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Mr. Scott Miller
Remedial Project Manager
Superfund Division
Superfund Remedial Branch
Section C
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

ENVIRONMENT

Subject:

**Additional Off-Site Soil Sampling
West, South, Southeast and Residential Busy Street Background Locations
Cabot Carbon/Koppers Superfund Site
Gainesville, Florida**

Date:
August 31, 2011

Contact:
Paul Anderson

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Our ref:
B0039196.0001

Dear Mr. Miller:

On behalf of Beazer Inc. (Beazer), ARCADIS is providing this revised proposal for additional off-Site soil samples in the vicinity of the Cabot Carbon/Koppers Superfund Site (Site) in Gainesville, Florida. The sampling locations proposed in this plan reflect changes based upon comments from the US Environmental Protection Agency (USEPA) dated July 11, 2011 on the *Off-Site Data Summary and Fingerprinting Evaluation* submitted on April 6, 2011 (*Off-Site Data Summary Report*). Sample locations have been proposed to further delineate off-Site concentrations of arsenic, polynuclear aromatic hydrocarbons (PAHs), and dioxins/furans as well as to collect additional samples to better define local background concentrations in the vicinity of busy streets. Figures 1, 2 and 3 present the proposed additional sample locations to delineate off-Site arsenic, PAH and dioxin/furan concentrations, respectively. Figure 4 presents the proposed additional sample locations to establish a statistically robust Site-specific busy street background concentration. The additional proposed off-Site sampling is described below by constituent followed by a description of the proposed background sampling.

Arsenic

Three sample locations, two west of the Site (SS09 and SS15) and one south of the Site (SS309), had arsenic concentrations above the residential delineation criterion (i.e., the residential SCTL of 2.1 mg/kg). In response to USEPA's comments six

Imagine the result

additional samples will be collected for potential arsenic delineation: two along NW 31st Avenue, two along NW 27th Avenue, and two along NW 2nd Street (Figure 1, Table 1). The samples will be located within the ROW of each street. Samples on NW 31st Avenue (SS 270 and SS271) and NW 27th Avenue (SS272 and SS273) will be located approximately 100 and 200 feet west of existing samples. Samples on NW 2nd Street (SS350 and SS351) will be located approximately 100 and 200 feet south of the existing sample. The samples on NW 31st Avenue and NW 27th Avenue will be analyzed for arsenic only. The samples on NW 2nd Street will be analyzed for arsenic and possibly for PAHs pending the outcome of the residential busy street background sampling results (see discussion below regarding PAHs).

The analyses will be conducted in phases (Table 1). The 100-foot samples (i.e., SS270, SS272 and SS350, shown in green on Figure 1) will be analyzed first. If arsenic delineation criteria are met within a specific ROW, no other samples in that ROW will be analyzed for arsenic. If arsenic delineation criteria are not met at the 100-foot sample, then the 200-foot sample will be analyzed for arsenic (referred to as contingent samples and shown in blue on Figure 1, Table 1).

Table 1. Proposed Arsenic Samples

Sample Requiring Additional Delineation	Proposed Sample Location	Proposed Contingent Sample Location
SS09	SS270	SS271
SS15	SS272	SS273
SS309	SS350	SS351

PAHs

Six sample locations, three west of the Site (SS06, SS07 and SS13) and three south of the Site (SS307, SS308 and SS309) had PAH concentrations (expressed as benzo(a)pyrene toxic equivalents or BaP-TE) above the residential delineation criterion (i.e., the residential SCTL of 100 ug/kg). One location to the east of the Site (SS310) had a BaP-TE concentration above the industrial delineation criterion (i.e., the industrial SCTL of 700 ug/kg). In response to USEPA’s comments, 11 additional samples will be collected for potential PAH delineation: two along NW 32nd Avenue (SS274 and SS275), two along NW 28th Avenue (SS276 and SS277), two along NW 23rd Avenue to the west of the Site (SS278 and SS279), two along NW 3rd Terrace

(SS352 and SS353), two along NW 2nd Street (SS350 and SS351), and one along NE 1st Boulevard (SS354) (Figure 2, Table 2). With the exception of the two samples along NW 23rd Avenue to the west of the Site (SS278 and SS279), all the samples will be located within a ROW. The two samples along NW 23rd Avenue to the west of the Site will be located approximately 50 feet to the north of the ROW in a wooded area. Samples on NW 32nd Avenue and NW 28th Avenue will be located approximately 100 and 200 feet west of existing samples. Samples to the west of the Site on NW 23rd Avenue will be located approximately 100 and 200 feet west of Former KI Facility Boundary. Samples on NW 3rd Terrace and NW 2nd Street will be located approximately 100 and 200 feet south of the existing sample. The sample on NE 1st Boulevard will be located approximately 250 feet to the north of existing sample location SS310. The samples on NW 32nd Avenue, NW 28th Avenue, NW 23rd Avenue and NE 1st Boulevard will be analyzed for PAHs only. The samples on NW 2nd Street will be analyzed for arsenic and PAHs.

The analyses will be conducted in phases (Table 2). The samples to the west and east of the Site closest to the Former KI Facility Boundary (shown in green on Figure 2) will be analyzed first. If PAH delineation criteria are met within a specific ROW, no other samples in that ROW will be analyzed for PAH. If PAH delineation criteria are not met at the 100-foot sample, then the 200-foot sample will be analyzed for PAH (referred to as contingent samples and shown in blue on Figure 2, Table 2).

The samples to the south of the Site, on NW 3rd Terrace and NW 2nd Street will be analyzed for PAHs if comparison of the BaP-TE concentration in the existing samples within those ROWs (SS308 and SS309) is determined to exceed residential busy street background concentrations, once the complete residential busy street background dataset is available (see discussion below regarding residential busy street background sampling). If the existing samples on NW 3rd Terrace or NW 2nd Street exceed background then analyses of the proposed sample locations will be conducted in phases (Table 1). The 100-foot samples (i.e., SS350 and SS352 shown in blue on Figure 1) will be analyzed first. If PAH delineation criteria are met within a specific ROW, the other samples in that ROW will not be analyzed for PAH. If PAH delineation criteria are not met at the 100-foot sample, then the 200-foot sample in that ROW will be analyzed for PAH.

Table 2. Proposed PAH Samples

Sample Requiring Additional Delineation	Proposed Sample Location	Proposed Contingent Sample Location
SS06	SS274	SS275
SS07		
SS13	SS276	SS277
SS307	SS278	SS279
SS308		SS352
		SS353
SS309		SS350
		SS351
SS310	SS354	

Dioxins

As discussed in the *Off-Site Data Summary Report* several samples to the west and south of the Site had dioxin/furan concentrations (expressed as 2,3,7,8-tetrachlorodibenzo-p-dioxin toxic equivalents or TCDD-TEQ) above the residential delineation criterion (i.e., the residential SCTL of 7 ng/kg (Figure 3)). Several additional samples are proposed to complete delineation of dioxins/furans. In response to USEPA’s comments on the *Off-Site Data Summary Report*, incremental sampling methodology (ISM) samples will be collected from residential yards to the west and south of the Site and from several private properties to the west of NW 6th Street (Figure 3, Table 3).

Collection of ISM samples will follow the general approach described in USEPA’s *Uniform Federal Policy Quality Assurance Project Plan Template for Soils Reassessment of Dioxin Site*. Given that dioxin/furan concentrations on the properties proposed for ISM sampling are expected to be relatively homogenous, 10-15 increments (instead of the 30-60 increments discussed in the above guidance) will be collected from each ISM area. The assumption that dioxin/furan concentrations are homogenous is based on the results of the previous sampling described in the *Off-Site Data Summary Report* and that any contribution of dioxins/furans from the Former KI Facility to the ISM sampling areas, assuming such a contribution actually

occurred, is via aerial deposition of dust. Aerial deposition is assumed to result in a more uniform distribution of constituents in soils than, for example, surface water runoff of surface spills/releases. Thus, the typical number of increments referred to by the above guidance can be reduced. Within an ISM area, increments will not be collected from the vicinity of localized potential sources of dioxins/furans such as grills, burn barrels, visibly stained soil, treated wood, etc.

Five samples will be collected west of the Site between the Site and NW 6th Street. Three samples will be collected along NW 31st Lane and two along NW 30th Avenue (Figure 3). Six samples will be collected to the south of the Site: four along NW 3rd Terrace and two along NW 2nd Street (Figure 3).

The analyses will be conducted in phases (Table 3). The samples closest to the Former KI Facility Boundary (shown in green on Figure 3) will be analyzed first. If dioxin/furan delineation criteria are met within a specific sample, no other samples on that street will be analyzed for dioxins/furans. Analysis of successively more distant samples (referred to as contingent samples and shown in blue on Figure 3, Table 3) will continue until the dioxin/furan delineation criteria are met or the most distant sample is analyzed, whichever comes first.

Six ISM samples will also be collected west of NW 6th Street (Figure 3). Four of these samples will be analyzed for dioxins/furans (shown in green on Figure 3, Table 3). If dioxin/furan delineation criteria are met at ISM08, ISM10 will not be analyzed for dioxins/furans. Similarly, if dioxin/furan delineation criteria are met at ISM09, ISM11 will not be analyzed for dioxins/furans.

Table 3. Proposed Dioxin Samples

Sample Requiring Additional Delineation	Proposed Sample Location	Proposed Contingent Sample Location
SS204	ISM01	ISM02
		ISM03
SS213	ISM04	ISM05
SS308	ISM12	ISM13
		ISM14
		ISM15
SS309	ISM16	ISM17
Several	ISM06	
	ISM07	
	ISM08	ISM10
	ISM09	ISM11

Local Background Samples

An additional 10 samples from residential neighborhoods along residential busy streets that are located more than a mile from the Site will also be collected and analyzed for PAHs and dioxins/furans to complete the background residential busy street dataset. Proposed residential busy street background locations are shown on Figure 4.

Sampling and Laboratory Analysis

Consistent with previous off-Site sampling, final sampling locations will be selected in the field and the U.S. EPA, FDEP, Alachua County and City of Gainesville will be invited to review all locations prior to sampling. All sampling and analysis will be performed in accordance with the *Off-Site Sampling Work Plan* (AMEC, 2008) and the *Quality Assurance Work Plan* (Environmental Standards, 2009) All dioxin samples will be submitted for analysis by USEPA Method 1613B. In accordance with the Quality Assurance Project Plan, all PAH samples will be submitted for analysis by USEPA Method 8270C SIM. All arsenic samples will be submitted for analysis by

USEPA Method 6020. All samples will be analyzed following a standard 21-day turn-around time.

Should you have any questions or concerns, please don't hesitate to contact Mitchell Brouman of Beazer (412-208-8805) or me.

Sincerely,

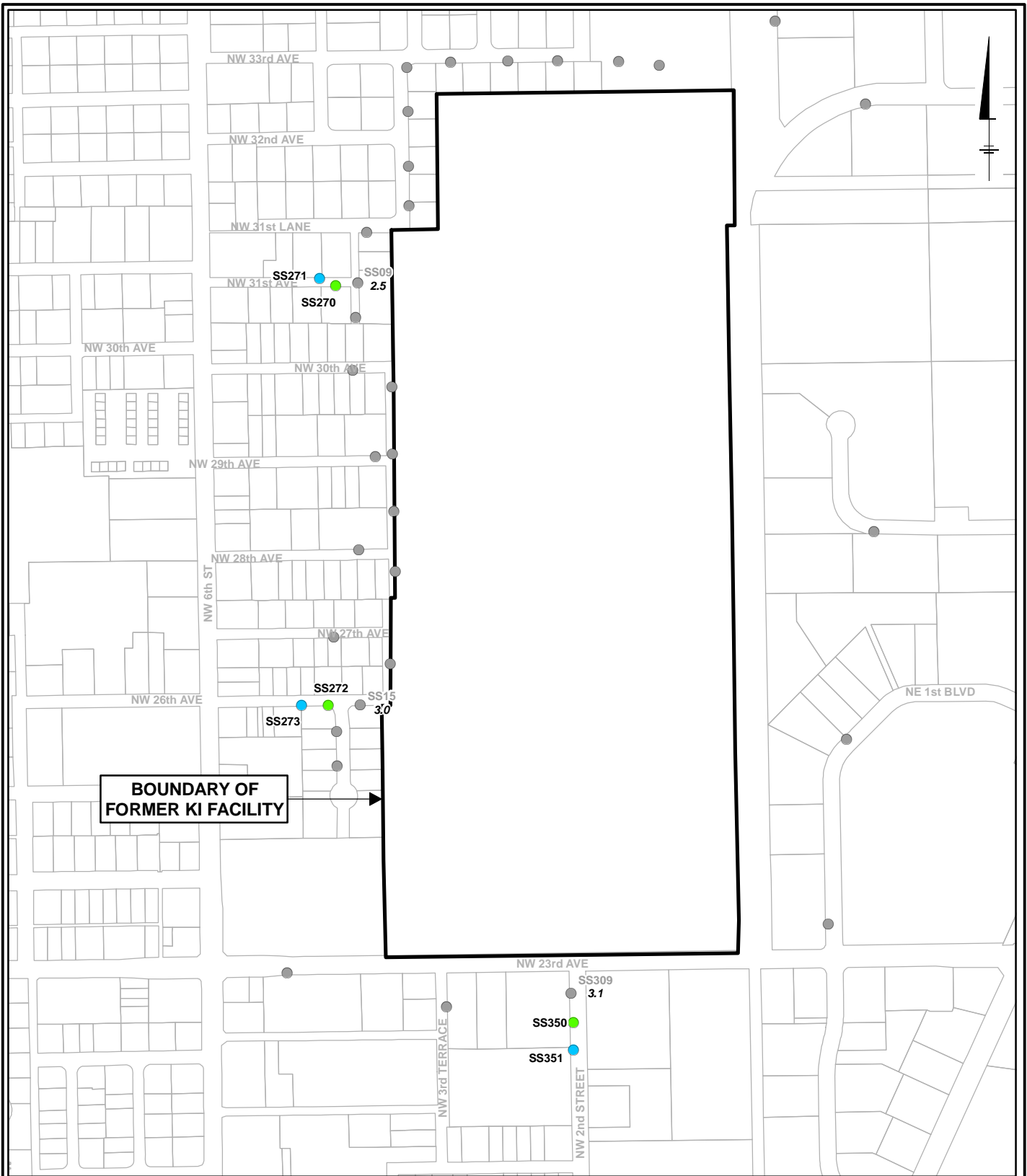
ARCADIS U.S., Inc.



Paul Anderson
Principal Scientist

Copies:

Mitchell Brouman, Beazer
John Rice, AMEC
Greg Council, Tetra Tech Geo



LEGEND:

- PROPOSED ARSENIC SAMPLE
- PROPOSED CONTINGENT ARSENIC SAMPLE
- EXISTING SOIL SAMPLE LOCATION
(CONCENTRATION AT THAT LOCATION SHOWN IN ITALICS IN MG/KG)

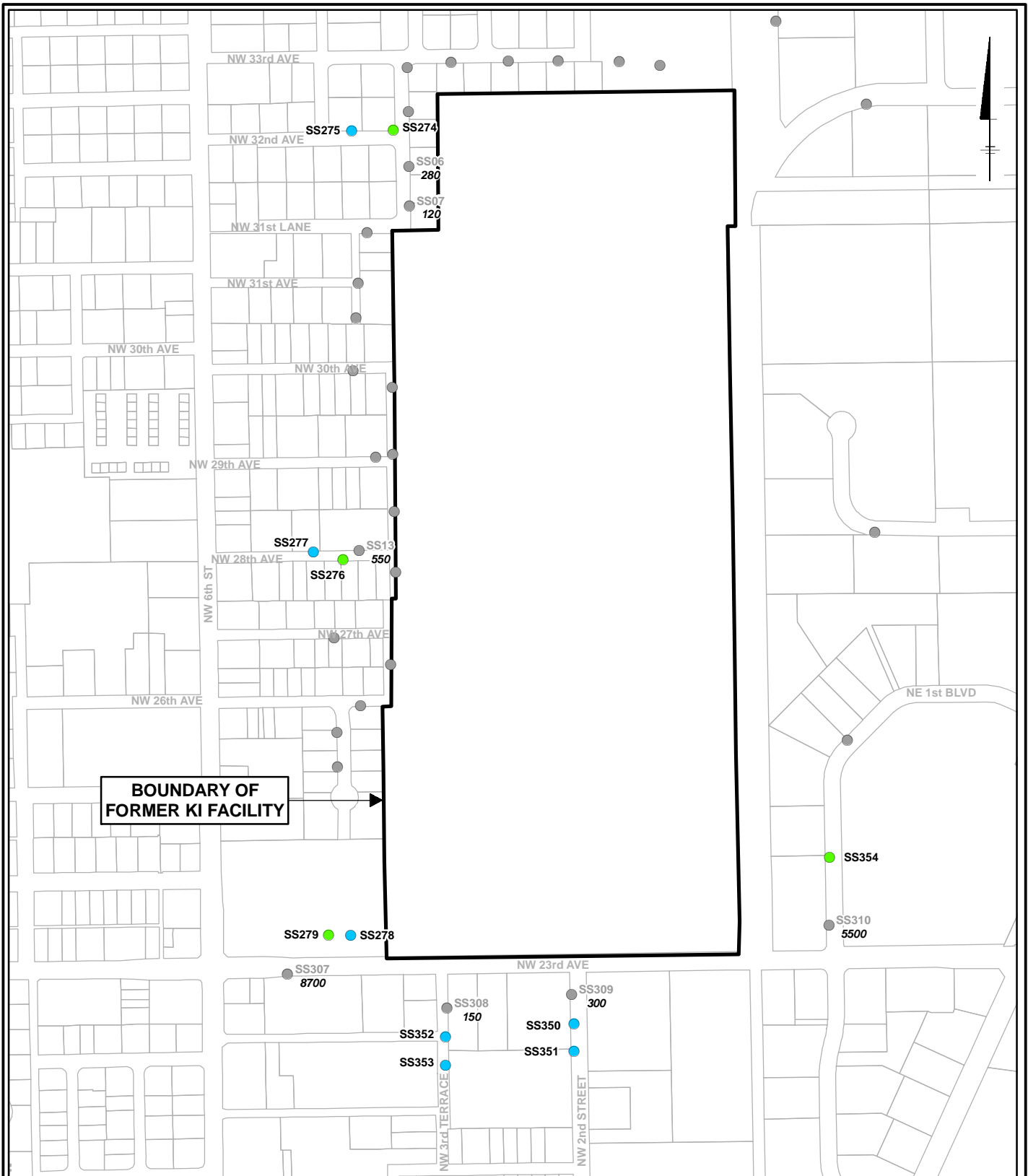


CABOT CARBON/KOPPERS SUPERFUND SITE
 GAINESVILLE, FL

OFF-SITE SAMPLING - 2011
ADDITIONAL PROPOSED SAMPLING LOCATIONS:
ARSENIC

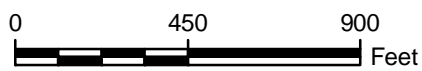


FIGURE
1



LEGEND:

- PROPOSED PAH SAMPLE
- PROPOSED CONTINGENT PAH SAMPLE
- EXISTING SOIL SAMPLE LOCATION
(CONCENTRATION AT THAT LOCATION SHOWN IN ITALICS IN MG/KG)



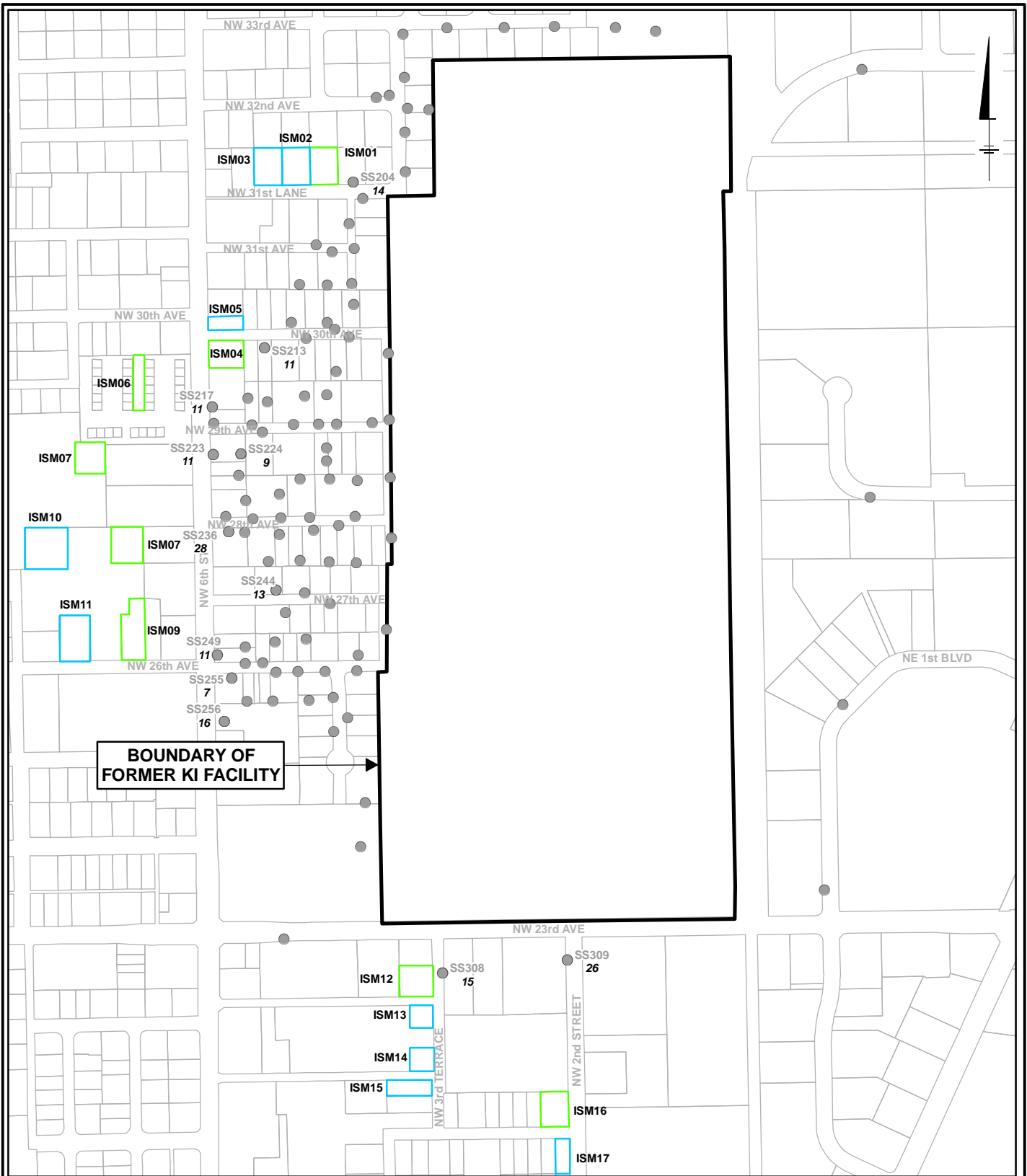
GRAPHIC SCALE

CABOT CARBON/KOPPERS SUPERFUND SITE
 GAINESVILLE, FL

OFF-SITE SAMPLING - 2011
ADDITIONAL PROPOSED
SAMPLING LOCATIONS:
PAH

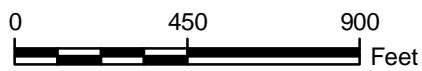


FIGURE
2



LEGEND:

- EXISTING SOIL SAMPLE LOCATION (CONCENTRATION AT THAT LOCATION SHOWN IN ITALICS IN NG/KG)
- ISM SAMPLE
- ISM CONTINGENT SAMPLE



GRAPHIC SCALE

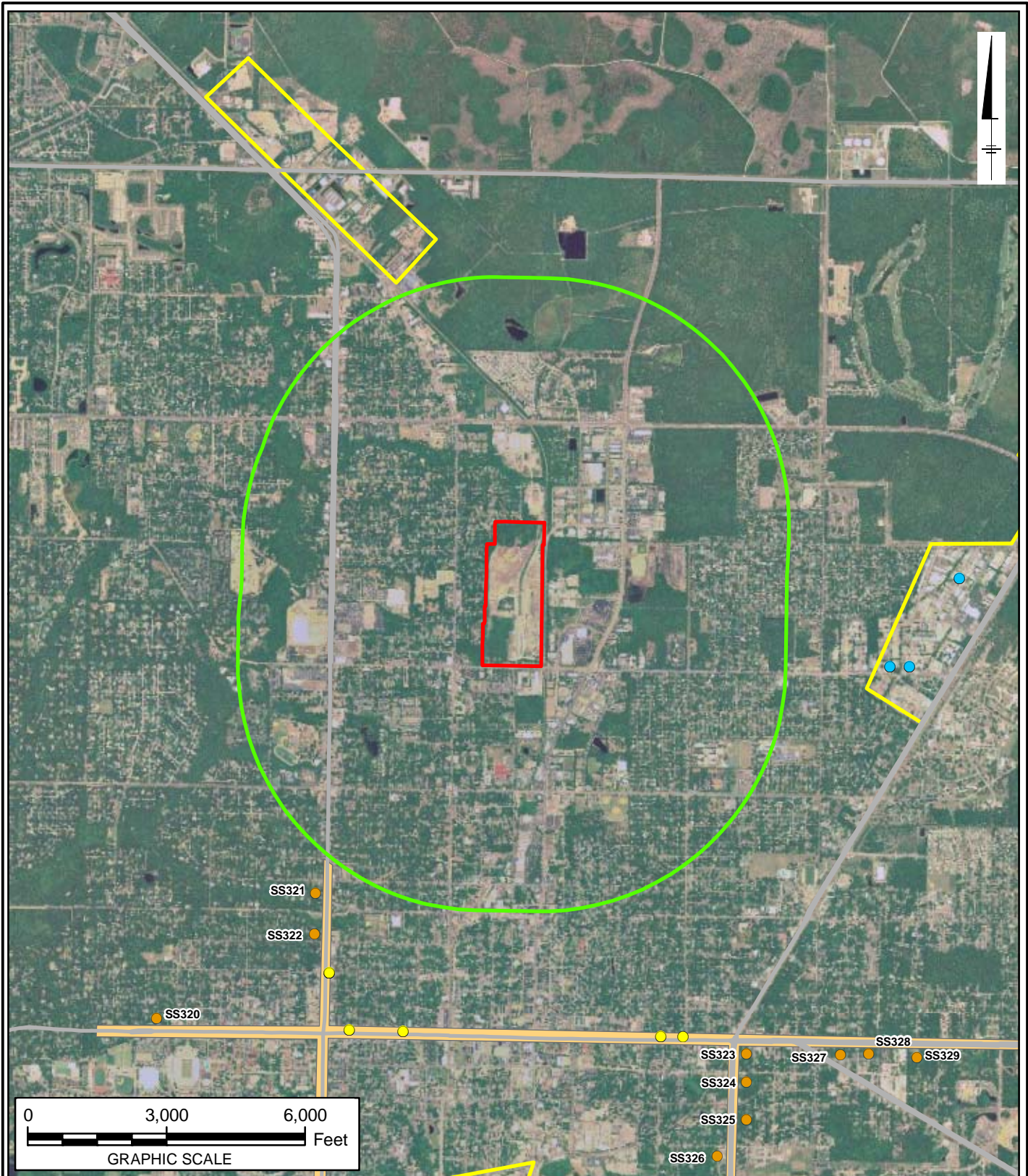
CABOT CARBON/KOPPERS SUPERFUND SITE
 GAINESVILLE, FL

OFF-SITE SAMPLING - 2011
ADDITIONAL PROPOSED
SAMPLING LOCATIONS:
DIOXINS/FURANS



FIGURE
3

CITY: SYR DIV/GROUP: IM DB: KES LD: PIC: PM: TM: RP
 BP (GPO9BPNA.NJ23)
 Q:\Beazer\Gainesville_FL\OffSiteSampling2011\mxd\ProposedBackgroundSamplingLocations.mxd - 8/12/2011 @ 10:45:56 AM



LEGEND:

- 2010 BACKGROUND INDUSTRIAL SOIL SAMPLE LOCATION
- 2010 BACKGROUND BUSY STREET SOIL SAMPLE LOCATION
- ONE MILE SITE RADIUS
- PROPERTY BOUNDARY
- PROPOSED INDUSTRIAL BACKGROUND SAMPLING AREA
- PROPOSED RESIDENTIAL BUSY STREET BACKGROUND SAMPLING AREA
- PROPOSED BUSY STREET BACKGROUND SAMPLE
- BUSY STREET

CABOT CARBON/KOPPERS SUPERFUND SITE
 GAINESVILLE, FL

OFF-SITE SAMPLING - 2011

**PROPOSED BUSY STREET
 BACKGROUND SAMPLING
 LOCATIONS**



FIGURE
4