In addition to all remedies provided above, in the event of failure to comply with any requirement of this section or in the event a violation of this section is occurring in the absence of a City-issued permit, the City Manager may request the city attorney's

office seek injunctive relief in a court of equitable jurisdiction so that the property owner will cease any and all activity on the site.

(10) The remedies provided in this section shall not be exclusive, and are in addition to any other remedies available to the County, State or Federal government; and the City may seek whatever remedies are authorized in Code against any person or user for violating the provisions of this section.

~~(6) The property owner shall be mailed written confirmation that a violation has occurred within five days of any inspection. Notification of violation shall include the time and place of the inspection, the name of the inspecting officer, and a description of the conditions that are in violation. The property owner shall be given ten days to arrange a schedule acceptable to the public works director to abate the violation or file an appeal for additional time to abate the violation with the code enforcement board.~~

~~(7) If the board of adjustment finds that delay in remediating the violation may result in an immediate danger to the public health and safety, the city manager or designee may order that work to be done immediately, at the expense of the property owner.~~

Section 2. It is the intention of the City Commission that the provisions of Section 1 of this ordinance shall become and be made a part of the Code of Ordinances of the City of Gainesville, Florida, and that the Sections and Paragraphs of this Ordinance may be renumbered or relettered in order to accomplish such intentions.

Section 3. If any section, sentence, clause or phrase of this ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this ordinance.

Section 4 All ordinances, or parts of ordinances, in conflict herewith are, to the extent of such conflict, hereby repealed.

Section 5. This ordinance shall become effective immediately upon final adoption.

PASSED AND ADOPTED this 12th day of September, 2005.

CHARLES S. CHESTNUT, IV
MAYOR-COMMISSIONER PRO TEMPORE

ATTEST:

KURT M. LANNON
CLERK OF THE COMMISSION

Approved as to form and legality

MARION J. RADSON
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