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REDACTED

United States Environmental Protection Agency
Region 4



35TH AVENUE REMOVAL INVESTIGATION
BIRMINGHAM, ALABAMA
JEFF CROWLEY, ON-SCENE COORDINATOR

FIELD SAMPLING LOGBOOK

Book ____ of ____

Inclusive Dates: 11/13/2012

List of Sampling Team in logbook:

Name	Initials	Organization/Duties
(b) (6)		OTIE, Team Leader
(b) (6)		OTIE

General Soil Descriptions

Color	Abbv
Black	blk
Brown	bwn
Light Brown	lt/bwn
Dark Brown	dk/bwn
Gray	gry
Light Gray	lt/gry
Olive Gray	olv/gry
Greenish Gray	grn/gry
Dark Gray	dk/gry
Tan	tn
Light Tan	lt/tn
Orange	Org
Red	Rd

Soils	Abbv
Clay	CL
Sandy Clay	sndy CL
Silty Clay	slty CL
Sand	Snd
Silty Sand	slty Snd
Silt	slt
Grass	grs
Organic	Org

Sizes	Abbv
Coarse	C
Coarse to medium	c-m
Coarse to fine	c-f
Medium to fine	m-f
Fine	f

Texture	Abbv
Hard	hrd
Dry	Dry
brittle	brt
Stiff	stf
Very Stiff	vry stf
soft	sft
Very Soft	vry sft
Damp	dmp
Wet	wt
Wet	wt

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Sampling Procedures and Methodology

Unless specified elsewhere in this logbook, all soil samples will be collected in accordance with the EPA Science and Ecosystem Division (SED) Field Branches Quality System and Technical Procedures (FBQSTP) Soil Sampling (SESDPROC-300-R2) based on the following design.

The total number of 5-point composite surface soil samples (0-4 inches below ground surface) to be collected from each property will be based on the lot size as follows:

- For residential properties with a total parcel lot size equal to or less than (\leq) 5,000 square feet - the front yard and back yards of each property. If the property has a substantial side yard (primarily corner lots), then one composite soil sample may also be collected from the side yard. Aliquots will be collected away from influences with drip lines and burn areas in a five dice configuration (each of the four corners and the center).
- For residential properties with a total parcel lot size greater than ($>$) 5,000 square feet and \leq ¼-acre - the property should be divided into two roughly equal surface areas. If the property has a substantial side yard (primarily corner lots), then one composite soil sample may be collected from the side yard with the remainder of the property being divided into two roughly equal surface areas. Aliquots will be collected away from influences including drip lines and burn areas with reasonably equal spacing between aliquots.
- Residential properties over ¼-acre in parcel lot size will be divided into ¼-acre sections. When dividing any such property with a substantial side yard (primarily corner lots), one composite soil sample may be collected from the side yard. Aliquots will be collected away from influences including drip lines and burn areas in a five dice configuration, if possible, with reasonably equal spacing between aliquots.

Grab surface soil samples will be collected from apparent exposure pathways where active play sets are located.

Three-point composite surface soil samples will be collected from distinct vegetable gardens from each residential property.

Samples shall not be collected under paved areas or under stationary fixed structures.

Grab sediment samples will be collected in accordance with EPA SED FBSTP Sediment Sampling (SESDPROC-200-R2) from any surface water drainage pathways located on individual properties, as directed by the OSC, and in and along the banks of the 34th Street North Ditch.

Each surface soil or sediment sample should be homogenized in a stainless steel bowl. One 8-ounce jar will be filled and the remaining sample material will be placed in zip-top bags for screening. Information identifying the location, sample, and date/time will be inscribed on each jar and zip-top bag.

All sample bags will be screened for metals in accordance with SED FBQSTP Field XRF Measurement (SESDPROC-107-R2) using a Niton XRF. The sample will be dried before sieving or analysis is performed. Once the sample has dried, the sample will be divided into two subsamples; one subsample will be sieved through a #10 screen (2 mm) and the other will be left unsieved. Once separated into sieved and unsieved samples, the zip-top bag will be compressed by folding over the excess plastic and removing as much air and space from the sample as possible. The XRF will be placed directly on the exterior of the compressed sample in the plastic zip-top bag to measure metals concentrations. Following XRF screening, the unsieved portion of the sample material will be containerized into one 8-ounce jars and the sieved portion of the sample will be containerized into another 8-ounce jar.

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Based on the site DQOs the 8-ounce jars of surface soil and sediment samples should be submitted to PEL, Tampa, Florida (a NELAC certified laboratory) for low level PAH, and/or TCL SVOC, RCRA metals, PCB, and/or Hexavalent Chromium analysis. RCRA metals will be analyzed from both the sieved and unsieved portions of the sample. All other analysis will be conducted on the unsieved portion.

The location of each aliquot will also be logged in accordance with SESD FBQSTP Global Positioning System (SESDPROC- 110-R3) using a Trimble GPS.

A description of the color and texture of the aliquot material will be recorded in each box.

The **station ID** for each location will consist of seven characters, beginning with the six digit Property ID designation for the property followed by a alphabetic letter beginning with "A".

e.g. CV0001A would be the station ID for the front yard 5-pt composite sample collected at the property with Property ID CV0001.

The **sample ID** for each sample is the station ID with "CS" (composite soil), "GS" (grab soil), "SD" (sediment), or "SW" (surface water) appended, therefore, the sample ID for this sample would be CV0001A-CS. Co-located duplicates will be designated by appending a "D" to the end of the sample ID. Pan splits will be identified by appending an "SP" to the end of the sample ID.

STATION ID: FM 0209

SAMPLE ID: FM 0209 A-CS

SAMPLE COLLECTION TIME: 1510

Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):

front yard

Collection: Composite or Grab

MS/MSD? Y or (N) CS-D

Field Duplicate or Split: Yes or No If yes, indicate Duplicate/split sample station ID: FM0209 A

GPS Coordinates: Trimble ☒ Instrument #: 020168 Logged? Y or N

Aliquot #1: Latitude: 33.57029606 N Longitude 86.80374882 W
Media description: Dark Brown Silty Soil

Aliquot #2: Latitude: 33.57031861 N Longitude 86.80375049 W
Media description: Dark Brown Silty Soil

Aliquot #3: Latitude: 33.57031637 N Longitude 86.80371555 W
Media description: Dark Brown Silty Soil & small coal pieces

Aliquot #4: Latitude: 33.57029186 N Longitude 86.80367351 W
Media description: Dark Brown Silty Soil & small coal fragments

Aliquot #5: Latitude: 33.57034085 N Longitude 86.80367346 W
Media description: Dark Brown Silty Soil & small coal fragments

STATION ID: FM 0209

SAMPLE ID: FM0209 B-CS

SAMPLE COLLECTION TIME: 1533

Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):

Side yard

Collection: Composite or Grab

MS/MSD? Y or (N)

Field Duplicate or Split: Yes or No If yes, indicate Duplicate/split sample station ID: FM0209 B

GPS Coordinates: Trimble ☒ Instrument #: 020168 Logged? Y or N

Aliquot #1: Latitude: 33.57030204 N Longitude 86.80361099 W
Media description: Dark brown silty soil

Aliquot #2: Latitude: 33.57030761 N Longitude 86.80354726 W
Media description: Dark brown silty soil

Aliquot #3: Latitude: 33.57038023 N Longitude 86.80357122 W
Media description: Dark brown silty soil + coal small fragments

Aliquot #4: Latitude: 33.57046111 N Longitude 86.80359312 W
Media description: Dark brown silty soil + coal small fragments

Aliquot #5: Latitude: 33.57046697 N Longitude 86.80354544 W
Media description: Dark brown silty soil + coal small fragments

ADDRESS: (b) (6) PROPERTY ID: Fm 0009
DATE: 11/13/2012 ARRIVAL TIME: 1415

Other pertinent information (weather conditions, etc.):

Refer to Page 6

PROPERTY COMMENTS:

Refer to page 6

Grid for property sketch

Same
Refer to Page 6

FM 0209

STATION ID:

~~FM 0209~~

SAMPLE ID:

FM009C-ES

SAMPLE COLLECTION TIME:

Back yard 1545

Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):

Collection: Composite or GrabMS/MSD? Y or N

Field Duplicate or Split:

Noor No

If yes, indicate Duplicate/split sample station ID:

~~FM009C-ES~~GPS Coordinates: Trimble [☒] Instrument #: 020168

Logged? Y or N

Aliquot #1: Latitude: 33.57054578 N Longitude 86.80370562 W

Media description: dark brown silty soil

Aliquot #2 Latitude: 33.5705149 N Longitude 86.80377468 W

Media description: dark brown silty soil

Aliquot #3: Latitude: 33.57057536 N Longitude 86.80374319 W

Media description: dark brown silty soil

Aliquot #4: Latitude: 33.57060917 N Longitude 86.80369450 W

Media description: dark brown silty soil

Aliquot #5: Latitude: 33.57060734 N Longitude 86.80374934 W

Media description: dark brown silty soil

STATION ID:

FM 0209

SAMPLE ID:

FM 0209D-G

SAMPLE COLLECTION TIME:

1537

Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):

Drainage

Collection: Composite or GrabMS/MSD? Y or N

Field Duplicate or Split:

Noor No

If yes, indicate Duplicate/split sample station ID:

~~FM009C-ES~~GPS Coordinates: Trimble [☒] Instrument #: 020168

Logged? Y or N

Aliquot #1: Latitude: 33.57054414 N Longitude 86.80355387 W

Media description: orange clay + silty soil dark brown

Aliquot #2 Latitude: N Longitude W

Media description:

Aliquot #3: Latitude: N Longitude W

Media description:

Aliquot #4: Latitude: N Longitude W

Media description:

Aliquot #5: Latitude: N Longitude W

Media description:

(b) (6)

ADDRESS: _____ PROPERTY ID: _____

DATE: 11/14/12 ARRIVAL TIME: 0855

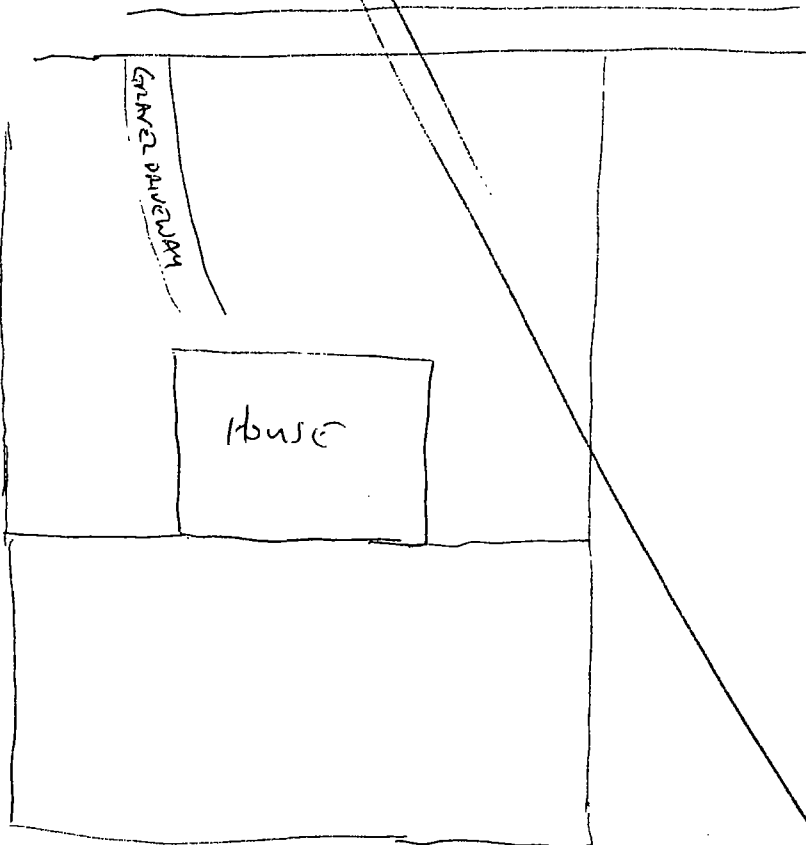
Other pertinent information (weather conditions, etc.):

cloudy 44°F

PROPERTY COMMENTS:

1

Grid for property sketch



STATION ID: _____ SAMPLE ID: _____

SAMPLE COLLECTION TIME: _____

Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):

Collection: Composite or Grab

MS/MSD? Y or N

Field Duplicate or Split: Yes or No If yes, indicate Duplicate/split sample station ID: _____

GPS Coordinates: Trimble [] Instrument #: _____ Logged? Y or N

Aliquot #1: Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #2 Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #3: Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #4: Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #5: Latitude: _____ N Longitude _____ W

Media description: _____

STATION ID: _____ SAMPLE ID: _____

SAMPLE COLLECTION TIME: _____

Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):

Collection: Composite or Grab

MS/MSD? Y or N

Field Duplicate or Split: Yes or No If yes, indicate Duplicate/split sample station ID: _____

GPS Coordinates: Trimble [] Instrument #: _____ Logged? Y or N

Aliquot #1: Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #2 Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #3: Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #4: Latitude: _____ N Longitude _____ W

Media description: _____

Aliquot #5: Latitude: _____ N Longitude _____ W

Media description: _____

ADDRESS:

PROPERTY ID:

FMØ210

DATE: _____

DATE: 01/14/12

ARRIVAL TIME:

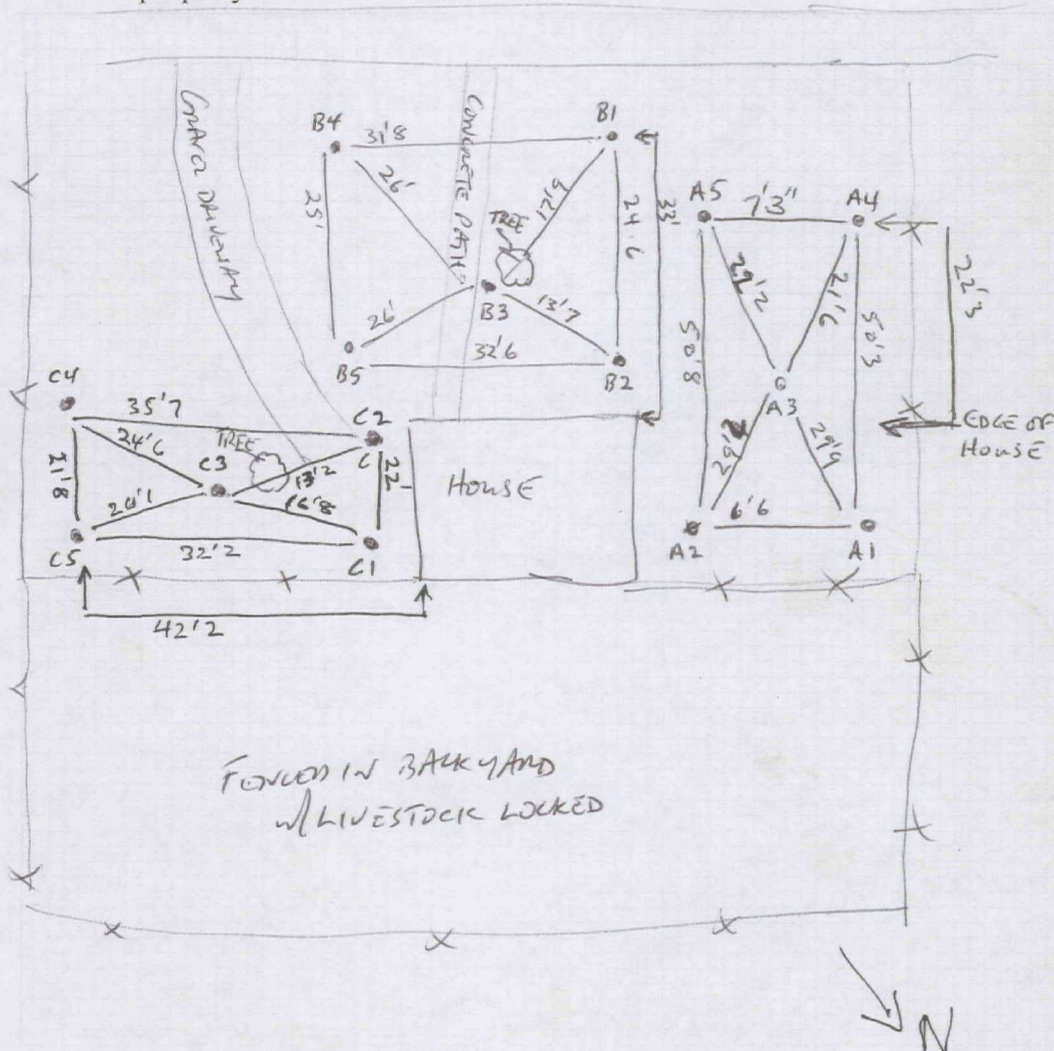
0855

Cloudy 44°F

PROPERTY COMMENTS:

BACK YARD FENCED IN AND LOADED W/ DUES + LIVESTOCK (FREE RANGE)

Grid for property sketch



STATION ID: Fm0210ASAMPLE ID: Fm0210A-CSSAMPLE COLLECTION TIME: 0919Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):GRASS FAIRLY FLAT, NO OBSERVED DRAINAGE PATTERNSCollection: Composite or GrabMS/MSD? Y or (N)Field Duplicate or Split: Yes or (No) If yes, indicate Duplicate/split sample station ID: _____GPS Coordinates: Trimble ☒ Instrument #: 020168Logged? (Y) or NAliquot #1: Latitude: 33.57044691 N Longitude: 86.80350869 WMedia description: DK BWN, CL w/SLT, DMP w/COAL FRAGMENTSAliquot #2 Latitude: 33.57044683 N Longitude: 86.80350001 WMedia description: DK BWN, CL w/SLT, DMP w/COAL FRAGMENTS

Aliquot #3: Latitude: _____ N Longitude: _____ W

Media description: DK BWN, CL w/SLT, DMP w/COAL FRAGMENTS

Aliquot #4: Latitude: _____ N Longitude: _____ W

Media description: ORG CL w/SLT, DMP w/COAL FRAGMENTS

Aliquot #5: Latitude: _____ N Longitude: _____ W

Media description: ORG CL w/SLT, DMP w/COAL FRAGMENTSSTATION ID: Fm0210BSAMPLE ID: Fm0210B-CSSAMPLE COLLECTION TIME: 0950Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):GRASS SLOPED TO HOUSE, NO OBSERVED DRAINAGE PATTERNSCollection: Composite or GrabMS/MSD? Y or (N)Field Duplicate or Split: Yes or (No) If yes, indicate Duplicate/split sample station ID: _____GPS Coordinates: Trimble ☒ Instrument #: 020168

Logged? Y or N

Aliquot #1: Latitude: 33.57027839 N Longitude: 86.80347337 WMedia description: BWN, ^{J.P.} ~~SLT~~ w/CLAMP CL w/SLT, DMPAliquot #2 Latitude: 33.57034459 N Longitude: 86.80345724 WMedia description: BWN TO ORG CL w/SLT, DMPAliquot #3: Latitude: 33.57031119 N Longitude: 86.80343152 WMedia description: DK BWN, CL w/SLT, DRYAliquot #4: Latitude: 33.57027903 N Longitude: 86.80335418 WMedia description: DK BWN, CL w/SLT, DMP w/COAL FRAGMENTSAliquot #5: Latitude: 33.57034415 N Longitude: 86.80335899 WMedia description: DK BWN, CL w/SLT, DMP w/COAL FRAGMENTS

PERSONNEL AIR MONITORING - ST: 0855-1030

DATA TEAM - ST: 0855-1030

LAT - 33.57033802

LONG - 86.80334449

ADDRESS: _____ PROPERTY ID: _____

DATE: _____ ARRIVAL TIME: _____

Other pertinent information (weather conditions, etc.):

PROPERTY COMMENTS:

Grid for property sketch

STATION ID: Fm0210C SAMPLE ID: Fm0210C-CS

SAMPLE COLLECTION TIME: 1015

Description of sample location (front, back, side yard, vegetable garden; play set; ditch, etc):

GRASS FARM FLAT

Collection: Composite or Grab

MS/MSD? Y or N

Field Duplicate or Split: Yes or No If yes, indicate Duplicate/split sample station ID: _____

GPS Coordinates: Trimble <input checked="" type="checkbox"/> Instrument #: <u>020168</u> Logged? <input checked="" type="checkbox"/> or N	
Aliquot #1: Latitude: <u>33.57045349</u>	N Longitude <u>86.80337209</u> W
Media description: <u>DK BWN CL w/SLT, DRY w/COAL FRAGMENTS</u>	
Aliquot #2 Latitude: <u>33.57041411</u>	N Longitude <u>86.80336441</u> W
Media description: <u>DK BWN, SANDY CL, DRY w/COAL FRAGMENTS</u>	
Aliquot #3: Latitude: <u>33.57042716</u>	N Longitude <u>86.80333084</u> W
Media description: <u>DK BWN, CL w/SLT, DRY w/COAL FRAGMENTS</u>	
Aliquot #4: Latitude: <u>33.57046425</u>	N Longitude <u>86.80326249</u> W
Media description: <u>DK BWN, CL w/SLT, DRY w/COAL FRAGMENTS</u>	
Aliquot #5: Latitude: <u>33.57040294</u>	N Longitude <u>86.80326678</u> W
Media description: <u>DK BWN, CL w/SLT, DRY w/COAL FRAGMENTS</u>	

STATION ID: _____ SAMPLE ID: _____

SAMPLE COLLECTION TIME: _____

Description of sample location (front, back, side yard; vegetable garden; play set; ditch, etc):

Collection: Composite or Grab

MS/MSD? Y or N

Field Duplicate or Split: Yes or No If yes, indicate Duplicate/split sample station ID: _____

GPS Coordinates: Trimble [] Instrument #: _____ Logged? Y or N	
Aliquot #1: Latitude: _____	N Longitude _____ W
Media description: _____	
Aliquot #2 Latitude: _____	N Longitude _____ W
Media description: _____	
Aliquot #3: Latitude: _____	N Longitude _____ W
Media description: _____	
Aliquot #4: Latitude: _____	N Longitude _____ W
Media description: _____	
Aliquot #5: Latitude: _____	N Longitude _____ W
Media description: _____	

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