REMEDIATION WORK PLAN

The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana 46721
BFD #4170705

July 2020

Prepared for:

City of Butler
215 South Broadway Street
Butler, Indiana 46721

Indiana Brownfields Program
Indiana Finance Authority
100 North Senate Avenue, Room 1275
Indianapolis, Indiana 46204

ENVIRONMENTAL PROFESSIONAL STATEMENT

I certify, under penalty of law, that this document and all appendices and attachments as applicable were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience.

_____
Glen A Howard, CHMM
Senior Project Manager
SES Fort Wayne, IN

EXECUTIVE SUMMARY

This document serves as a remediation work plan (RWP) for addressing contaminants at the former *The Butler Company* property located at 325 South Broadway Street, Butler, DeKalb County, Indiana 46721 (hereinafter collectively referred to as the site). This RWP was prepared on behalf of the City of Butler, the Indiana Brownfields Program (IBP) and Indiana Finance Authority (IFA).

The City of Butler (City) will utilize brownfield funding (i.e., grant) from the U.S. EPA Region 5 and the Indiana Finance Authority (IFA) to conduct remediation of hazardous substances (lead contaminated soils) at the subject property, as well as asbestos abatement and chemical container removal and disposal. Cleanup will help revitalize approximately 3.5 acres of blighted property in downtown Butler, Indiana. The City intends to redevelop the property for commercial use.

Background Information

The site consists of a 3.55-acre property located at the northeast corner of South Broadway Street and East Willow Street, on the south side of the City of Butler, Indiana central business district. Railroad tracks border the site to the north, South Broadway Street is located to the west, and East Willow Street is located to the south. The area surrounding the site includes commercial businesses and residences.

The central and west portions are covered with concrete and brick debris associated with former building structures. Two buildings remain partially intact on the north and east portions. Remaining areas are covered with grass, trees, and scrub vegetation. Foundry slag was observed on the north-central and northeast portions of the site in the vicinity of a former foundry building. Piles of building debris covered the central and west portions of the site. The piles generally consist of brick, concrete, scrap wood and metal, wood pallets, and roof materials. Site observations also included a riveted steel exhaust stack on the central portion, 55-gallon drums, burn barrels, and plastic tote containers, and various small containers (<10 gallons) of chemicals.

Historical review indicates the site was first developed by The Butler Manufacturing Company in 1888. The property was sold in 1894 and was renamed “The Butler Company.” Expansions and reconfigurations occurred throughout the 1890’s as windmills, bicycles, buggies and mail wagons were manufactured on-site. An additional factory was built in 1906. A new foundry was built in 1918. Oil-bath style windmills were then constructed on-site. By the 1930s, The Butler Company site included a machine shop, foundry, paint shop, pipe shed, lumber shed, tin shop and storage building. A major fire destroyed the three-story storage building on the southwest portion of the site in 1958. The site was then used as a distributor of plumbing, heating, and cooling parts.

The building closest to the railroad tracks to the north of the property was used by the Carbola Chemical Company in approximately the late 1950’s and early 1960’s. The Butler Company continued as a jobber of electrical, plumbing, heating, cooling, and well drilling supplies until the facility was closed in 1997. The site was acquired by FSPI 401K Employee Profit Sharing Plan at a tax sale in 2012. A massive fire destroyed the site buildings on March 26, 2015. The City of Butler acquired the site via a tax sale in January 2020.

Environmental site assessments were conducted at the site between October 2017 and June 2019 and included Phase I and Phase II Environmental Site Assessments (ESAs). Phase I ESAs identified historical manufacturing operations and use of hazardous substances and petroleum products as a *recognized environmental condition* (REC). Other RECs included potential chlorinated solvent groundwater impact from an off-site source and oil tanks identified on historical maps/documents.

Phase II ESA screening investigations have included soil, groundwater, and vapor investigation, geophysical survey, asbestos and lead based paint surveys, and a chemical inventory of petroleum and/or hazardous substances remaining on site. Soil, groundwater, and vapor investigation consisted of advancing 30 soil borings throughout the site. Samples of surface fill material, native clay soil, perched water, and groundwater were collected and analyzed for VOCs, PAHs, RCRA 8 metals, copper, and zinc as a screening for contaminants of concern. Soil vapor was analyzed

for VOCs only. Investigation results indicate impact is limited to arsenic and lead within the fill material (0-4 feet) at concentrations exceeding industrial direct contact levels.

A geophysical survey was conducted to identify potential tanks or other subsurface structures. It should be noted; significant debris and metal objects on the ground throughout the facility limited the effectiveness of the survey. USTs were not identified during the survey. Several remnant subsurface utilities were identified including water and natural gas. A storm sewer catch basin was also located.

Asbestos and lead-based paint surveys were conducted on building materials within the debris piles, as well as accessible standing buildings. Asbestos containing materials (ACMs) were identified in the East Central Building debris pile and the North Building. ACMs included transite panels and tar roofing materials. The lead-based paint survey was conducted using an XRF field meter to determine the presence of lead on building materials. If present, a physical sample was collected for laboratory analysis. One sample of red paint from the door and door frame in the East Building exhibited a 1.8% by weight results (18,000 ppm).

A chemical inventory of petroleum and/or hazardous substances remaining on site was completed. Totes, drums, small containers (<10 gallons) of paints, dyes, and water filtration chemicals were identified during the inventory.

Constituents of Concern (COCs)

Investigation results indicate constituents of concern are limited to arsenic and lead in soil/fill; however, asbestos containing materials in the East Central Building debris pile and the North Building are identified as concerns, as well as the containerized chemicals and lead-based paint.

Focus COC Area

Soil barrier installation is proposed, and soil barrier installation is proposed at three areas where previous investigation results indicate lead and/or arsenic concentrations exceed *industrial direct contact screening levels*. The areas are also depicted on Figure 2 and soil barrier construction has been selected to isolate the following three areas.

- **Area 1)** Lead contamination at southwest portion of site at sampling locations BC-GP-3- SS1 (1-2) and BC-GP3-S10 (1-2).
- **Area 2)** Arsenic contamination at east central portion of site at sampling locations BC-GP7-SS1 (1-2), BC-GP-8-SS1 (2-3) and BC-GP14-SS1 (0.5-1.5).
- **Area 3)** Arsenic and lead contamination at northeast portion of site at sampling locations BC, BC-GP16-E10 (1-2), and BC-GP-16-W5 (1-2).

Potential Exposure Assessment

Constituents of concern have been documented in near surface soils/fill at levels that pose an exposure risk for visitors, trespassers, and/or transient site workers and maintenance personnel. Ingestion or inhalation of wind-blown dust particles and surface runoff/erosion/soil washing migration to offsite areas and/or storm sewers are also identified as potential concerns. A *Freshwater Forested/Shrub Wetland* extends onto the northeast portion of the site and this area may be a potentially susceptible ecological area and habitat for animal species. Inhalation of asbestos is another potential exposure pathway and chemical containers and lead-based paint should be removed/disposal to eliminate exposure hazards.

Future Land Use

The site is currently characterized as a fire-damaged property. The City of Butler intends to redevelop the property for commercial use.

Proposed Remedial Approach

Based on the identified contaminants and concentrations, as well as inferred distribution of constituents of concern and the potential exposure risk to human health and the environment, soil barrier installation is proposed, and soil barrier installation is proposed at three areas where previous investigation results indicate lead and/or arsenic concentrations exceed *industrial direct contact screening levels*.

Site work will also include the removal and offsite disposal of fire damaged debris/structures by City personnel with hazardous materials awareness training, the disposal of red colored lead-based paint during demolition under the supervision of SES, the removal/disposal of asbestos by a licensed abatement contractor, and the removal/disposal of chemical containers under the supervision of a CHMM.

Groundwater monitoring is also proposed to confirm contaminants in soil have not leached to groundwater. Finally, a risk-based environmental remedy is anticipated to address any residual contaminants in soil/fill pursuant to the *BFF Comfort Letter* and *Environmental Restrictive Covenant (ERC)* issued in IBP correspondence dated January 18, 2019. SES anticipates IBP will prepare a revised ERC following implementation and completion of this RWP.

Schedule

Regulatory approval of this RWP is requested to initiate remediation of this site. RWP implementation is estimated to require at least 14 months.

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1.0 INTRODUCTION

This document serves as a remediation work plan (RWP) for addressing contaminants at the former *The Butler Company* property located at 325 South Broadway Street, Butler, DeKalb County, Indiana 46721 (hereinafter collectively referred to as the site). This RWP was prepared on behalf of the City of Butler, the Indiana Brownfields Program (IBP) and Indiana Finance Authority (IFA).

The City of Butler (City) will utilize brownfield funding (i.e., grant) from the U.S. EPA Region 5 and the Indiana Finance Authority (IFA) to conduct remediation of hazardous substances (lead contaminated soils) at the subject property, as well as asbestos abatement and chemical container removal and disposal. Cleanup will help revitalize approximately 3.5 acres of blighted property in downtown Butler, Indiana. The City intends to redevelop the property for commercial use.

The plan begins by providing a summary of site conditions and previous environmental investigation conducted between October 2017 and June 2020. This discussion is followed by details concerning contaminant characteristics, distribution, and potential exposure scenarios. The plan concludes by presenting details concerning the remediation approaches chosen for the site. All figures referenced in the text are located together at the conclusion of the report. Project supporting information is provided in the Appendices.

1.1 Project Identification

The site consists of a 3.55-acre fire-damaged property. The central and west portions are covered with concrete and brick rubble associated with former building structures. Two buildings remain partially intact on the north and east portions. Remaining areas are covered with grass, trees, and scrub vegetation. The City of Butler acquired the site via a tax sale in January 2020. Contact information for involved parties are as follows:

Owner	**Indiana Brownfields / Indiana Finance Authority**	**Consultant**
City of Butler	Indiana Brownfields / Indiana Finance Authority	SES Environmental
215 South Broadway Street	100 North Senate Avenue, Suite 1275	3807 Transportation Drive
Butler, IN 46721	Indianapolis, IN 46204	Fort Wayne, IN 46818
Mike Hartman, Mayor	Tracey Michael, Project Manager	Glen A. Howard, Project Manager
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1.2 Overview of COC Distribution and Cleanup Approach

Environmental site assessments were conducted at the site between October 2017 and June 2019 and included Phase I and Phase II Environmental Site Assessments (ESA). Phase I ESAs identified historical manufacturing operations and use of hazardous substances and petroleum products as a recognized environmental condition (REC). Other RECs included potential chlorinated solvent groundwater impact from an off-site source and oil tanks identified on historical maps/documents. The Phase II ESA identified surface fill material with barium, cadmium, chromium, copper, lead, zinc, and mercury concentrations being evidence of contamination that poses a concern.

Subsequent Phase II ESA investigation in May and June 2019 included soil, groundwater, and vapor investigation, geophysical survey, asbestos and lead based paint surveys, and a chemical inventory of petroleum and/or hazardous substances remaining on site. Soil, groundwater, and vapor investigation consisted of advancing 30 soil borings throughout the site. Samples of surface fill material, native clay soil, perched water, and groundwater were collected and analyzed for VOCs, PAHs, RCRA 8 metals, copper, and zinc as a screening for contaminants of concern. Soil vapor was analyzed for VOCs only. Investigation results indicate impact was limited to arsenic and lead within the fill material (0-4 feet) at concentrations exceeding *industrial direct contact levels*.

A geophysical survey was conducted during the 2019 investigation to identify potential tanks or other subsurface structures. It should be noted, significant debris and metal objects on the ground throughout the facility limited the effectiveness of the survey. USTs were not identified during the survey. Several remnant subsurface utilities were identified including water and natural gas. A storm sewer catch basin was also located.

A site inspection was completed in May 2020. Asbestos and lead-based paint surveys were conducted on building materials within the debris piles, as well as accessible standing buildings. Asbestos containing materials (ACMs) were identified in the East Central Building debris pile and the North Building. ACMs included transite panels and tar roofing materials. The lead-based paint survey was conducted using an XRF field meter to determine the presence of lead on building materials. If present, a physical sample was collected for laboratory analysis. One sample of red paint from the door and door frame in the East Building exhibited a 1.8% by weight results (18,000 ppm). A chemical inventory of petroleum and/or hazardous substances remaining on site was completed. Totes, drums, small containers (<10 gallons) of paints, dyes, and water filtration chemicals were identified during the inventory. Small containers were inventoried as a 'lab pack' for potential disposal at a Tradebe disposal facility. Universal wastes and larger containers were also inventoried, and profiles were prepared. Totes containing sand/sludge filtration material were observed inside and outside of the north building. Representative samples of the materials were obtained (one sample inside and one sample outside) for laboratory analysis and profiling purposes.

SES anticipates the removal and offsite disposal of fire damaged debris/structures, asbestos transite panels and roofing tar, and chemical containers. Clean soils (soil barrier) will be applied over three areas of lead and/or arsenic impacted soils/fill to prevent direct contact with the contaminants. The soils selected for barrier construction will be screened for potential contaminants (VOCs, SVOCs, and RCRA eight metals). SES also anticipates that groundwater monitoring would confirm contaminants in soil have not leached to groundwater. Finally, a risk-based environmental remedy is anticipated to address any residual contaminants in soil/fill pursuant to the *BFF Comfort Letter* and *Environmental Restrictive Covenant (ERC)* issued in IBP correspondence dated January 18, 2019. SES anticipates IBP will prepare a revised ERC following implementation and completion of this RWP.

2.0 GENERAL BACKGROUND INFORMATION

This section provides general information concerning local and site-specific conditions. This information was obtained from published sources and site reconnaissance.

2.1 Site Location and Setting

The site consists of one land parcel located at 325 South Broadway Street, Butler, DeKalb County, Indiana and identified by the DeKalb County Assessor's Offices as Parcel ID 23-07-12-109-001. Geographically, the site is located at approximately 41.4267450° north latitude and 84.8704460° west longitude. An abbreviated legal description of the site obtained from DeKalb County Assessor's Office is as follows:

> 3.55 Acres in the Mid Part of the West ½ of the Northwest ¼ of Section 12, Township 34 North, Range 14 East, Wilmington Township, DeKalb County, Indiana.

The elevation of this site is approximately 870 feet above mean sea level as shown on the Butler East, Indiana USGS 7.5-Minute Quadrangle Map. A Topographic Map and Site Area Map are presented as Figures 1 and 2, respectively.

2.2 Surrounding Population and Land Use

The area surrounding the site includes commercial businesses and residences. Railroad tracks are located north of the site with a laundry and carwash facility beyond. A bulk petroleum storage facility is located east of the site. What appear to be empty aboveground storage tanks (ASTs) and drums are stored on the west portion of this property. Bulk petroleum ASTs are located in secondary containment on the east portion of the property, approximately 250 feet from the site. East Willow Street is located south of the site with residences beyond. South Broadway Street is located west of the site with the Butler Public Library and Hathaway Park beyond.

2.3 Site and Site History

The central and west portions are covered with concrete and brick debris associated with former building structures. Two buildings remain partially intact on the north and east portions. Remaining areas are covered with grass, trees, and scrub vegetation. Foundry slag was observed on the north-central and northeast portions of the site in the vicinity of a former foundry building. Piles of building debris covered the central and west portions of the site. The piles generally consist of brick, concrete, scrap wood and metal, wood pallets, and roof materials.

Historical review indicates the site was first developed by The Butler Manufacturing Company in 1888. The initial building was constructed in late 1888 and was used for manufacturing windmills. A second building was constructed in 1892. The property was sold in 1894 and was renamed "The Butler Company." Expansions and reconfigurations occurred throughout the 1890's as windmills, bicycles, buggies and mail wagons were made on-site.

An additional factory was built in 1906. A new foundry was built in 1918. Oil-bath style windmills were then constructed on-site. By the 1930s, The Butler Company site included a machine shop, foundry, paint shop, pipe shed, lumber shed, tin shop and storage building. The production of windmills ceased in 1943 when the Company went into World War II production.

A major fire destroyed the three-story storage building on the southwest portion of the site in 1958. The site was then used as a distributor of plumbing, heating, and cooling parts. The building closest to the railroad track to the north of the property was used by the Carbola Chemical Company in approximately the late 1950's and early 1960's.

The Butler Company continued as a jobber of electrical, plumbing, heating, cooling, and well drilling supplies until the facility was closed in 1997.

FSPI 401K Employee Profit Sharing Plan, acquired the site at a tax sale in 2012 and subsequently sold the property on a land contract to an individual, Mr. Tom Estes, who planned to use the facility for manufacturing prefab storage buildings. A massive fire destroyed the site buildings on March 26, 2015.

The City of Butler acquired the site via a tax sale in January 2020.

2.4 Surface Waters

Surface drainage at the site is directed to storm drains along South Broadway Street to the west and toward a low-lying wooded area northeast of the site. The nearest surface-water feature to the site is Big Run located approximately ¾ mile to the northeast. Two ponds are located along Big Run, approximately one mile to the northeast. A stream identified as Mason Ditch is located approximately one mile to the southwest. The most significant surface water drainage feature is the St. Joseph River, located approximately four miles southeast of the site. The St. Joseph River is the largest surface water feature in the area and flows southwest.

Review of a FEMA Flood Insurance Rate Map (FIRM) indicates the site is located in Zone X, an area of minimal flood hazard. A copy of the FIRM is presented in Appendix E.

Surface water on the site or in its immediate vicinity is not a source of local drinking water. The site area receives water from the City of Butler.

2.5 Regional and Local Topography

The Butler area topography is generally flat to gently rolling with the site located near the northern limb of the Wabash Moraine, in an area of ground moraine (hill). As previously noted, the elevation of this site is approximately 870 feet above mean sea level as shown on the Butler East, Indiana USGS 7.5-Minute Quadrangle Map (Figure 1).

2.6 Subsurface Structures

Water and sewer services are provided to the site area by the City of Butler. Natural gas is provided to the site area by NIPSCO, and electricity is provided to the site by American Electric Power. Municipal buried utility mains are located beneath right-of-ways. Service lines extending to the fire damaged building structures have been vacated. However, an active 48-inch storm sewer main extends across the north portion of the site near the north property line. Known underground utilities are depicted on Figure 4.

2.7 Geology and Hydrogeology

2.7.1 Regional

A United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report for DeKalb County, Indiana, shows soil beneath the subject site is part of the Blount silt loam and Pewamo silty clay complexes. Details concerning the specific soil types identified on the site are provided in a custom soil report presented in Appendix A.

The site is located near the northern limb of the Wabash Moraine, in an area of ground moraine, characterized by till sediments. Wabash end moraine sediments (mostly till with ice contact and lake sediments) are located approximately two miles west of the site area. Valley train deposits (sand and gravel) associated with the St. Joseph River, are located approximately four miles to the southeast.

Based on a cross section presented in the Hydrogeologic Atlas of Aquifers in Indiana, soil in the Butler area consists predominantly of nonaquifer till material near the surface. Two, somewhat laterally continuous aquifers are encountered at approximately ninety and 120 feet beneath the surface. The shallower aquifer is approximately ten feet thick, and the lower aquifer appears to be at least forty feet thick. Discontinuous, near surface aquifer materials are sometimes present.

Depth to bedrock in the area is estimated to be 300 feet. Bedrock consists of Upper Devonian Antrim, and Lower Mississippian Ellsworth Shales.

Review of State of Indiana water well logs for wells located on the north and west adjacent properties indicates soil beneath the site are generally consists of clay from the near surface to depths ranging from 18 to 57 feet. The upper clay is underlain by alternating layers of sand, gravel, and clay to a depth of 148 feet (i.e. maximum depth explored). The static groundwater level in the site area ranges from approximately 21 to 24 feet.

Groundwater in the site area is obtained primarily from buried sand and gravel aquifers and carbonate bedrock aquifers. Buried sand and gravel aquifers are laterally continuous deposits that were formerly coalescing outwash fans, outwash plains, kame terraces and other ice-contact stratified deposits. The aquifer characteristics are highly variable because of the different depositional environments of these deposits. Aquifers in the site area include deep, relatively narrow to very wide wedge- or channel-like bodies that commonly extend from the intersequence horizon or upper part of the Trafalgar Formation to the bedrock surface, and outwash aprons and channel deposits at the base of the Trafalgar Formation commonly deposited directly on the bedrock surface. Yields from wells finished in buried sand and gravel aquifers range from 20 gallons per minute to 500 gallons per minute. Water in these aquifers is of suitable quality for drinking.

The carbonate bedrock aquifers generally produce yields ranging from 35 gallons per minute to 500 gallons per minute. The full carbonate aquifer sequence is approximately 700 feet thick.

2.7.2 Site

A mixture of sand, clay, gravel, cinders, debris, and brick fragments was present at the surface of the site. This fill material extends to depths of approximately 3 to 9 feet, followed by clay that extended to a depth of at least 20 feet (depth of exploration). Sand seams are occasionally interspersed with the clay and where present yielded groundwater. Perched water was occasionally present in the fill material. Groundwater flow beneath the site was determined based on groundwater elevations from the temporary wells to flow to the south-southeast (Figure 6). The groundwater present beneath the site appears to be located within sandy unconsolidated sediments at depths ranging from approximately 19.63 feet bgs (BC-GP11) to approximately 21.18 feet bgs (BC-GP14).

Debris piles and foundry material, including slag is known to be distributed throughout the site and interspersed with fill material that extends to depths of four feet. The surface debris piles are depicted on Figure 3. The inferred thickness of fill material /foundry material is shown on Figure 4 (green blocked data).

2.8 Location and Usage of Water Wells

The Phase II ESA Report dated July 31, 2019 and the IDEM Wellhead Proximity Determinator website (https://idemmaps.idem.in.gov/whpa2/) indicate the site is located inside a Wellhead Protection Area (Appendix B). According to the Indiana Department of Natural Resources (IDNR) Water Well Record Database (http://www.in.gov/dnr/water/3595.htm) thirty-four (34) mixed use water wells were identified within a 1-mile radius of the Site. Two (2) significant withdrawal (>70 gallons per minute) wells owned by the City of Butler Water Department are used for public supply wells and are shown as being located across South Broadway Street, approximately 290 feet west of the Site. Other mixed-use water wells are located in close proximity to the Site as shown on the 1-Mile Radius Water Well Map included in Appendix B. Well Reference No. 107441 is a high capacity well (1,150 gallons per minute), installed at a depth of 147 feet bsg, and located approximately 290 feet west of the Site. Well Reference No. 107430 is a high capacity well (1000 gallons per minute), installed at a depth of 144 feet bsg, and located approximately 430 feet west of the Site. There are six (6) wells identified on the map (Well Reference Nos. 107360, 107415, 107430, 107441, 107471, and 232269) shown being located within a 0.25-mile radius of the Site. The available well logs for the six (6) wells identified are provided in Appendix B.

2.9 Future Land Use

As previously noted, the site is currently characterized as a fire-damaged property. The City of Butler intends to redevelop the property for commercial use.

2.10 Susceptible Area Evaluation

Geologically susceptible areas (e.g., surface-water bodies, karstic bedrock areas, etc.) have not been identified at or immediately surrounding the site. The nearest surface-water feature to the site is Big Run located approximately ¾ mile to the northeast. A *Freshwater Forested/Shrub Wetland* extends onto the northeast portion of the site and this area may be a potentially susceptible ecological area and habitat for animal species.

Potentially susceptible community areas located adjacent to the site include residences to the south and recreation to the west. SES notes that offsite contamination is not known to be present. The following table describes the nearest potentially susceptible facilities to the site.

Table 1. Surrounding Land Use
325 South Broadway Street, Butler, Indiana

Facility Type	Address	Distance from Site (miles)
Residences	401 South Broadway Street, 108 East Willow Street, and 116 East Willow Street	Adjacent - south
Church – Butler Church of Christ	173 West Oak Street, Butler	1000 feet northwest
Retirement – Laurels of Dekalb	520 West Liberty Street, Butler	1-mile northwest
Park/Recreation – library and ball diamonds	340 South Broadway Street, Butler	Adjacent - west
Day Care – Butler Day Care Inc.	408 East Washington Street, Butler	0.6 mile - northeast
School – Eastside Jr-Sr High School	603 East Green Street, Butler	0.7 mile – northeast
School – Butler Elementary	1025 South Broadway Street, Butler	0.7 mile - south
Hospital – Dekalb Memorial	1316 East 7th Street, Auburn	6 miles - southwest

Source: Directions – Bing Maps

2.11 Constituents of Concern (COCs)

Investigation results indicate constituents of concern are limited to arsenic and lead in soil/fill; however, asbestos containing materials are identified as concerns, as well as the containerized chemicals and lead-based paint. The Phase II ESA Report dated July 31, 2019 reported the following soil and groundwater conditions:

"Each of the RCRA 8 metals including copper and zinc, except silver, were detected above their respective laboratory reporting limits (LRLs) in soil samples analyzed from the site. Arsenic and lead were each detected in excess of their respective RCG Res MTGSLs, RDCSLs, and/or IDCSLs in several soil samples. Due to the elevated concentration of lead detected in BC-GP3-SS1 (1-2'), TCLP lead analysis was performed on the sample. The resulting 30.6 mg/L lead detection in the leachate reveals that the lead is leachable in the vicinity of the BC-GP3 and BC-GP16 borings. The three (3) soil samples exhibiting the highest concentrations of total chromium were also submitted for analysis of Cr (VI). The results indicate that Cr VI is not present in soil at concentrations exceeding its IDEM RCG RDCSLs. No VOCs, PAHs, or PCBs were detected at concentrations exceeding their respective IDEM RCG Res MTGSLs in any soil sample. The PFAS Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) were detected in some of the samples ranging between 0.46 and 0.61 µg/kg."

"Multiple total RCRA 8 metals including copper and zinc were detected in groundwater samples; however, only barium, cadmium, and zinc were detected in the laboratory-filtered dissolved RCRA 8 metals groundwater samples. No metals detections exceeded their respective IDEM RCG Res TAP GWSLs. No VOCs, PAHs, or PCBs were detected at concentrations exceeding their respective IDEM RCG Res TAP GWSLs in any groundwater sample. PFAS compounds were detected in groundwater samples collected from BC-GP12 and/or BC-GP13 ranging from between 3.0 and 23 ng/L. Total PFAS ranged from 30.3 to 48.6 ng/L in BC-GP12 and BC-GP13, respectively."

2.12 Potential Exposure Evaluation

Constituents of concern have been documented in near surface soils/fill at levels that pose an exposure risk for visitors, trespassers, and/or transient site workers and maintenance personnel. Ingestion or inhalation of wind-blown dust particles and surface runoff/erosion/soil washing migration to offsite areas and/or storm sewers are also identified as potential concerns. A *Freshwater Forested/Shrub Wetland* extends onto the northeast portion of the site and this area may be a potentially susceptible ecological area and habitat for animal species. Inhalation of asbestos is another potential exposure pathway and chemical containers and lead-based paint should be removed/disposal to eliminate future exposure hazards.

3.0 PREVIOUS INVESTIGATIONS

The following provides a summary of investigation information that has been reproduced from the following previous reports. Soil boring logs are provided in Appendix C. Data compilation tables are provided in Appendix D.

- SES Environmental, November 10, 2017, *Phase I Environmental Site Assessment*
- SES Environmental, June 13, 2018, *Phase II Environmental Screening Report*
- SES Environmental, October 2018, *Phase I Environmental Site Assessment*
- SES Environmental, January 2019, *Analysis of Brownfield Cleanup Alternatives*
- SES Environmental, April 10, 2020, *Health and Safety Plan*
- SES Environmental, April 24, 2020*, Sampling and Analysis Plan*
- SES Environmental, June 8, 2020, *Field Activity Report*
- *IDEM,* January 18, 2019, *BFPP Comfort Letter and Institutional Controls*
- *IWM* Consulting Group, July 31, 2019, *Phase II Environmental Site Assessment Report*

3.1 Phase I Environmental Site Assessment – November 2017

SES Environmental (SES) conducted Phase I Environmental Site Assessment (ESA) between October and November 2017. The ESA included a visual inspection of the site and limited observations of surrounding properties, a review of historic land use, a review of regulatory listings, and interviews with persons potentially knowledgeable concerning site conditions. SES identified the following *recognized environmental conditions* (RECs) associated with the site:

REC#1 Historic manufacturing operations conducted at the site from at least 1898 until 1997 included a machine shop, painting and varnishing shops, plating, a foundry, and a chemical company. Hazardous substances and petroleum products including but not limited to oil, petroleum fuels, solvents, and/or metals were likely stored and used at the site. The potential exists of releases of hazardous substances or petroleum products to have occurred during the long history of manufacturing operations at the site.

REC#2 During investigation of a petroleum release at the east adjacent bulk plant, chlorinated solvents including trichloroethylene (TCE) were detected in a groundwater sample obtained approximately 200 feet east of the site. While IDEM issued "No Further Action" status to the petroleum release, the source and extent of chlorinated solvent impact in groundwater was not determined.

REC#3 Evidence of underground storage tanks was not observed during the site inspection; however, a 10-barrel buried oil tank is depicted on the central portion of the site on a historical map from 1897, a gasoline tank is shown on the northeast portion of the site on a map from 1914, and a gasoline tank is shown west of the site beneath South Broadway Street on a map from 1923.

Based on the ESA findings, SES recommended a Phase II ESA to evaluate the identified RECs.

3.2 Screening Investigation – June 2018

A Phase II environmental screening investigation was conducted in May 2018 to further assess soil and groundwater conditions and to screen for contaminants of concern. The screening investigation consisted of advancing seven soil borings within and around former manufacturing buildings/areas. Boring locations are identified as 'A' through 'G' on Figure 4. Samples were collected at each boring location and analyzed for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs) and metals. A sample of black peat-like material was also analyzed for polychlorinated biphenyls (PCBs). Collectively, borings were used to evaluate overall site conditions. Screening results are summarized as follows:

- A mixture of sand, clay, gravel, cinders, debris, and brick fragments was present at the surface. At boring C, paint debris and chips were observed. This fill material extended to depths of approximately 3 to 9 feet, followed by clay that extended to a depth of at least 20 feet (depth of exploration).
- Sand seams were occasionally interspersed with the clay and where present yielded groundwater, except at boring A. Perched water was also observed in the fill material. Groundwater flow direction was not assessed.
- Field evidence of contamination such as elevated PID responses and/or black staining was associated with the fill material. PID responses associated with the fill material generally ranged between 2 and 8 ppmv; however, PID responses ranged up to 56 ppmv at boring B.
- Volatile organic compounds (VOCs) were not detected in soil samples or the fill sample. Polychlorinated biphenyls (PCBs) were not detected in the collected peat-like material sample. Polycyclic aromatic hydrocarbons (PAHs) were not detected in soil or fill samples, except for a trace concentration of benzo(a)pyrene in fill at boring C. The detected benzo(a)pyrene concentration did not exceed any *residential* or *commercial/industrial remediation screening level.*
- Metals including barium, chromium, copper, lead, and zinc were detected in clay soil samples. These metals are known to occur naturally in soils and detected concentrations in clay soil samples did not exceed any *residential* or *commercial/industrial remediation screening level.*
- Metals including barium, cadmium, chromium, copper, lead, zinc, and mercury were detected in surface fill samples. The lead concentration in surface fill at boring A exceeded the *migration to groundwater screening level* but did not exceed *direct contact screening levels.* The lead concentration in near surface fill at boring C was 7,160 mg/kg and exceeded *remediation screening levels* that range from the most conservative 270 mg/kg to 1,000 mg/kg. Cadmium and mercury were also detected in the surface fill at boring C, along with paint chips and a potentially elevated chromium concentration. The chromium concentrations in the BC and BH samples ranged between 56 and 249 mg/kg, while the maximum concentration in all other samples was 14 mg/kg. The duplicate sample collected at boring C exhibited barium, cadmium, copper, and lead concentrations exceeding *remediation screening levels.*
- Volatile organic compounds (VOCs) were not detected in perched water or groundwater samples. Polycyclic aromatic hydrocarbons (PAHs) were not detected in perched water or groundwater samples. Metals including barium, chromium, copper, lead, and/or zinc were detected in groundwater samples. The total lead concentration in groundwater samples D and E exceeded the *tap water screening level.* However, dissolved lead was not detected in these samples.
- Metals including barium, cadmium, chromium, copper, lead, selenium, and zinc were detected in perched water samples. The total lead, selenium, copper, and/or zinc concentrations exceeded *tap water screening levels.* However, dissolved metal concentrations did not exceed *tap water screening levels.*

This screening found no evidence of chlorinated solvent contamination and no further assessment of REC #2 was recommended. The screening found no evidence of petroleum contamination (REC #3); however, this screening investigation did not rule-out the possibility of localized petroleum contamination at historical buried tank areas.

With respect to the various metals detected in native clay soil and groundwater during this screening investigation, metal concentrations in native soil were well below *residential screening levels* and dissolved metals were not detected in groundwater. Based on this firm's review of native clay soil and groundwater testing results, these detected metals are consistent with naturally occurring concentrations, and therefore do not pose

a concern and no further inquiry is recommended, at this time. If a higher level of confidence is required, background samples and permanent monitor wells would need to be collected and installed to statistically establish naturally occurring metal concentrations.

With respect to metals in surface fill material, which appears to be distributed over most of the site, the barium, cadmium, chromium, copper, lead, zinc, and mercury concentrations are evidence of contamination that poses a concern. SES recommended establishing *remediation objectives,* and conducting additional investigation to characterize the fill material, extent of metals (in solids and perched water), and potential exposure pathways.

3.3 Phase I Environmental Site Assessment – October 2018

SES conducted another Phase I Environmental Site Assessment (ESA) between September and October 2018 in preparation of a USEPA grant and funding opportunity number EPA-OLEM-OBLR-18-07. The ESA included a visual inspection of the site and limited observations of surrounding properties, a review of historic land use, a review of regulatory listings, and interviews with persons potentially knowledgeable concerning site conditions. SES identified the following RECs associated with the site.

SES identified the following *recognized environmental conditions* (RECs) associated with the site during the completion of this Phase I ESA:

REC#1 Historic manufacturing operations conducted at the site from at least 1898 until 1997 included a machine shop, painting and varnishing shops, plating, a foundry, and a chemical company. Hazardous substances and petroleum products including but not limited to oil, petroleum fuels, solvents, and/or metals were likely stored and used at the site. Environmental investigation conducted in May 2018 found no evidence of petroleum or solvent contamination at the site; however, concentrations of metals, including barium, cadmium, chromium, copper, lead, zinc, and mercury, exceeded *remediation screening levels* in surface fill materials, which appeared to be distributed over most of the site.

REC#2 Evidence of underground storage tanks was not observed during the site inspection; however, a 10-barrel buried oil tank is depicted on the central portion of the site on a historical map from 1897, a gasoline tank is shown on the northeast portion of the site on a map from 1914, and a gasoline tank is shown west of the site beneath South Broadway Street on a map from 1923. Environmental investigation conducted in May 2018 found no evidence of petroleum contamination; however, the screening investigation did not rule-out the possibility of localized petroleum contamination at historical buried tank areas.

SES recommended additional environmental investigation to further evaluate the identified RECs.

3.4 Analysis of Brownfield Cleanup Alternatives

In preparation of a USEPA grant and funding opportunity number EPA-OLEM-OBLR-18-07, SES prepared an *Analysis of Brownfield Cleanup Alternatives* (ABCA). The ABCA outlined environmental cleanup alternatives that were evaluated to mitigate blight and facilitate potential redevelopment. The analysis included an evaluation of alternatives with respect to effectiveness and cost.

Remediation alternatives for metals in soil included (1) isolation, (2) immobilization, (3) physical separation, or (4) extraction. Each alternative is summarized below, along with conceptual application of isolation and extraction at the site. This *ABCA* determined that while there may be alternative for addressing contamination at this particular site; given the known conditions, extraction and isolation/soil barrier would be the most effective corrective action alternatives. And isolation/soil barrier appeared to be the most cost effective.

3.5 Comfort Letter

A comfort letter request package was issued to the Indiana Brownfield Program in October 2018 to confirm the City of Butler has an exemption of environmental liability. The request package included a *Phase I Environmental Site Assessment* dated October 2, 2018 and a *Phase II Environmental Screening Report* dated June 13, 2018.

On December 5, 2018, Mitchell Smith (IFA) requested an affected area map with the location of boring "B" being a corner of the western most and southern most extent of the area and the northeast point of the Site boundary being another corner. On December 26, 2018, Mr. Smith indicated the proposed Environmental Restrictive Covenant (ERC) for the site will state if the soil in the affected area is not removed it will need 2 feet of cover. A *BFF Comfort Letter* along with an ERC was issued in correspondence dated January 18, 2019.

3.6 IWM, Phase II Assessment – July 2019

"In accordance with the Indiana Brownfields Program (IBP) and United States Environmental Protection Agency (US EPA) approved Sampling and Analysis Plan (SAP) dated April 16, 2019, Industrial Waste Management Consulting Group, LLC (IWM Consulting) conducted a Phase II Environmental Site Assessment (Phase II ESA) of The Butler Company property located at 325 South Broadway Street in Butler, DeKalb County, Indiana (Site). The objective of the investigation was to determine the presence/absence, nature, and potential extent of contamination at the Site due to historical activities/operations. The environmental investigation was completed between May 15, 2019 and June 18, 2019."

"IWM Consulting conducted Phase II ESA field activities between May 15, 2019 and June 18, 2019. During the course of this assessment the following investigative activities were completed: A geophysical survey of the Site was completed by Ground Penetrating Radar Systems Inc. (GPRS), to identify potential buried underground storage tanks (USTs) and/or other buried objects that may pose an environmental risk to the Site. An asbestos survey of the building materials contained in debris piles (previously razed building structures) and the buildings still standing on the Site. A lead paint survey of the building materials contained in debris piles and the buildings still standing on the Site was performed with a hand-held X-ray fluorescence (XRF) analyzer. A chemical inventory of potential containerized petroleum and/or hazardous substances remaining on the Site was completed. Installation of nine (9) subsurface soil borings (BC-GP1 through BC-GP9) to depths of one (1) to two (2) feet beneath previously identified fill material at depths ranging from two (2) to seven (7) feet below surface grade (bsg). The collection and analysis of eighteen (18) soil samples from the fill and underlying clay material. Installation of six (6) subsurface soil borings (BC-GP10 through BC-GP15) at depths up to 20 feet bsg to collect soil and groundwater samples for analysis. Installation of fifteen (15) shallow soil borings to a depth of two (2) feet bsg to delineate lead impacts in near surface soils in the vicinity of BC-GP3 and SES Environmental (SES) boring location "BC". Groundwater was collected and analyzed from six (6) temporary groundwater monitoring wells installed in borings BC-GP10 through BC-GP15. Collection and analysis of five (5) soil and five (5) groundwater samples from BC-GP10, BC-GP11, BC-GP12, BC-GP13, and BC-GP14 for analysis of polyfluoroalkyl substances (PFOAs) and perfluoroalkyl substances (PFOS), collectively identified as PFAS, from areas of the Site possibly impacted from fire-fighting chemicals during previous fires at the Site. Installation of three (3) soil vapor probes adjacent to soil borings that displayed elevated vapor readings during field screening and the subsequent attempted collection of soil gas samples for laboratory analysis. A professional survey by Maxwell Surveying & Engineering to locate the horizontal position of subsurface boring locations and the horizontal and vertical location of the temporary monitoring wells."

- A geophysical survey was performed/attempted on the Site by GPRS on May 15, 2019 to determine the presence/absence of the USTs and/or product piping on the Site. Not all areas of the Site could be scanned due to interference from debris. No buried metallic objects were detected/identified; however, two (2) areas with relic utilities were identified.

- For asbestos-sampling purposes, due to the conditions of the buildings at the Site, building materials were divided into five (5) primary areas (West Central Building debris, East Central Building debris, Central Shed/Kiosk, North Building, and East Building). A total of thirty (30) bulk samples of suspect asbestos-containing materials (ACMs) from each homogeneous area were collected in accordance with the requirements of 40 CFR 763.86. The suspect ACM samples included roofing materials, brick façade mortar, electrical wire insulation, transite-like panels, fire brick mortar, fire brick, window sealant, and electrical board paper backing. Roofing material samples from several locations contained between <1 and 5% chrysotile. Two (2) transite panel samples (BC-AB13 and BC-AB14) collected from the East Central Building exhaust stack debris contained 15-20% chrysotile. One (1) friable sample of paper backing (BC-AB21) collected from an electrical panel located near the East Central Building stack debris contained 40% chrysotile.

- IWM Consulting collected one (1) representative paint chip sample from the building near the east Site boundary, where the XRF instrument indicated a positive reading (>1.0%). The paint chip sample (red paint) was collected from the doorframe on the east side of the building and had a lead concentration of 18,000 parts per million (ppm), or 1.8 percent by weight.

- Several containerized chemicals including paints, dyes, and water treatment chemicals were identified within Site buildings and on exterior portions of the Site.

- IWM Consulting obtained a total of twenty-four (24) soil samples, comprised of both surface and subsurface soil samples, for the analysis Resource Conservation and Recovery Act (RCRA) 8 metals including copper and zinc and percent moisture. Additional soil samples were also submitted from each soil boring location for laboratory analysis of the toxicity characteristic leaching procedure (TCLP) RCRA 8 metals and hexavalent chromium (Cr (VI)), if necessary. Based on analytical results, Cr (VI) analysis was performed on BC-GP6-SB1 (3-4'), BC-GP8-SS1 (2-3'), and BC-GP9-SS1 (1-2') and TCLP lead analysis was performed on BC-GP3-SS1 (1-2'). Two (2) subsurface soil samples were collected from BC-GP7-SB1 (3-4') and BC-GP8-SB1 (3-4') for the analysis of volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) analysis. Eight (8) additional shallow soil samples collected from the vicinity of BC-GP3 and SES boring "BC" were analyzed for lead and percent moisture. No VOCs, PAHs, or PCBs were detected at concentrations exceeding their respective Indiana Department of Environmental Management (IDEM) *Remediation Closure Guide* (RCG) Residential Migration to Groundwater Screening Levels (Res MTGSLs) in any soil sample. Each of the RCRA 8 metals including copper and zinc, except silver, were detected above their respective laboratory reporting limits (LRLs) in soil samples analyzed from the Site. Arsenic and lead were each detected in excess of their respective RCG Res MTGSLs, Residential Direct Contact Screening Levels (RDCSLs), and/or Commercial/Industrial Direct Contact Screening Levels (IDCSLs) in several soil samples. Due to the elevated concentration of lead detected in BC-GP3-SS1 (1-2'), TCLP lead analysis was performed on the sample. The three (3) soil samples exhibiting the highest concentrations of total chromium were also submitted for analysis of Cr (VI). The results indicate that Cr VI is not present in soil at concentrations exceeding RCG RDCSLs. Due to the concentrations of lead detected in BC-GP3-SS1 (1-2') at 3,160 milligram per kilogram (mg/kg) and SES boring "BC" (7,160 mg/kg and 28,700 mg/kg in the duplicate), shallow soil samples from depths of 1 to 2 feet bsg were collected from 5- to 10-feet in each cardinal direction of the aforementioned borings. Analytical results for the shallow soil samples identified lead at concentrations exceeding RCG Excavation Worker Direct Contact Screening Levels (EX DCSLs) in soil near these borings. Five (5) soil samples and a duplicate were collected and analyzed for PFAS from borings BC-GP10, BC-GP11, BC-GP12, BC-GP13, and BC-GP14. The PFAS Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) were detected in some of the samples ranging between 0.46 and 0.61 µg/kg.

- IWM Consulting obtained a total of six (6) groundwater samples for the analysis of VOCs, PAHs, total and dissolved RCRA 8 metals including copper and zinc, PCBs, and/or PFAS. No VOCs, PAHs, RCRA 8 metals including copper and zinc, or PCBs were detected in any groundwater sample at concentrations exceeding their respective RCG Residential Tap Groundwater Screening Levels (Res TAP GWSLs). Five (5) groundwater samples and a duplicate were collected and analyzed for PFAS from borings BC-GP10, BC-GP11, BC-GP12, BC-GP13, and BC-GP14. Eight (8) different PFAS compounds were detected in groundwater samples collected from BC-GP12 and/or BC-GP13 ranging from between 3.0 and 23 ng/L. Total PFAS ranged from 30.3 to 48.6 ng/L in BC-GP12 and BC-GP13, respectively.

- IWM Consulting obtained one (1) soil gas sample (BC-SG2) and its duplicate (BC-SG-FD1) for the analysis of VOCs. No contaminants were detected in the soil gas samples at concentrations exceeding their respective calculated RCG Commercial/Industrial Soil Gas Vapor Exposure Screening Levels (Indus SGe VESLs). Water infiltration and/or tight clays prevented the collection of soil gas samples from BC-SG1 and BC-SG3.

- Groundwater flow beneath the site was determined based on groundwater elevations from the temporary wells to flow to the south-southeast. The groundwater present beneath the site appears to be located within sandy unconsolidated sediments at depths ranging from approximately 19.63 feet bsg (BC-GP11) to approximately 21.18 feet bsg (BC-GP14). Groundwater flow was determined by surveying the elevations of the six (6) temporary well casings to within 1/100th of a foot and the spatial well placement on the Site to within 1/10th of a foot. Groundwater elevations were calculated based on gauging data collected on May 22, 2019."

"Due to the significant debris and metallic objects on the ground surface at the Site, the geophysical survey could not be successfully completed with the equipment utilized at the time of the survey. No obvious buried metallic objects resembling USTs were identified during the geophysical survey. ACMs were identified in roofing materials and exhaust stack components in the vicinity of the East Central Building and North Building. Asbestos is present in some of the building materials and should be handled appropriately. Lead based paint (LBP) was identified (1.8 percent by weight) on the East Building associated with the red paint but is below actionable concentrations of 5 percent by weight. Disposal considerations for these materials should be discussed with the disposal facility. Several containerized chemicals were identified in the North Building and near the East Building. An inventory of these materials was performed. However, none of these materials were sampled and/or analyzed to determine disposal options. In general, the most significant lead and arsenic soil impacts are in surface soils ranging from 0- to 3-feet bsg. No contaminants were detected in groundwater at concentrations exceeding their respective RCG Res TAP GWSLs. PFAS were detected in both soil and groundwater. There are currently no IDEM RCG screening levels for soil or groundwater impacted with PFAS. No contaminants were detected in soil gas at concentrations exceeding their respective calculated RCG Indus SGe VESLs."

3.7 Field Activity Report – June 2020

In preparation of redevelopment, a Sampling and Analysis Plan (SAP) dated April 24, 2020 was proposed to collect additional information for use in building demolition/removal and debris/chemical removal planning. The goal of this proposed inspection was to identify and quantify materials to be removed from the site. Indiana Brownfields Program (IBP) indicated the *SAP* had been approved by the USEPA in e-correspondence dated May 1, 2020.

SES personnel conducted a visual inspection of the building remnants and debris piles on May 7, 2020. A Certified Hazardous Material Manager (CHMM) also inspected the interior and exterior of the site buildings and debris piles to identify and inventory chemical containers, drums, totes, tanks, pits, etc. SES notes that the riveted steel tank is actually a 'smokestack' that had fallen over and is included in the east central debris pile. SES field staff did not observe any pits, buried tanks, or sumps. SES field staff noted that all observed 'suspected lower than grade features' were related to foundations, or crawlspaces of structures. Inspection areas were generally characterized within the following six areas.

- North building; consisting of a collapsed portion in the west, a standing building portion in the east, and a concrete enclosure at the east end.
- West building; consisting of debris piles over and surrounding the west building foundation.
- East central building; consisting of debris piles over and surrounding the east center building foundation.
- East building; consisting of a standing building.
- Kiosk; consists of a wooden structure near the center of the property.
- Perimeter debris piles; consist of debris piles along the east property line.

Historic finding regarding suspect asbestos containing building materials (ACBM) and lead based paint (LBP) were compared to current conditions. The previously identified and sampled suspect (ACBM) were located; however, in instances where additional suspect materials were identified, bulk samples of the above materials were collected in accordance with EPA guidelines. Screening for lead-based paint (LBP) was conducted utilizing a handheld and calibrated Delta Pro XRF with results reported in milligram per square centimeter.

A CHMM inventoried visible chemical containers and items. Small containers were inventoried as a 'lab pack' for potential disposal at a Tradebe disposal facility. Universal wastes and larger containers were also inventoried, and profiles were prepared. Totes containing sand/sludge filtration material were observed inside and outside of the north building. Representative samples of the materials were obtained (one sample inside and one sample outside) for laboratory analysis and profiling purposes.

The collapsed west portion of the north building could not be thoroughly inspected beyond the top layer of debris. Regulated materials could be present beneath the collapsed portion of the building, that was not readily visible during this inspection. The debris piles at the west building and the east center building appeared to have been moved from their original collapse locations. The debris piles were compact, and inspection was limited to exposed materials.

Previous LBP analytical results indicated the red paint on wood at the east building as LBP with a result of 1.8 percent by weight. The corresponding XRF reading was 0.96 mg/cm2. The current XRF reading of the same paint indicated a reading of 0.83 mg/cm2. An extrapolation of XRF data to the known LBP concentration indicates all identified red paint in the north, east, and east central building are LBP.

Foundry material, including slag is known to be distributed throughout the site and interspersed with fill material that extends to depths of four feet.

SES recommended the following actions to be considered.

1) Complete the profiling of containerized materials and universal wastes and offsite disposal at approved, licensed facilities.
2) Abatement of the identified transite panels in debris piles at and near 'smokestack' following proper notifications to IDEM. Roofing tar at the north building is ACM but characterized as non-friable and will not require abatement personnel.
3) Segregation of metal for scrap metal recycling. The red colored paint is considered LBP and abatement may be necessary, unless regulatory recycling exclusion is obtained via the *RCRA Scrap Metal Exemption*. Regardless of recycling exclusions, this task must include building demolition and demolition notifications.
4) Segregation of red colored paint on wood surfaces and disposal at an approved, licensed facility.
5) Segregation debris into either (1) bricks for restoration and preservation; or (2) demolition debris for offsite disposal. During debris removal an asbestos inspector must be onsite to visually inspect for suspect ACBM, as the debris piles are disturbed, and materials are segregated. This task will require building demolition and demolition notifications.
6) An abatement team will need to respond to the presence of any previously unidentified regulated materials.
7) Impacted soils will need to be addressed and groundwater monitoring will be required after the above six actions are completed.
    a. Lead and arsenic along with foundry material are distributed throughout the surface fill material; however, previous assessment has shown only three general areas where lead and/or arsenic concentrations exceed *commercial/industrial direct contact screening levels.* These three general areas are shown on Figure 4 and are targeted for monitoring and extraction. Approximately 4000 cubic yards of soils/fill extending from the surface to depths of 2 to 3 feet are targeted for monitoring and removal.
    b. Groundwater monitoring will be conducted at up to five (5) monitor wells for two quarters to confirm contaminants in soil have not leached to groundwater. Groundwater monitor wells and groundwater monitoring will be conducted at the three previously described general areas, as well as at the northwest

and southeast portions of the site as shown on Figure 6 (Groundwater Monitoring Areas). The groundwater monitoring may be initiated prior to soil extraction/removal.

Bricks for restoration and preservation should be stored at an offsite location, if possible.

3.8 Contemplated Redevelopment and Cost Estimates

As part of the City's desired expansion of its storm sewer system on the south side of the City, storm sewers extending through the former Butler Company were considered. The removal and offsite disposal of fire damaged debris/structures, chemical containers, and impacted soils would be required to facilitate pipeline construction. A cost estimate for removal was prepared; however, after further review, the City determined the potential routing of a storm sewer main through this property was no longer an option, and hence, soil capping could be pursued.

A cost estimate for soil capping and soil removal were presented to IBP in e-correspondence dated July 17, 2020. The estimate cost for soil capping was $158,649. However, please be advised the extended cost for clearing and grubbing was not included in this calculation and with clearing and grubbing included the estimated cost is $164,649. The estimated removal cost was $315,747. Both estimated included preparations and workplans, container removal, abatement, and groundwater monitoring.

4.0 REMEDIATION APPROACH AND RATIONALE

As a part of selecting an appropriate environmental remedy, the nature, contaminant concentrations and distribution of constituents of concern were evaluated, as well as potential exposure risk to human health and the environment. Based on this evaluation, soil barrier installation is proposed, and soil barrier installation is proposed at three areas where previous investigation results indicate lead and/or arsenic concentrations exceed *industrial direct contact screening levels*.

Site work will also include the removal and offsite disposal of fire damaged debris/structures by City personnel with hazardous materials awareness training, the disposal of red colored lead-based paint during demolition under the supervision of SES, the removal/disposal of asbestos by a licensed abatement contractor, and the removal/disposal of chemical containers under the supervision of a CHMM.

Groundwater monitoring is also proposed to confirm contaminants in soil have not leached to groundwater. Finally, a risk-based environmental remedy is anticipated to address any residual contaminants in soil/fill pursuant to the *BFF Comfort Letter* and *Environmental Restrictive Covenant (ERC)* issued in IBP correspondence dated January 18, 2019. SES anticipates IBP will prepare a revised ERC following implementation and completion of this RWP. The ERC which is incorporated with the comfort letter is provided as Appendix F.

4.1 Source and Nature of COCs

Constituents of concern documented in surface and near surface soils/fill are the focus of this RWP, as well as lead-based paint, and asbestos. There has been no known illegal dumping at the site. However, the site has had a long industrial history dating from 1888 to 1997. The Butler Company site (circa 1888 to 1958) included a machine shop, foundry, paint shop, pipe shed, lumber shed, tin shop and storage building. A major fire destroyed the three-story storage building on the southwest portion of the site in 1958. A distributor of plumbing, heating and cooling parts occupied the site in the 1960s. The building closest to the railroad track to the north of the property was used by the Carbola Chemical Company in approximately the late 1950's and early 1960's. The Butler Company continued as a jobber of electrical, plumbing, heating, cooling, and well drilling supplies until the facility was closed in 1997.

Lead and arsenic are the primary COCs detected at concentrations exceeding *industrial direct contact screening levels*. Asbestos containing materials are also identified as contaminants of concern, as well as the containerized chemicals and red colored lead-based paint. The following presents published toxicity characteristics for lead, arsenic, and asbestos.

Lead (CAS#: 7439-92-1) Lead occurs naturally as a sulfide in galena. It is a soft, bluish-white, silvery gray, malleable metal. Lead is a natural element that is persistent in water and soil. Most of the lead in environmental media is of anthropogenic sources. Soil content varies with the location, ranging up to 30 ug/g in rural areas, 3000 ug/g in urban areas, and 20,000 ug/g near point sources. Human exposure occurs primarily through diet, air, drinking water, and ingestion of dirt and paint chips (EPA; ATSDR). Lead absorbed into the body is distributed to three major compartments: blood, soft tissue, and bone. Exposure to lead is evidenced by elevated blood lead levels. Evidence shows that lead is a multitargeted toxicant, causing effects in the gastrointestinal tract, hematopoietic system, cardiovascular system, central and peripheral nervous systems, kidneys, immune system, and reproductive system. Other organs or systems affected by exposure to lead are the kidneys, immune system, reproductive system, gastrointestinal tract, and liver. These effects usually occur at high blood levels, or the blood levels at which they occur have not been sufficiently documented. The EPA has not developed an RfD for lead because it appears that lead is a nonthreshold toxicant, and it is not appropriate to develop RfDs for these types of toxicants. Instead the EPA has developed the Integrated Exposure Uptake Biokenetic Model to estimate the percentage of the population of children up to 6 years of age with blood lead levels above a critical value, 10 ug/dL. The model determines the contribution of lead intake from multimedia sources (diet, soil and dirt, air, and drinking water) on the concentration of lead in the blood. Site-specific concentrations of lead in various media are used when available; otherwise default values are assumed. The EPA has established a screening level of 400 ppm (ug/g) for lead in soil. Inorganic lead and lead compounds have been evaluated for carcinogenicity by the EPA; however, the data from human studies are inadequate for evaluating the potential carcinogenicity of lead. In addition, lead-based paint and lead-contaminated dust are the most widespread and hazardous sources of lead exposure for young children in the United States.

Arsenic (CAS#: 7440-38-2) Arsenic is a naturally occurring element widely distributed in the earth's crust. In the environment, arsenic is combined with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Inorganic arsenic compounds are mainly used to preserve wood and organic arsenic compounds are used as pesticides. Symptoms of acute inorganic arsenic poisoning in humans are nausea, anorexia, vomiting, epigastric and abdominal pain, and diarrhea. Severe exposures can result in acute encephalopathy, congestive heart failure, stupor, convulsions, paralysis, coma, and death. General symptoms of chronic arsenic poisoning in humans are weakness, general debility and lassitude, loss of appetite and energy, loss of hair, hoarseness of voice, loss of weight, and mental disorders. Although the carcinogenic potential of arsenic is debated, U.S. EPA has placed inorganic arsenic in weight-of-evidence group A, human carcinogen.

Contaminant of Concern (COC)	Dia (cm2/s)	Diw (cm2/s)	Koc (1/kg)	Kd (1/kg)	H (unitless)	ABS (unitless)	S (mg/l)	MCL (mg/l)	MP (Celsius)	BP (Celsius)	MW (g/mol)
Arsenic				29	0	0.03	0	0.05	817	613	74.9
Lead				270		0.01		0.015	327	1740	207

Source: RISC Guidance
Di,a-diffusivity in air
Di,w-diffusivity in water
Koc-soil organic carbon-water partitioning coefficient
Kd-soil-water partition coefficient
ABS-fraction absorbed through skin
S-water solubility
MCL-Safe Drinking Water Act maximum contaminant level
MP-melting point
BP- boiling point
MW- molecular weight
H'-Dimensionless Henry's Law constant (a measure of the affinity of a compound to volatilize from water)

Asbestos According to ATSDR (https://www.atsdr.cdc.gov/asbestos/health_effects_asbestos.html) "asbestos is a dangerous substance and should be avoided. Breathing asbestos can cause tiny asbestos fibers to get stuck in the lungs and irritate lung tissues. Scientific studies have shown that the following non-cancer diseases can be caused by breathing asbestos: Asbestosis is scarring in the lungs caused by breathing asbestos fibers. Oxygen and carbon dioxide do not pass in and out of scarred lungs easily, so breathing becomes harder. Asbestosis usually occurs in people who have had very high exposures over a long time, but years may pass before any symptoms appear. Pleural disease is a non-cancerous lung condition that causes changes in the membrane surrounding the lungs and chest cavity (pleura). The membrane may become thicker throughout (diffuse pleural thickening) or in isolated areas (pleural plaques), or fluid may build up around the lungs (known as a pleural effusion). Not everyone with pleural changes will have problems breathing, but some may have less efficient lung function. Asbestos exposure also increases the risk of developing certain cancers. In addition to

lung cancer and mesothelioma, asbestos exposure can also cause cancer of the larynx and ovary. Current evidence also suggests asbestos exposure may cause cancer of the pharynx, stomach, and colorectum."

4.2 Distribution

Foundry material are distributed throughout the surface fill material; however, previous assessment has shown only three general areas where lead and/or arsenic concentrations exceed *commercial/industrial direct contact screening levels.* The following table summarizes arsenic and lead sample depths and concentrations.

Table 2. Arsenic and Lead in Soil: Testing Summary
325 South Broadway Street, Butler, Dekalb County, Indiana

Sample ID	Sample Depth (feet)	Arsenic (mg/kg)	Lead (mg/kg)
RCG Migration to Groundwater (2020)		*5.9*	*270*
RCG Residential Direct Contact (2020)		***9.5***	***400***
RCG Commercial/Industrial Direct Contact (2020)		***30***	***800***
RCG Excavation Direct Contact (2020)		*920*	*1000*
BA	0-2	<3	299
BB	2-4	<2	35
BC Duplicate = BH	2-4	<2 <3	**7160** **28700**
BD	0-2	<2	8.6
BE	6-8	<3	9.4
BF	2-4	<2	7.3
BG	6-8	<2	6.0
BC-GP1-SS1	1-2	**14.0**	6.16
BC-GP1-SB1	3-4	2.6	11.3
BC-GP2-SS1	0.5-1.5	8.6	97.7
BC-GP2-SB1	3-4	9.3	9.4
BC-GP3-SS1	1-2	6.7	**3160**
BC-GP3-SB1	3-4	5.5	11.5
BC-GP4-SS1 BC-SB-FD2	1-2	**12.0** **11.5**	395 **691**
BC-GP4-SB1	3-4	3.0	11.3
BC-GP5-SS1	2-3	**10.4**	63.1
BC-GP5-SB1	3.5-4	5.9	13.6
BC-GP6-SS1	1-2	**13.2**	62.5
BC-GP6-SB1	3-4	5.5	15.6
BC-GP7-SS1	1-2	**44.0**	159
BC-GP7-SB1	3-4	**28.2**	198
BC-GP8-SS1	2-3	**33.9**	25.4
BC-GP8-SB1 BC-SB-FD3	3-4	2.8 **27.7**	10.7 27.0
BC-GP9-SS1	1-2	**25.5**	**448**
BC-GP9-SB1	3-4	**13.8**	12.6

RCG – remediation closure guide
mg/kg – milligrams per kilogram (parts per million)
Bold – indicates concentration exceeds the residential direct contact screening level
Bold Underline – indicates concentration exceeds the commercial/industrial direct contact screening level

Continued on next page

Table 2. Arsenic and Lead in Soil: Testing Summary
325 South Broadway Street, Butler, Dekalb County, Indiana

Sample ID	Sample Depth (feet)	Arsenic (mg/kg)	Lead (mg/kg)
RCG Migration to Groundwater (2020)		*5.9*	*270*
RCG Residential Direct Contact (2020)		***9.5***	***400***
RCG Commercial/Industrial Direct Contact (2020)		***30***	***800***
RCG Excavation Direct Contact (2020)		*920*	*1000*
BC-GP10-SS1	1-2	**11.6**	158
BC-GP11-SS1	0.5-1.5	**15.0**	282
BC-GP12-SS1	1-2	3.1	84.7
BC-GP13-SS1	1-2	**13.5**	137
BC-SB-FD1		**17.1**	150
BC-GP14-SS1	0.5-1.5	**49.2**	156
BC-GP15-SS1	0.5-1	**12.8**	20.8
BC-GP3-N5	1-2	NA	51.7
BC-SB-FD4		NA	228
BC-GP3-E5	1-2	NA	NA (XRF = 101)
BC-GP3-E10	1-2	NA	75.6
BC-GP3-W5	1-2	NA	307
BC-GP3-W10	1-2	NA	NA (XRF = 12)
BC-GP3-S5	1-2	NA	NA (XRF = 380)
BC-GP3-S10	1-2	NA	**660**
BC-GP16-N5	1-2	NA	49.2
BC-GP16-N10	1-2	NA	NA (XRF = 87)
BC-GP16-E5	1-2	NA	NA **(XRF = 448)**
BC-GP16-E10	1-2	NA	**4470**
BC-GP16-W5	1-2	NA	**964**
BC-GP16-W10	1-2	NA	NA (XRF = 94)
BC-GP16-S5	1-2	NA	NA (XRF = 141)
BC-GP16-S10	1-2	NA	135

RCG – remediation closure guide11
mg/kg – milligrams per kilogram (parts per million)
Bold – indicates concentration exceeds the residential direct contact screening level
Bold Underline – indicates concentration exceeds the commercial/industrial direct contact screening level

Based on these tabulated results and site mapping contaminant concentrations exceed *RCG Commercial/Industrial Direct Contact Screening Levels* at the following three generalized areas. The areas are also depicted on Figure 5 and soil barrier construction has been selected to isolate these areas.

Area 1) Lead contamination at southwest portion of site at sampling locations BC-GP-3- SS1 (1-2) and BC-GP3-S10 (1-2).

Area 2) Arsenic contamination at east central portion of site at sampling locations BC-GP7-SS1 (1-2), BC-GP-8-SS1 (2-3) and BC-GP14-SS1 (0.5-1.5).

Area 3) Arsenic and lead contamination at northeast portion of site at sampling locations BC, BC-GP16-E10 (1-2), and BC-GP-16-W5 (1-2).

Asbestos containing materials (ACMs) were identified in the East Central Building debris pile and the North Building. ACMs included transite panels, and roofing materials. Abatement will be conducted by EMS a licensed abatement contractor with monitoring by SES.

A chemical inventory of petroleum and/or hazardous substances remaining on site was completed. Totes, drums, small containers (<10 gallons) of paints, dyes, and water filtration chemicals were identified during the

inventory. Small containers were inventoried as a 'lab pack' for potential disposal at a Tradebe disposal facility. Universal wastes and larger containers were also inventoried, and profiles were prepared. Totes containing sand/sludge filtration material were observed inside and outside of the north building. Removal and disposal will be completed under the supervision of a CHMM.

Segregation of metal for scrap metal recycling is proposed and the red colored paint on metal surfaces will seek regulatory recycling exclusion via the *RCRA Scrap Metal Exemption*. Segregation of red colored paint on wood surfaces and disposal at an approved, licensed facility are proposed.

4.3 Baseline Ecological Assessment

A baseline ecological assessment was conducted to determine if any critical habitats exist on or near the site. The assessment included a review of the U.S. Geological Survey 7.5-minute topographic map to identify features such as parks, preserves, and other special-use areas within a one-mile radius of the site; a visit to the property to identify wildlife, vegetation, and critical habitats in the near vicinity; and online database review of governmental and regulatory agencies having jurisdiction over protected species to identify state-listed and proposed endangered and threatened animal and plant species and wetlands within the area.

Topographic Map. The area approximately 500 feet to the east is identified as a marsh/wetland area. No other significant potential ecological features were noted within the immediate site vicinity.

Site Visit. The site was visually inspected and ecological habitats were not discernible due to the existing debris. The inspection revealed grass, scrub vegetation and gravel over the majority of the site surface, as well as many debris piles. The west portion of the site is wooded. Streets border the site to the west and south and railroad property is located to the north. Residential properties are located to the south and a library is located adjacent west of the site.

Governmental Database. Online information was obtained from the following agencies: U.S. Forest Service, National Park Service, U.S. Department of Fish and Wildlife Service, and the Indiana Department of Natural Resources (DNR). No registered forests or parks were identified at or adjacent to the site.

The U.S. Department of Fish and Wildlife Service National Wetlands Inventory (Appendix E) identified a *Freshwater Forested/Shrub Wetland* area to the east and extending onto the northeast portion of the site. In addition, a *Freshwater Pond* was identified approximately 1200 feet to the southeast.

A DNR listing of endangered, threatened, and rare species for Dekalb County is provided in Appendix E. Several types of mollusk, insect, fish, amphibian, reptile, bird, mammal, and vascular plant are listed, as well as high-quality natural communities. U.S. Department of Fish and Wildlife: Environmental Conservation Online System (Appendix E) identified the bald eagle, Indiana bat, and northern long-eared bat as threatened or endangered species.

In summary, the *Freshwater Forested/Shrub Wetland* that extends onto the northeast portion of the site may be a potentially susceptible ecological area and habitat for animal species. Geologically susceptible areas (e.g., surface-water bodies, karstic bedrock areas, etc.) have not been identified at or immediately surrounding the site.

4.4 Identification and Evaluation of Potential Human Receptors

Human receptors that might be potentially exposed to COCs were identified by inspecting the site property and adjacent properties, and reviewing published site maps, and reports detailing site conditions. The following potential receptors were identified, and exposure risk evaluated.

- Potentially susceptible areas located adjacent to the site include residences to the south and a library/recreation area to the west. A potential exposure route through ingesting wind-blown contaminated dust currently exists.

- There is a risk of surface runoff/erosion/soil washing migration to offsite areas and/or storm sewers given the current fire-damaged state of the site.

- Several additional potentially susceptible areas (church, day care, and schools) occur in the outlying area. These areas are not considered at risk due to their location and distance from the site.

- Lead/arsenic occurs in surface and near surface soils/fill and a potential route of exposure through ingesting/inhaling wind-blown contaminated dust currently exists,

- Transient site workers are identified as receptors, as well as maintenance personnel and caretakers. A potential route of exposure through direct contact or ingestion of impacted surface and near surface material currently exists.

- VOCs were not detected, and vapor intrusion into adjacent building structures is not a complete exposure pathway.

- The site is located within a wellhead protection area. Lead/arsenic impact is limited to the near surface and there is no indication groundwater has been impacted. The scenario of impacting a water supply is assigned a negligible risk.

- There are no known preferential migration pathways to a receptor.

- Construction workers involved with any site redevelopment are identified as receptors. Routes of exposure would include incidental direct contact and ingestion/inhalation of impacted soil. This exposure scenario is assigned a moderate risk.

- If unrestricted access to the site is allowed, there could be an exposure risk to adults/children via direct contact, and ingestion. This exposure scenario is assigned a moderate risk.

- Under an unrestricted access scenario, offsite transport of constituents of concern through physical tracking of soil by people, vehicles, or equipment would also be possible. This exposure scenario is assigned a negligible risk.

In summary, constituents of concern have been documented in near surface soils/fill at levels that pose an exposure risk for visitors, trespassers, and/or transient site workers and maintenance personnel. Ingestion or inhalation of wind-blown dust particles and surface runoff/erosion/soil washing migration to offsite areas and/or storm sewers are also identified as potential concerns. Inhalation of asbestos is another potential exposure pathway and chemical containers and lead-based paint should be removed/disposal to eliminate exposure hazards.

4.5 Soil Barrier

Soil barrier construction is proposed to mitigate the following potential exposure risks resulting from arsenic and lead occurrence in the surface and near surface at southwest portion of site at sampling locations BC-GP-3- SS1 (1-2) and BC-GP3-S10 (1-2); at east central portion of site at sampling locations BC-GP7-SS1 (1-2), BC-GP-8-SS1 (2-3) and BC-GP14-SS1 (0.5-1.5); and at northeast portion of site at sampling locations BC, BC-GP16-E10 (1-2), and BC-GP-16-W5 (1-2).

1) Dermal contact with COCs in surface soils;
2) Ingestion of COC in surface soils;
3) Wind transport of particulates;
4) Stormwater transport of particulates; and
5) Physical tracking of COC in soil.

Soil barrier construction was selected for three areas where contaminant concentrations exceed *RCG Commercial/Industrial Direct Contact Screening Levels*. Soil barrier areas are depicted on Figure 5 and explained in the following narratives.

Area 1) **Lead contamination at southwest portion of site at sampling locations BC-GP-3- SS1 (1-2) and BC-GP3-S10 (1-2).** IDEM's Technical Guidance Document titled *Engineering Control: Covers* created on May 26, 2009 and updated on September 20, 2017 specifies a soil barrier at least two feet in thickness would be appropriate to mitigate exposure. Since COC concentrations exceed c*ommercial/industrial direct contact screening levels* at a depth of one foot, an additional one foot of clean soil will be applied over this area to complete the soil barrier. Six inches of loam will be applied as the base material for the barrier and six inches of topsoil will be applied at the surface.

Area 2) **Arsenic contamination at east central portion of site at sampling locations BC-GP7-SS1 (1-2), BC-GP-8-SS1 (2-3) and BC-GP14-SS1 (0.5-1.5).** Approximately one foot of clean soil (6-inch loam base and 6-inches of topsoil) will be applied over most of this area. The south portion within the area of BC-GP14-SS1 will included 12 inches of loam base and 6 inches of topsoil.

Area 3) **Arsenic and lead contamination at northeast portion of site at sampling locations BC, BC-GP16-E10 (1-2), and BC-GP-16-W5 (1-2).** Approximately one foot of clean soil (6-inch loam base and 6-inches of topsoil) will be applied at this area.

Barrier construction will initiate after the removal of surface debris generated during the facility fire. Clean soil will be applied over Areas #1, #2, and #3 (Figure 5). As a standard practice and in general accordance with IBP guidance, the following task implementation sequence will be followed to ensure the protection of human health and the environment:

1. Prior to constructing the soil barrier, surface debris from the fire will be removed.
2. An XRF instrument will be utilized to assess arsenic and lead concentrations in existing soils at the perimeter of the proposed soil barriers (XRF screening of surface material and of soils/fill at a depth of one foot). At least two samples will be collected from each area and submitted for arsenic and lead analysis in accordance with SW 846 Method 6010.
3. Dust suppression efforts will be maintained throughout the soil barrier construction period.
4. Soil to be utilized for barrier construction will be clean base materials sourced from a local cemetery (Butler Cemetery, County Road 28). The clean base material is stockpiled at the cemetery and consists of excess spoil soils from graves. Topsoil will be obtained at Stafford Gravel Inc., (425 Co Road 79, Butler, IN 46721).
5. Soil selected for barrier construction will be screened for potential contaminants (RCRA 8 metals, SVOCs/PAHs, and VOCs). Testing will be conducted on five representative samples obtained from the cemetery source area (one sample per 500 tons of soil to be used for capping). Two representative samples of topsoil will also be obtained. Soil will be acceptable for use as a barrier if contaminant concentrations are less than *residential direct contact screening levels*.
6. The representative confirmation samples will be collected and submitted for laboratory VOC, SVOC/PAHs, and RCRA 8 metals analyses. Samples will be placed in laboratory provided sample containers. Containers will be properly labeled, entered into chain-of-custody documentation, and placed into an ice-filled cooler for shipment to the laboratory. All retained soil samples will be promptly delivered to a sub-contract laboratory for analyses in accordance with SW846 Methods. QA/QC samples consisting of field duplicates and MS/MSD samples will be retained per 20 samples. A level IV analytical data package will be requested from the laboratory.
7. In the event a confirmation sample exhibits contaminant concentrations exceeding *residential direct contact screening levels*, the sample representing the soil stockpiled area will be utilized for soil capping.
8. Accepted clean base soils be applied across Area #1, Area #2, and Area #3 until the desired barrier thickness is attained. SES will observe the application process and obtain measurements regarding barrier thickness and extent. The base soils will be placed in 6-inch loose lifts and compacted using a mechanical sheep-foot vibrating compactor to 90% Modified Proctor density. Soil will be removed from equipment tires/tracks (if applicable) before leaving the site.
    a. Soil barrier surface shall slope so as to drain with no depressions to catch water.
    b. Around perimeter of each soil barrier area, soil will be sloped 4:1.
    c. Surfaces will be fine graded by raking.
    d. SES will approve final grade elevations before seeding or other landscaping operations begin.
    e. Any undulations or irregularities in the surface shall be leveled out before seeding operations begin.
    f. Grading and seeding operations will be conducted at all surfaces disturbed during site work, including soil barrier areas, and traveled surfaces.

9. Standard fescue (grass seed) will be planted across the disturbed areas including barrier construction areas. Work shall proceed as quickly as the site or portions of the site become available and as allowed by the seasonal limitations outlined under Planting Season. Extensions of this deadline may be granted with sufficient proof shown that conditions outside the contractor's control have prevented completion of the project.
    i. Planting Season: Seeding shall be August 15 to October 30 and April 15 to June 1.
10. Seed mixtures may consist of any of the following Turf-type tall fescues, provided at least 3 varieties are mixed in a blend, and no variety is more than forty percent (40%) of the mix. The seeding rate will be around 5 lbs per 1,000 square feet.
11. Soil barrier mapping will be conducted and a Global Navigation Satellite System (GNSS) - Geo 7X Centimeter Edition (Seiler Geospatial Division) or alternate mechanism utilized for data reproduction.
12. Soil barrier inspections will be conducted annually by City personnel or a City designated representative.

A *Remediation Completion Report* will be prepared to document groundwater monitoring, soil barrier construction, soil sampling methods, and laboratory testing results. Site maps will be developed that clearly and accurately depict the barrier areas, monitor wells, and final sampling results. The report appendix will include characterization data, loam and topsoil documentation, photographs, and other information derived from implementation.

4.6 Groundwater Monitoring

Groundwater monitoring will be conducted at up to five (5) monitor wells for two quarters to confirm contaminants in soil have not leached to groundwater. Groundwater monitor wells and groundwater monitoring will be conducted at the three previously described general areas, as well as at the northwest and southeast portions of the site as shown on Figure 6 (Groundwater Monitoring Areas). The following task implementation sequence is anticipated:

1. Borings will be advanced using direct-push probing methods, with borings extended to a depth of approximately 28 feet. All soil samples will be visually inspected in the field by a SES geologist and classified according to color, texture, and relative moisture content in accordance with ASTM Standard D 2488. A portion of each sample interval will be equally divided and placed in a plastic container for headspace analysis using a PID instrument. Soil sample testing is not anticipated at this time. To limit the generation of soil cuttings, wells may be installed using geoprobe direct push technology and in this case pre-pack well screens will be used. A permanent groundwater monitor well will be installed at each boring location. Wells will be constructed using conventional 2-inch, PVC casing, and a 10-foot 0.010-slotted screen (pre-pack screen for geoprobe install). Well screens will be positioned between 18 and 28 feet (but subject to observed soil conditions). Washed, commercial, quartz sand pack will be placed around the screened interval to a level approximately one foot above the screen and capped with 2 feet of bentonite. Grout will then be placed from the top of the bentonite seal to the ground surface. The wells will be finished with a watertight expansion seal, and a protective steel cover set in concrete, flush with grade.

2. Following well construction, groundwater will be purged to remove fines and to improve connection with the water bearing formation. Relative elevations will then be established for the top of each point/well using standard level survey methods. Elevations will be established to an accuracy of 0.01 feet. A horizontal control survey will also be conducted to locate the position of each well relative to significant site features.

3. On a quarterly basis, for a period of two quarters, groundwater samples will be collected from the monitor well locations. Sampling will be initiated by removing the well caps, and then allowing sufficient time for groundwater levels to equalize with ambient pressure conditions. The depth to water will then be gauged at each monitor well. Gauging will be conducted using an electronic water level indicator with an accuracy of 0.01 feet. The water level indicator will be cleaned with a detergent solution and tap water rinse prior each measurement. Following gauging, groundwater samples will be collected using low flow/low stress techniques. A small-diameter low-flow bladder pump will be used to purge and sample monitor wells. The purge rate will be set not to exceed 500 milliliters per minute (ml/min). During purging, regardless of the sample type or well recovery, field indicator parameters will be monitored and documented. These parameters are measured to document that the purging procedure is adequate, and that the stagnant water in the well has been removed. These parameters will begin to stabilize as purging

continues and should completely stabilize at the end of well purging. Turbidity, dissolved oxygen, oxygen reduction potential (ORP), specific conductivity, pH, and temperature will be measured. After stable conditions are established, water samples will be collected using the bladder pump and discharged directly into the appropriate sample containers. The following sample collection sequence will be followed for consistency:

a) Measure water level.
b) Purging with mechanical bladder pump (low flow-low stress).
c) After stable field readings are attained, collect sample under low flow conditions.
d) Collect sample for volatile organics.
e) Collect sample for semi-volatile organics, inorganics, and then metals.
f) Samples will be analyzed for VOCs, PAHs, RCRA 8 metals, copper, and zinc. *These testing parameters are consistent with the IWM Phase II Environmental Site Assessment Report. However, testing for PFAS in groundwater are not specified at this time, nor are PCBs.* With Program approval, hexavalent chromium testing will be conducted to further evaluate total chromium. In addition, with Program approval, dissolved and total metals testing will be conducted if groundwater samples exhibit turbidity greater than 10 NTU.
g) Place samples into appropriate containers and follow sample preservation, packaging, and shipping procedures.

4. QA/QC samples will include a trip, equipment blank, and blind duplicate. A MS/MSD will be collected for the final sampling event. Upon completion of a groundwater quarterly sampling event, a written report of analytical results and field activities will be submitted to the Program's project manager for review.

5. Well abandonment activities will be conducted after obtaining Program approval.

6. As previously noted, a *Remediation Completion Report* will be prepared to document groundwater monitoring, soil barrier construction, soil sampling methods, and laboratory testing results.

4.7 Abatement and Disposal

A chemical inventory of containers is complete and profiles for the chemical inventory will need to be issued to the selected disposal facilities. Following profile approvals, the containers may be removed from the site under the supervision of a CHMM. The containers will be transported under manifest control to the selected disposal facilities.

A licensed abatement contractor will remove and dispose of asbestos-containing material (ACM) as transite panels using industry-accepted asbestos removal procedures. Roofing tar at the north building is ACM but characterized as non-friable and will not require abatement personnel. This roofing material will be disposed at a landfill during the debris removal process by City. Visually identified asbestos contaminated transite debris will be removed using methods such as vacuuming, wet wiping, wet brushing, wet scraping, and other state-of-the-art techniques or better. The selected contractor will remove and properly containerize all asbestos-contaminated debris/materials. The following general work practices are anticipated.

A. Contractor shall post "Asbestos Health Hazard" danger signs at all entrances to the work area.
B. Access to the regulated work area shall be restricted to properly trained and authorized personnel.
C. Critical barriers shall be installed at openings to work area and dropcloths shall be placed when ACM is not removed substantially intact, or there is a potential for exposure above the PEL.
D. Personal protective clothing and respirator protection shall be consistent with selected control methods and a prepared HASP.
E. Contractor shall remove ACM transite panels in debris piles at and near 'smoke stack'.
F. Transite panels shall be sprayed with amended water, and if applicable detached from surface without breaking (as possible).
G. As ACM is removed, simultaneously pack material in disposal bags. Twist neck of bags, bend over and seal with minimum three wraps of duct tape.
H. ACM shall remain wet until transferred to a closed receptacle.

I. The closed receptable will contain approved OSHA and US DOT labels, identifying the contents as asbestos materials, to each container/receptacle.
J. Prior to initiating disposal, Contractor shall prepare a special waste acceptance application on behalf of the Owner and then submit application and fee to Indiana Department of Environmental Management for review and approval.
K. Contractor shall prepare shipping papers for Owner.
L. At completion of hauling and disposal of each load the Contractor will submit copy of waste manifest, chain of custody form, and landfill receipt to Owner and Programs.
M. Contractor will provide notification, in writing, that acceptable final clearance levels have been achieved.

After removal, SES will perform a complete final visual inspection of the entire work area. If any waste or chemical containers, debris or transite panel is found, Contractor will repeat the removal processes. Closeout documents shall be submitted to owner and Program at the conclusion of the project. Documents shall include but not limited to the following:

1. Copies of daily project sign-in/sign-out logs
2. Daily project log forms,
3. Equipment used,
4. Sample locations, dates, and times
5. Descriptions of unique or unusual events during the project.
6. A copy of final clearance certification,
7. Copies of waste manifests,
8. Copies of disposal application documents,
9. Visual inspection records, and
10. Any other relevant records.

4.8 Schedule

SES proposes the following task schedule. As previously noted, SES anticipates IBP will prepare a revised ERC following implementation and completion of this RWP.

Task	Duration of Task (months)
Remediation Work Plan Development	3 to 5 months
Demolition (abatement and disposal)	2 to 3 months
Soil Barrier Construction	1 to 2 months
Groundwater Monitoring	6 to 7 months (install and quarterly sampling)
Remediation Completion Report	1 to 2 months
Agency Review and Site Closure	1 to 2 months
Total Duration	14 to 21 months

5.0 HEALTH AND SAFETY PLAN

A *Health and Safety Plan* was provided previously. The plan specifies a site safety coordinator, job task delegation, emergency procedures, and directions to the nearest emergency care facility.

All field personnel conducting on-site activities will have completed OSHA 1910.120 40-hour Health and Safety Training, as well as annual eight-hour refresher training updates. All site personnel will be enrolled in a medical monitoring program.

The site safety coordinator will review the health and safety plan with all site personnel prior to beginning work. Daily toolbox meetings will be conducted at the beginning of each day thereafter to assess unforeseen hazards and/or make modifications due to changes in site conditions. All site personnel will acknowledge participation in the safety meeting by signing and dating the health and safety plan.

6.0 QUALITY ASSURANCE

The overall QA objective is to develop and implement procedures for field sampling, chain of custody, laboratory analysis, and reporting that will provide results that are scientifically valid, and the levels of which are sufficient to meet Level IV DQOs. Field and quality assurance procedures are detailed in a report titled *"Quality Assurance Project Plan (QAPP) – Revision 0"* dated July 2020.

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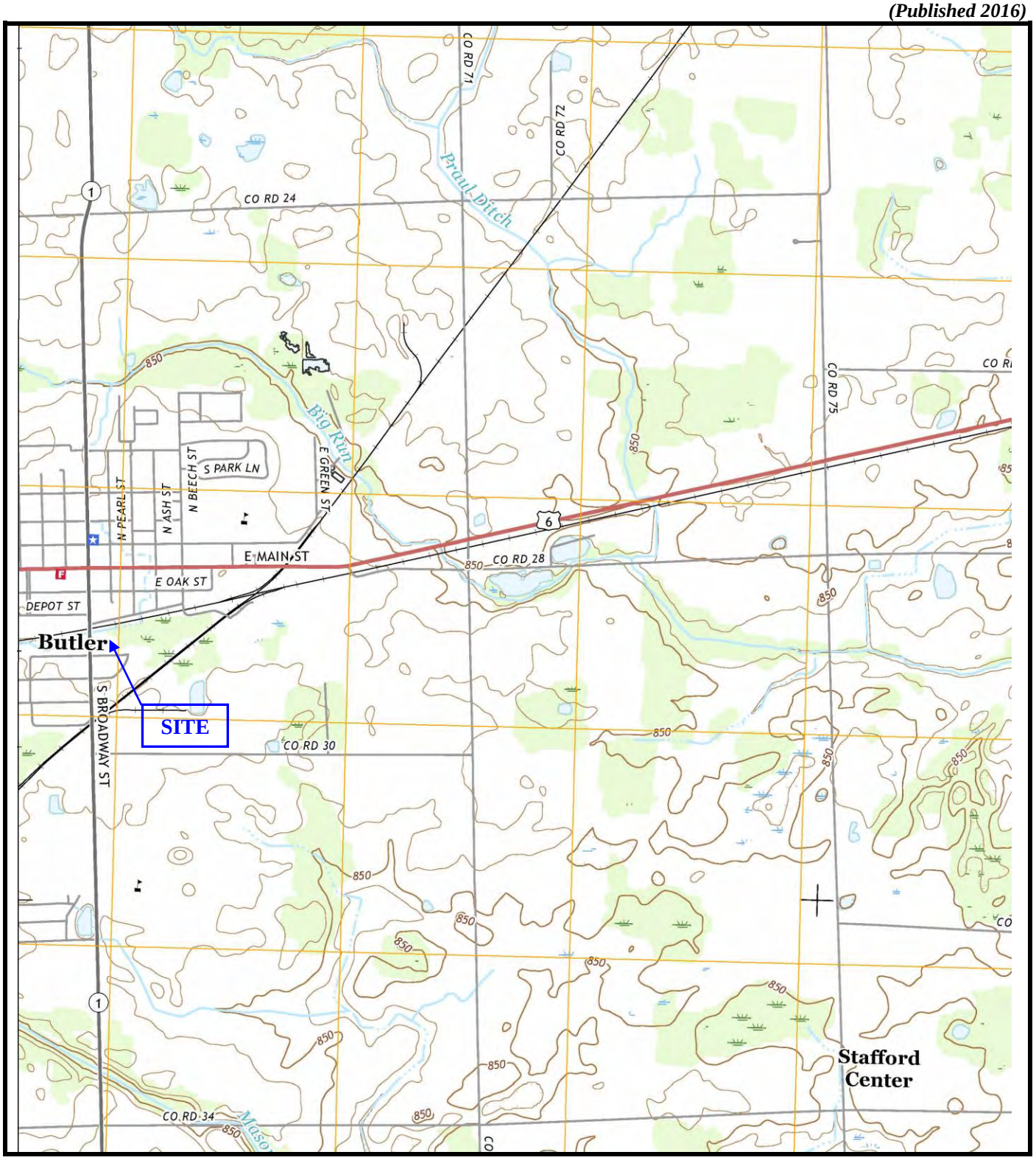
REMEDIATION WORK PLAN

FIGURES

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705

Butler East, Indiana 7.5 Minute Quadrangle Map
(Published 2016)



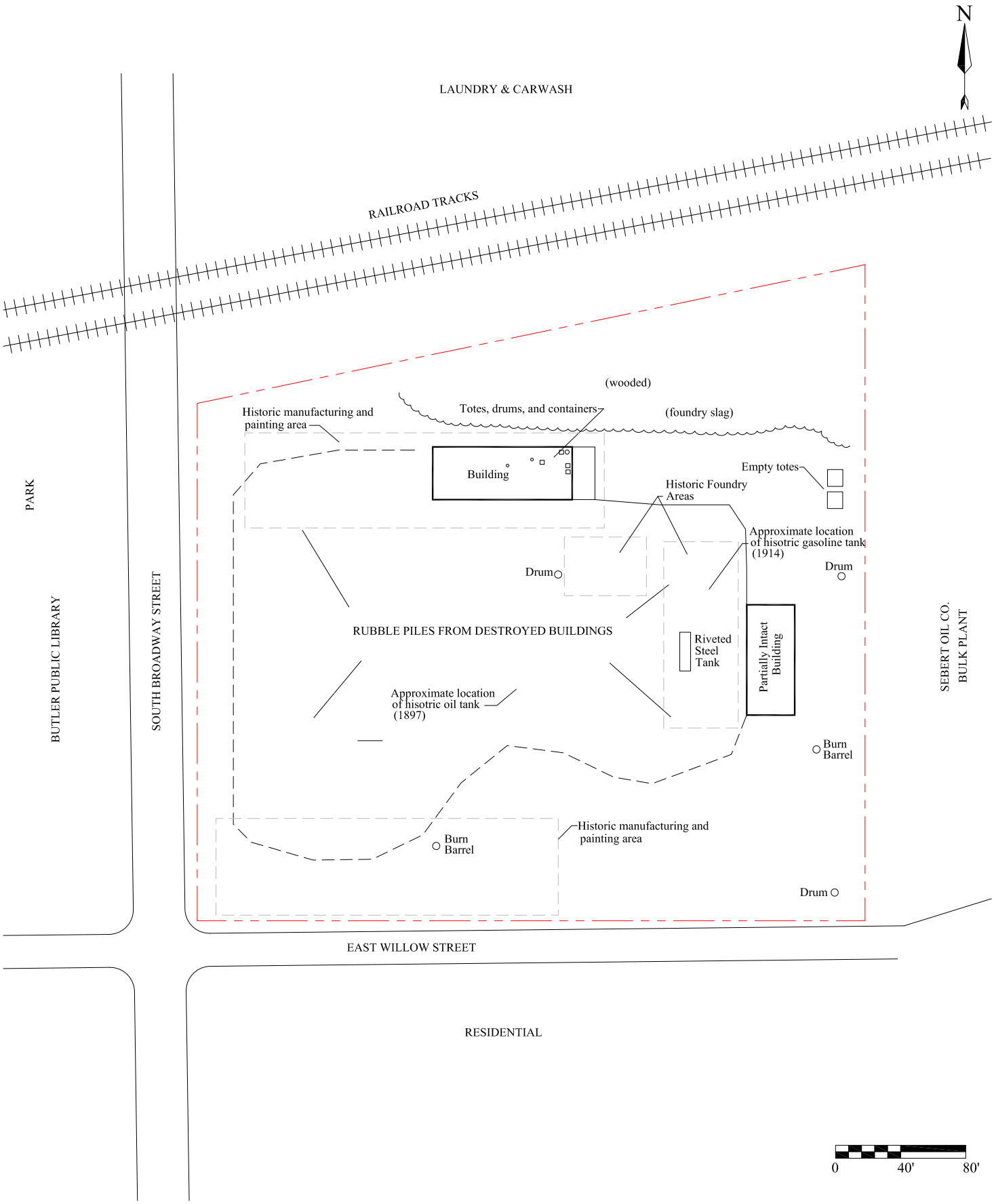
SCALE 1:24000 (1”=2,000’)

1 ½ 0 1 Mile

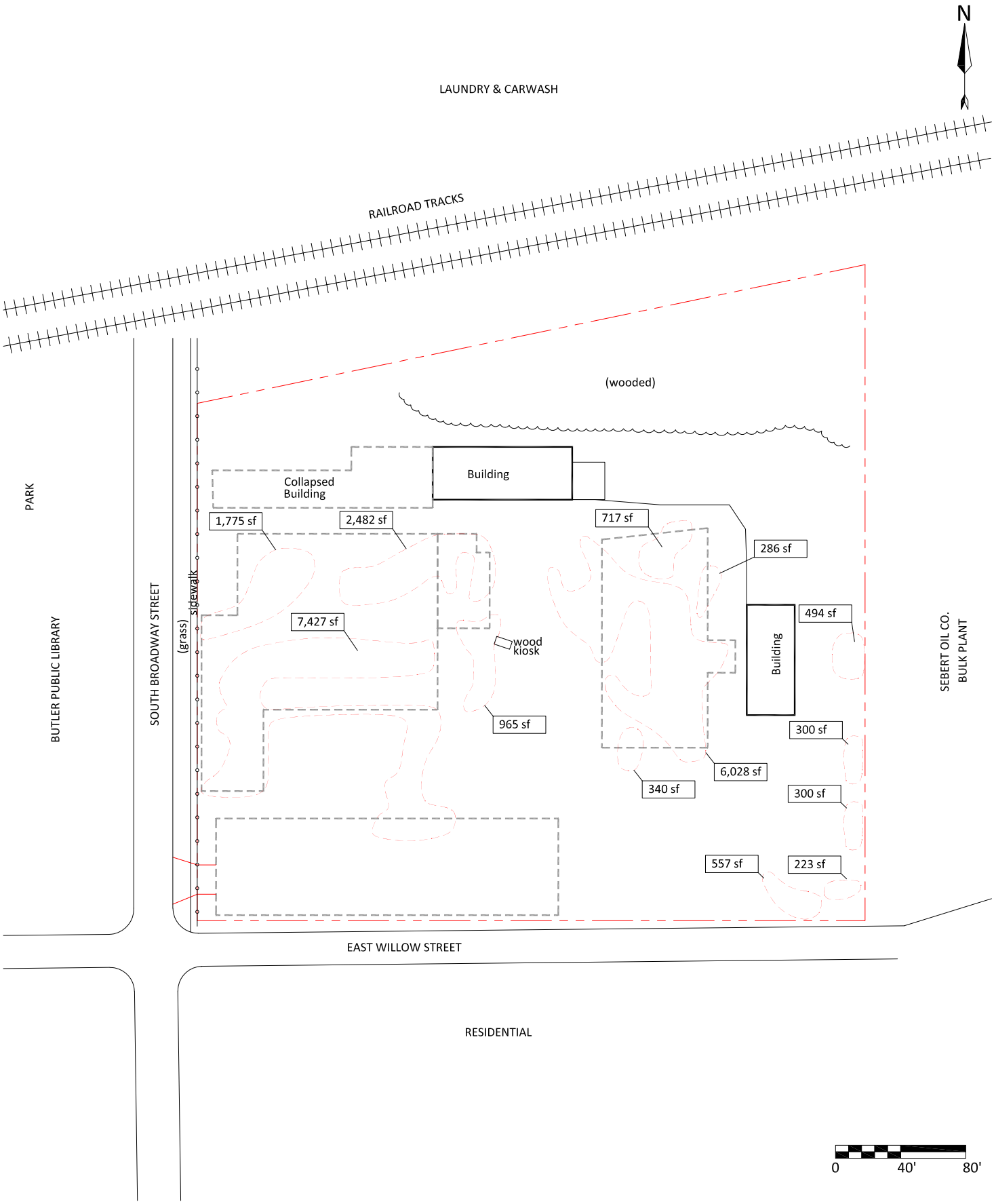
CONTOUR INTERVAL 10 FEET
Site Boundaries Shown are Approximate

Topographic Map **Figure 1**

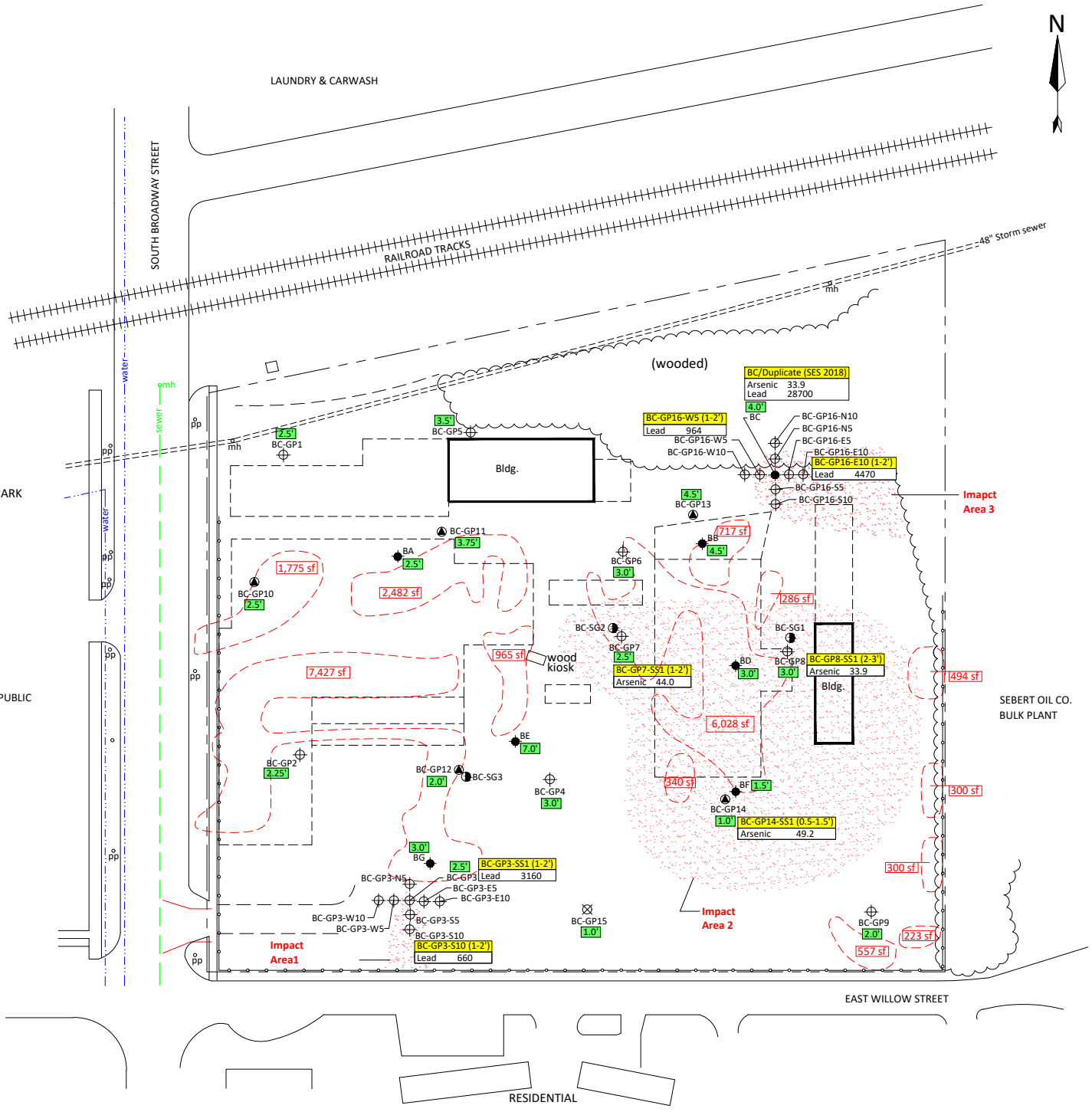
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana 46721
SES Project 2017-699



TITLE SITE AREA MAP Phase I Environmental Site Assessment	LEGEND Approximate site boundary	PROJECT 2017-699	
LOCATION The Butler Company 325 South Broadway Street Butler, DeKalb County, Indiana		SCALE 1" = 80'	FILE 2017699map
		DRAWN wg	CHECKED wg
		DATE 11/9/17	FIGURE 2



TITLE: Debris Piles	LEGEND	PROJECT: 2020-295	
LOCATION: The Butler Company 325 South Broadway Street Butler, DeKalb County, Indiana	Approximate site boundary Approximate location of former building walls/foundation Approximate location of debris pile	SCALE: 1" = 80' / FILE: 2020295map DRAWN: wg / CHECKED: lk DATE: 5/18/20 / FIGURE: 3	SES



Notes: 1. Boring locations digitized from IWM mapping, 7/11/19
2. Soil testing results reported as mg/kg
3. Only arsenic and lead concentrations exceeding IDSLs are shown

TITLE

Impact Extent and Utilities

LOCATION

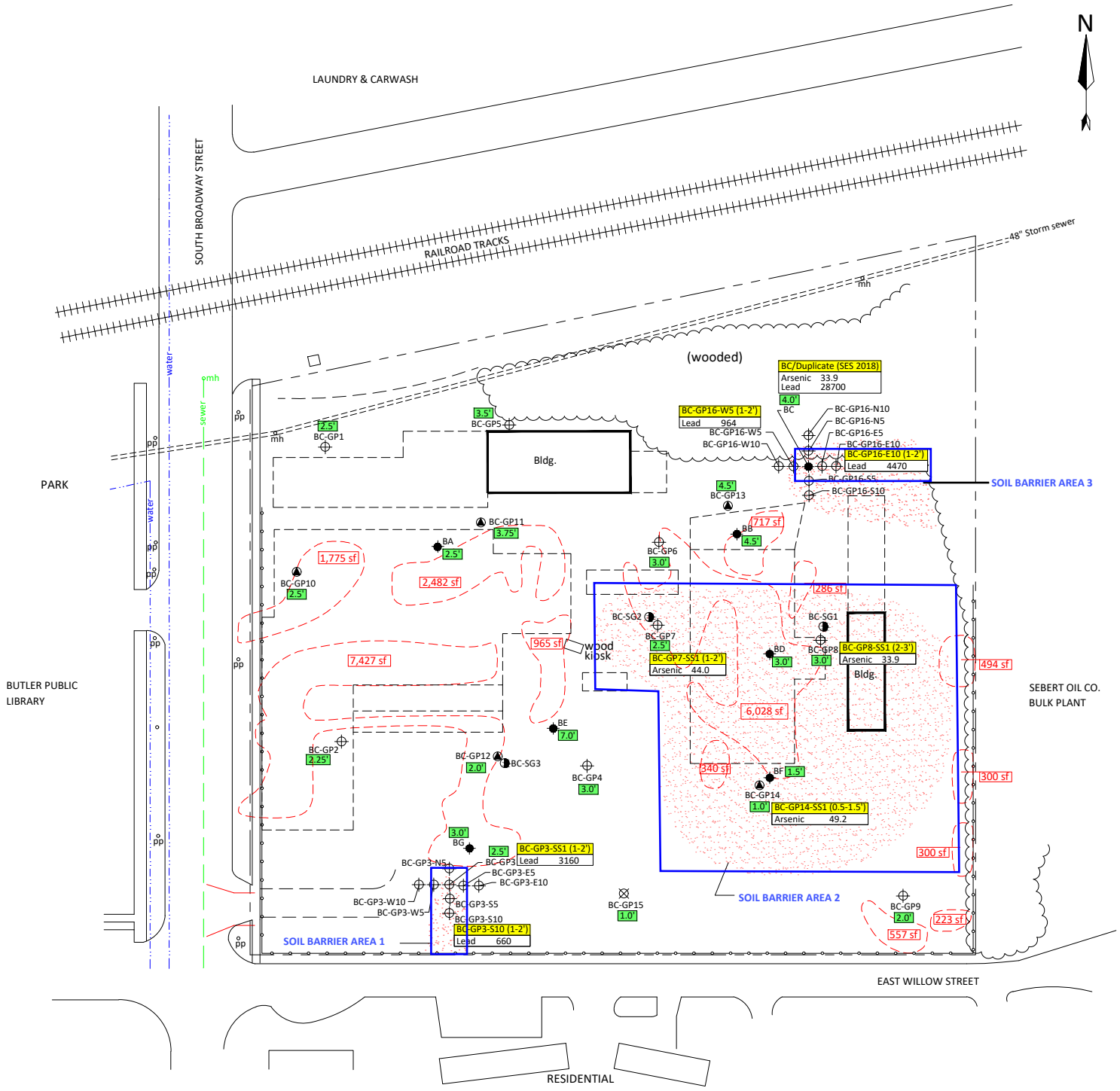
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana

LEGEND

- Approximate site boundary
- Approximate former building foundations
- pp Power pole
- mh Manhole
- Approximate locations of debris piles

PROJECT	
2020-295	
SCALE	FILE
1" = 80'	2020295map
DRAWN	CHECKED
dn	gh
DATE	FIGURE
5/22/20	4

SES



Notes: 1. Boring locations digitized from IWM mapping, 7/11/19
2. Soil testing results reported as mg/kg
3. Only arsenic and lead concentrations exceeding IDSLs are shown

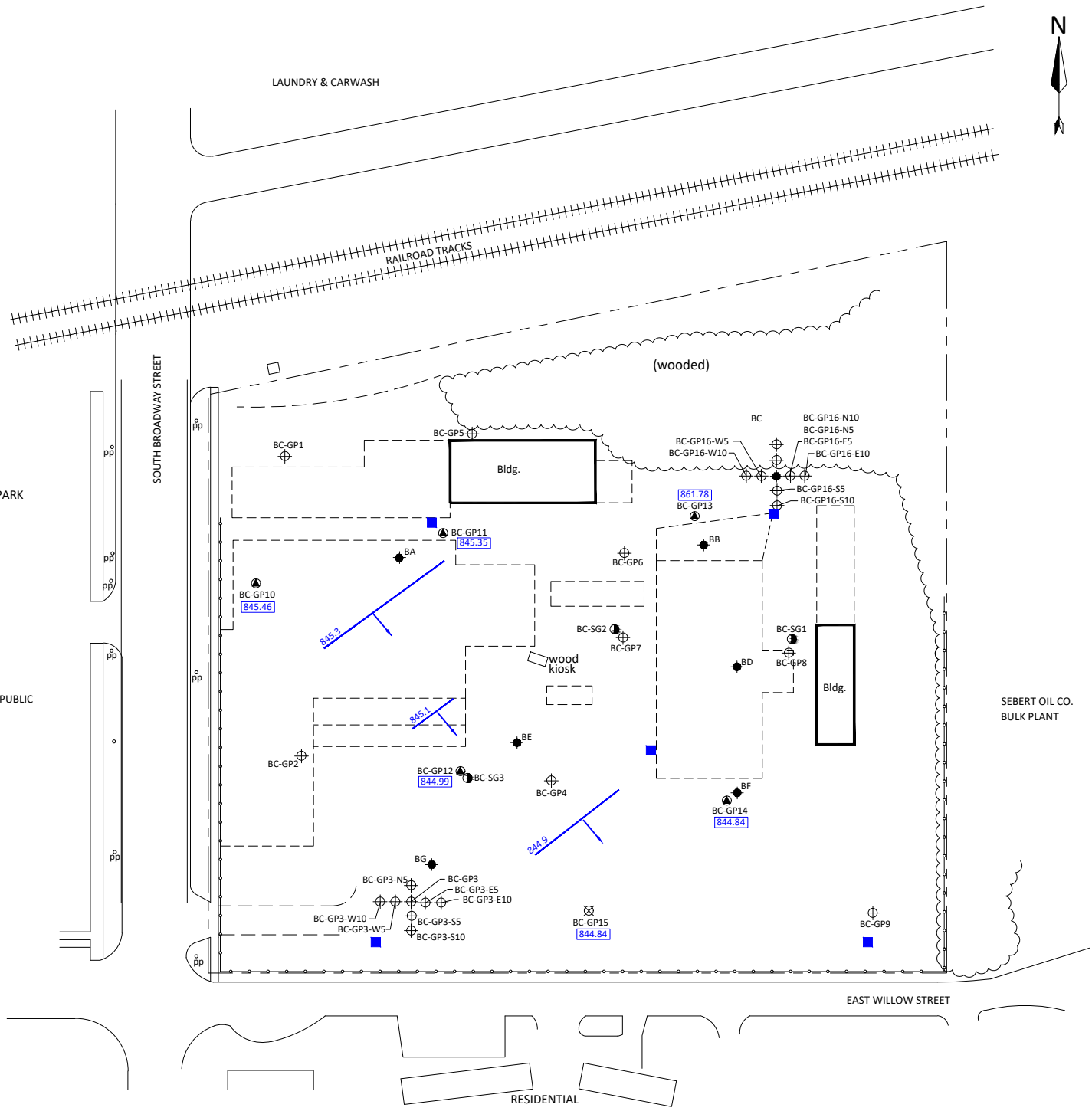
TITLE
SOIL BARRIER AREAS

LOCATION
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana

LEGEND
Approximate site boundary
Approximate former building foundations
pp Power pole
mh Manhole
Approximate locations of debris piles

PROJECT	
2020-295	
SCALE	FILE
1" = 80'	2020295map
DRAWN	CHECKED
dn	gh
DATE	FIGURE
5/22/20	5

SES



Notes: 1. Boring locations digitized from IWM mapping, 7/11/19
2. Soil testing results reported as mg/kg

TITLE: GROUNDWATER MONITORING	LEGEND: Approximate site boundary; Approximate former building foundations; ∘pp Power pole; Proposed monitor well location; 845.35 Groundwater elevation (ft) 22-May-19	PROJECT: 2020-295	
LOCATION: The Butler Company, 325 South Broadway Street, Butler, DeKalb County, Indiana		SCALE: 1" = 80'	FILE: 2020295map
		DRAWN: dn	CHECKED: gh
		DATE: 5/22/20	FIGURE: 6

REMEDIATION WORK PLAN

APPENDIX A. USDA SOIL REPORT

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for De Kalb County, Indiana

November 8, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: De Kalb County, Indiana
Survey Area Data: Version 22, Oct 2, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 1, 2011—Sep 24, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BaB2	Blount silt loam, 1 to 4 percent slopes, eroded	3.0	92.7%
Pe	Pewamo silty clay	0.2	7.3%
Totals for Area of Interest		**3.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

De Kalb County, Indiana

BaB2—Blount silt loam, 1 to 4 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t6kn
Elevation: 640 to 1,150 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Blount and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blount

Setting

Landform: End moraines on till plains, ground moraines on till plains
Landform position (two-dimensional): Footslope, backslope, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt - 8 to 26 inches: silty clay
BC - 26 to 30 inches: clay loam
Cd - 30 to 79 inches: clay loam

Properties and qualities

Slope: 1 to 4 percent
Depth to restrictive feature: 24 to 40 inches to densic material
Natural drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 35 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Haskins

Percent of map unit: 6 percent
Landform: End moraines on till plains, ground moraines on till plains
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Glynwood

Percent of map unit: 5 percent
Landform: End moraines on till plains, ground moraines on till plains
Landform position (two-dimensional): Footslope, backslope, shoulder
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

Pewamo

Percent of map unit: 4 percent
Landform: End moraines on till plains, ground moraines on till plains
Landform position (two-dimensional): Footslope, backslope, toeslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Pe—Pewamo silty clay

Map Unit Setting

National map unit symbol: 5cv6
Elevation: 640 to 1,150 feet
Mean annual precipitation: 34 to 39 inches
Mean annual air temperature: 47 to 52 degrees F
Frost-free period: 165 to 175 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Pewamo and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pewamo

Setting

Landform: Depressions on moraines, depressions on till plains
Landform position (two-dimensional): Footslope
Down-slope shape: Concave
Across-slope shape: Linear

Parent material: Clayey till

Typical profile

Ap - 0 to 10 inches: silty clay
Btg1,Btg2 - 10 to 34 inches: silty clay
Cg1,Cg2 - 34 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 35 percent
Available water storage in profile: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: Yes

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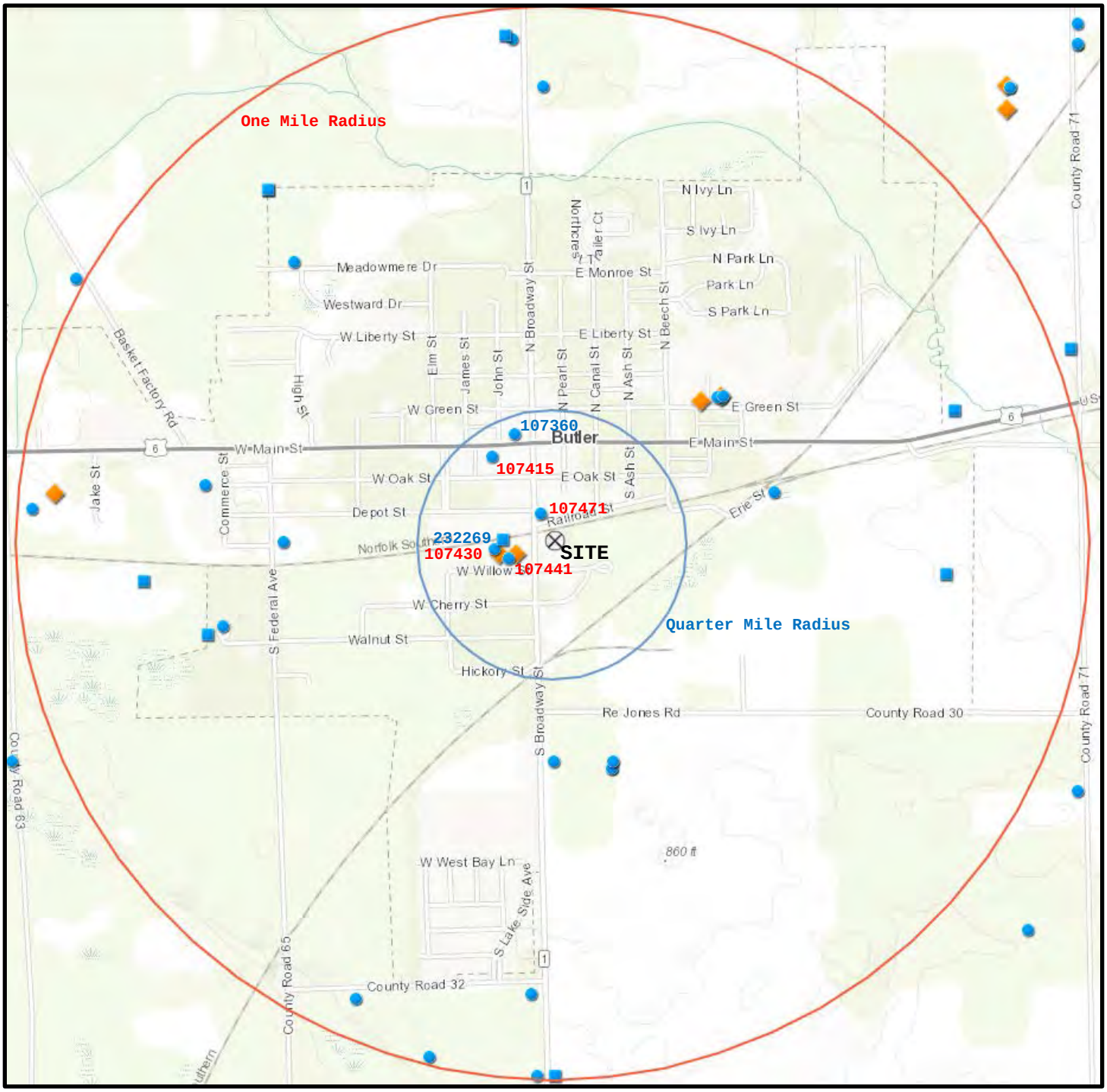
REMEDIATION WORK PLAN

APPENDIX B. WATER WELL LOGS

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705



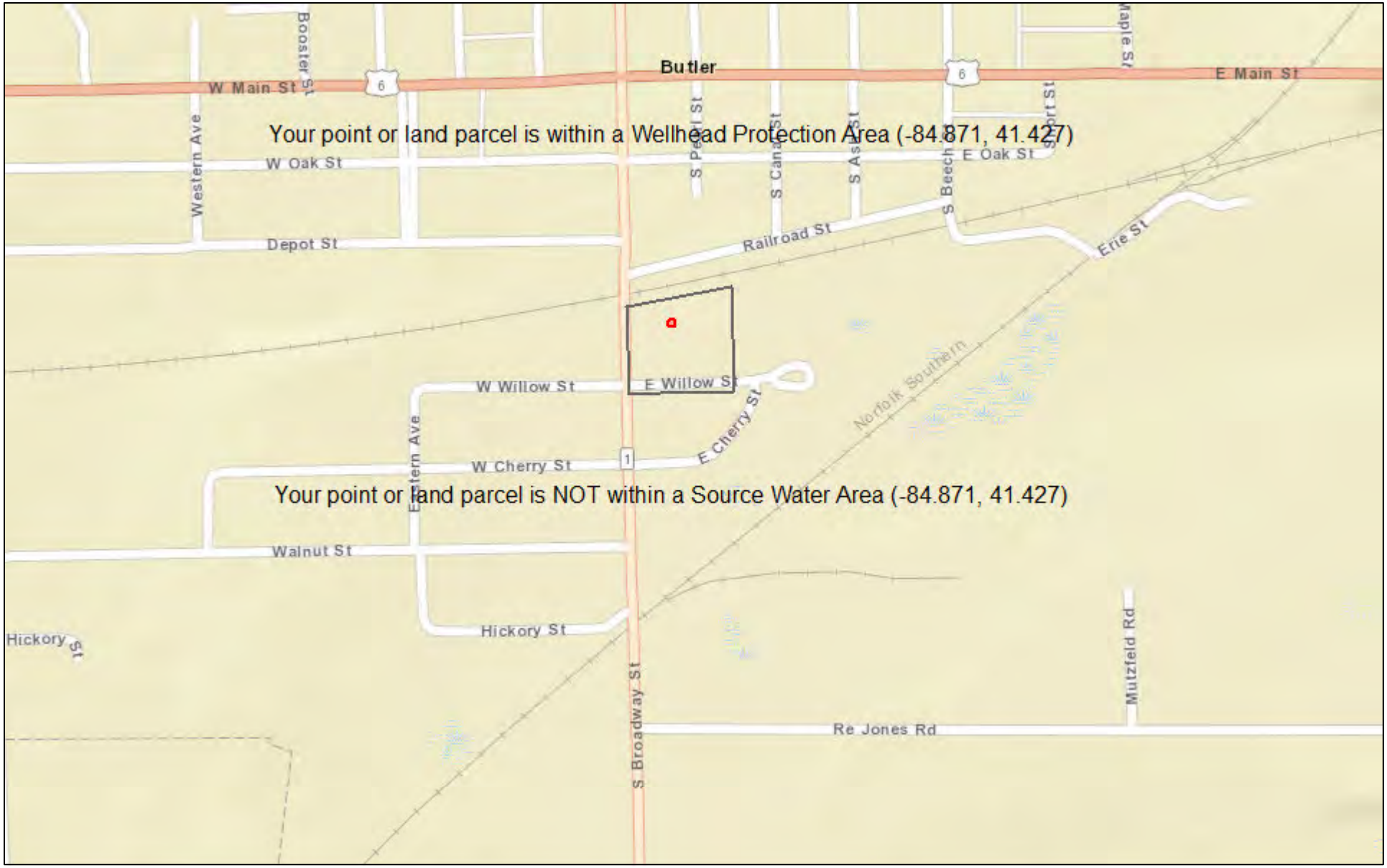
Appendix B

Water Well Mapping

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705
SES Project 2020-295

Blue – Pump Rate <70 GPM
Red – Pump Rate >70 GPM

IDEM Source Water Proximity



July 22, 2020

1:9,028

0 0.075 0.15 0.3 mi

0 0.1 0.2 0.4 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),

Record of Water Well

Indiana Department of Natural Resources

Reference Number	**Driving directions to well**	**Date completed**
107471	300' N OF PENN CENTRAL RR ON BROADWAY 1ST BLDG ON E SIDE OF BROADWAY N OF CONRAIL TRACKS	May 28, 1970

Owner-Contractor	**Name**	**Address**	**Telephone**
Owner	LAVON COLLINS	248 S BROADWAY BUTLER	
Driller	G & L WELL DRILLING		
Operator	MARVIN GILBERT/S LALOUDE	License: null	

Construction Details

Well	**Use:** Industry	**Drilling method:** Cable Tool	**Pump type:**
	Depth: 142.0	**Pump setting depth:**	**Water quality:**
Casing	**Length:** 116.0	**Material:**	**Diameter:** 8.0
Screen	**Length:** 15.0	**Material:**	**Diameter:** 8.0 **Slot size:** 30+25

Well Capacity Test

Type of test: **Test rate:** 350.0 gpm for 8.0 hrs. **BailTest rate:** 45.0 gpm for 5.0 hrs.
Drawdown: 24.0 ft. **Static water level:** 21.0 ft. **Bailer Drawdown** 0.0 ft.

Grouting Information

Material: **Depth:** from to
Installation Method: **Number of bags used:**

Well Abandonment

Sealing material: **Depth:** from to
Installation Method: **Number of bags used:**

Administrative

County: DEKALB **Township:** 34N **Range:** 14E
Section: SW of the NW of the NW of Section 12 **Topo map:** BUTLER EAST, IN-OH
Grant Number:
Field located by: BEB **on:** Oct 28, 1987
Courthouse location by: **on:**
Location accepted w/o verification by: HCK **on:** Jun 01, 1970
Subdivision name: **Lot number:**
Ft W of EL: **Ft N of SL:** **Ft E of WL:** 100.0 **Ft S of NL:** 700.0
Ground elevation: 870.0 **Depth to bedrock:** **Bedrock elevation:** **Aquifer elevation:** 728.0
UTM Easting: 677895.0 **UTM Northing:** 4588220.0

Well Log

Top	Bottom	Formation
0.0	0.5	BLACK TOP
0.5	5.0	FILL SAND
5.0	57.0	GRAY CLAY
57.0	95.0	SANDY HARD PAN
95.0	104.0	DIRTY SAND & GRAV
104.0	120.0	GRAY CLAY & FINE GRAV
120.0	126.0	FINE SAND
126.0	142.0	CRS SAND & GRAV

Comments MC CONTACT MADE W/ OWNER WELL USED FOR LAUNDROMAT AND CAR WASH WELL LOCATED ON N SIDE OF LAUNDRY

Record of Water Well

Indiana Department of Natural Resources

Reference Number	**Driving directions to well**	**Date completed**
107441	450' W OF BROADWAY 200' N OF W WILLOW	Sep 18, 1970

Owner-Contractor	**Name**	**Address**	**Telephone**
Owner	CITY WATER DEPT	BUTLER, IN	
Driller	LAYNE NORTHERN CO	MISHAWAKA, IN	

Construction Details

Well	**Use:** Public Supply	**Drilling method:** Other	**Pump type:**
	Depth: 147.0	**Pump setting depth:**	**Water quality:**
Casing	**Length:** 88.0	**Material:**	**Diameter:** 38.0
Screen	**Length:** 30.0	**Material:**	**Diameter:** 18.0 **Slot size:** 8

Well Capacity Test

Type of test: **Test rate:** 1002.0 gpm for 28.0 hrs. **BailTest rate:** gpm for hrs.
Drawdown: 20.0 ft. **Static water level:** 24.0 ft. **Bailer Drawdown** ft.

Grouting Information

Material: **Depth:** from to
Installation Method: **Number of bags used:**

Well Abandonment

Sealing material: **Depth:** from to
Installation Method: **Number of bags used:**

Administrative

County: DEKALB **Township:** 34N **Range:** 14E
Section: SE of the NE of the NE of Section 11 **Topo map:** BUTLER EAST, IN-OH
Grant Number:
Field located by: TMB **on:** Aug 01, 1973
Courthouse location by: **on:**
Location accepted w/o verification by: **on:**
Subdivision name: **Lot number:**
Ft W of EL: 450.0 **Ft N of SL:** **Ft E of WL:** **Ft S of NL:** 1100.0
Ground elevation: 870.0 **Depth to bedrock:** **Bedrock elevation:** **Aquifer elevation:** 723.0
UTM Easting: 677801.0 **UTM Northing:** 4588080.0

Well Log

Top	Bottom	Formation
0.0	2.0	FILL
2.0	28.0	CLAY
28.0	31.0	COARSE SAND & GRAVEL
31.0	57.0	CLAY
57.0	62.0	COARSE SAND & GRAVEL
62.0	89.0	CLAY
89.0	106.0	COARSE SAND & GRAVEL
106.0	129.0	CLAY
129.0	147.0	COARSE SAND & GRAVEL
147.0	148.0	CLAY

Comments WELL IN PUMPHOUSE W OF WATER TOWER PUMPING TEST DATA ENCLOSED

Record of Water Well

Indiana Department of Natural Resources

Reference Number
107430

Driving directions to well

Date completed
Dec 22, 1959

Owner-Contractor	**Name**	**Address**	**Telephone**
Driller	WATSON WELL DRILLING INC	BRYAN, OH	
Operator	C KIMBLE	License: null	

Construction Details

Well	**Use:** Public Supply	**Drilling method:** Other	**Pump type:**
	Depth: 144.0	**Pump setting depth:**	**Water quality:**
Casing	**Length:** 93.0	**Material:**	**Diameter:** 26.0
Screen	**Length:** 20.0	**Material:**	**Diameter:** 13.5 **Slot size:** 7

Well Capacity Test
Type of test: **Test rate:** 1000.0 gpm for hrs. **BailTest rate:** gpm for hrs.
Drawdown: 17.0 ft. **Static water level:** 21.6 ft. **Bailer Drawdown** ft.

Grouting Information
Material: **Depth:** from to
Installation Method: **Number of bags used:**

Well Abandonment
Sealing material: **Depth:** from to
Installation Method: **Number of bags used:**

Administrative
County: DEKALB **Township:** 34N **Range:** 14E
Section: SE of the NE of the NE of Section 11 **Topo map:** BUTLER EAST, IN-OH
Grant Number:
Field located by: KP **on:** Jul 01, 1965
Courthouse location by: **on:**
Location accepted w/o verification by: **on:**
Subdivision name: **Lot number:**
Ft W of EL: 350.0 **Ft N of SL:** **Ft E of WL:** **Ft S of NL:** 1000.0
Ground elevation: 870.0 **Depth to bedrock:** **Bedrock elevation:** **Aquifer elevation:** 726.0
UTM Easting: 677758.0 **UTM Northing:** 4588106.0

Well Log

Top	Bottom	Formation
0.0	18.0	HARD YELLOW CLAY
18.0	38.0	SAND & GRAVEL
38.0	58.0	CLAY
58.0	64.0	GRAVEL
64.0	88.0	BLUE CLAY
88.0	105.0	GRAVEL
105.0	129.0	CLAY
129.0	144.0	GRAVEL & SAND

Comments MC WELL #3 & TEST 59A

Record of Water Well

Indiana Department of Natural Resources

Reference Number
107415

Driving directions to well
AT UTILITY BLDG S SIDE JUST W OF SR 1

Date completed

Owner-Contractor	**Name**	**Address**	**Telephone**
Owner	BUTLER WATER WORKS	BUTLER	

Construction Details

Well	**Use:** Public Supply	**Drilling method:**	**Pump type:**
	Depth: 147.0	**Pump setting depth:**	**Water quality:**
Casing	**Length:**	**Material:**	**Diameter:** 10.0
Screen	**Length:**	**Material:**	**Diameter:** 10.0 **Slot size:**

Well Capacity Test
Type of test: **Test rate:** 275.0 gpm for hrs. **BailTest rate:** gpm for hrs.
Drawdown: ft. **Static water level:** 24.0 ft. **Bailer Drawdown** ft.

Grouting Information
Material: **Depth:** from to
Installation Method: **Number of bags used:**

Well Abandonment
Sealing material: **Depth:** from to
Installation Method: **Number of bags used:**

Administrative
County: DEKALB **Township:** 34N **Range:** 14E
Section: NE of the NE of the NE of Section 11 **Topo map:** BUTLER EAST, IN-OH
Grant Number:
Field located by: U KEP **on:** Jul 09, 1965
Courthouse location by: **on:**
Location accepted w/o verification by: **on:**
Subdivision name: **Lot number:**
Ft W of EL: 300.0 **Ft N of SL:** **Ft E of WL:** **Ft S of NL:** 100.0
Ground elevation: 865.0 **Depth to bedrock:** **Bedrock elevation:** **Aquifer elevation:** 720.0
UTM Easting: 677744.0 **UTM Northing:** 4588385.0

Well Log

Top	Bottom	Formation

Comments BUTLER 1

Record of Water Well

Indiana Department of Natural Resources

Reference Number	**Driving directions to well**	**Date completed**
107360	W OF BUTLER ON SR 6 3RD HSE ON R SIDE NEW LOCATION MOVED OLD HSE ON LOT	Sep 03, 1962

Owner-Contractor	**Name**	**Address**	**Telephone**
Owner	MR LARROWE	RRT BUTLER	
Driller	WILFRED SCHIFFLI	RRT 1 BOX 34 WATERLOO	
Operator	WILFRED SCHIFFLI	License: null	

Construction Details

Well	**Use:** Home	**Drilling method:** Jet	**Pump type:**
	Depth: 52.0	**Pump setting depth:**	**Water quality:**
Casing	**Length:** 48.0	**Material:**	**Diameter:** 2.0
Screen	**Length:** 2.5	**Material:**	**Diameter:** 1.0 **Slot size:** 40

Well Capacity Test

Type of test: **Test rate:** 12.0 gpm for 2.0 hrs. **BailTest rate:** gpm for hrs.
Drawdown: 0.0 ft. **Static water level:** 10.0 ft. **Bailer Drawdown** ft.

Grouting Information

Material: **Depth:** from to
Installation Method: **Number of bags used:**

Well Abandonment

Sealing material: **Depth:** from to
Installation Method: **Number of bags used:**

Administrative

County: DEKALB **Township:** 34N **Range:** 14E
Section: SE of the SE of the SE of Section 2 **Topo map:** BUTLER EAST, IN-OH
Grant Number:
Field located by: KEPPEL **on:** Jul 01, 1965
Courthouse location by: **on:**
Location accepted w/o verification by: **on:**
Subdivision name: **Lot number:**
Ft W of EL: 150.0 **Ft N of SL:** 50.0 **Ft E of WL:** **Ft S of NL:**
Ground elevation: 865.0 **Depth to bedrock:** **Bedrock elevation:** **Aquifer elevation:** 813.0
UTM Easting: 677812.0 **UTM Northing:** 4588455.0

Well Log

Top	Bottom	Formation
0.0	10.0	YEL CLAY
10.0	48.0	GRAY CLAY
48.0	52.0	SAND & GRAV & WATER

Comments

Record of Water Well

Indiana Department of Natural Resources

Reference Number
232269

Driving directions to well

Date completed
Nov 24, 1959

Owner-Contractor	**Name**	**Address**	**Telephone**
Owner	CITY OF BUTLER	BUTLER, IN	
Driller	GRO P REID & SON	HOWE, IN	
Operator	WM REID	License: null	

Construction Details

Well	**Use:**	**Drilling method:** Jet	**Pump type:**
	Depth: 148.0	**Pump setting depth:**	**Water quality:**
Casing	**Length:**	**Material:**	**Diameter:** 2.0
Screen	**Length:** 3.0	**Material:**	**Diameter:** 1.0 **Slot size:** 60

Well Capacity Test
Type of test: **Test rate:** gpm for hrs. **BailTest rate:** gpm for hrs.
Drawdown: ft. **Static water level:** 21.0 ft. **Bailer Drawdown** ft.

Grouting Information
Material: **Depth:** from to
Installation Method: **Number of bags used:**

Well Abandonment
Sealing material: **Depth:** from to
Installation Method: **Number of bags used:**

Administrative
County: DEKALB **Township:** 34N **Range:** 14E
Section: SE of the NE of the NE of Section 11 **Topo map:** BUTLER EAST, IN-OH
Grant Number:
Field located by: BEB **on:** Oct 29, 1987
Courthouse location by: **on:**
Location accepted w/o verification by: **on:**
Subdivision name: **Lot number:**
Ft W of EL: **Ft N of SL:** **Ft E of WL:** **Ft S of NL:**
Ground elevation: 875.0 **Depth to bedrock:** **Bedrock elevation:** **Aquifer elevation:**
UTM Easting: **UTM Northing:**

Well Log

Top	Bottom	Formation
0.0	18.0	CLAY BLUE
18.0	32.0	SAND & GRAVEL LT GRAY
32.0	60.0	CLAY BLUE
60.0	65.0	GRAV & LT GRAY
65.0	88.0	CLAY BLUE
88.0	105.0	GRAV LT GRAY
105.0	130.0	CLAY BLUE
130.0	144.0	GRAV LT GRAY
144.0	148.0	CLAY BLUE

Comments MC USE OF WELL TEST

REMEDIATION WORK PLAN

APPENDIX C. SOIL BORING LOGS

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705

SES Environmental
3807 Transportation Dr.
Fort Wayne, IN 46818
Phone: (260)497-7645
Fax: (260)497-7646

Boring/Well Number: BA

Client: City of Butler
Project Name: Former Butler Company
Project Number: 2018-364
Project Location: 325 South Broadway St. Butler, IN

Drilling Contractor: SCS Contracting
Driller Name: Philip Weaver
Driller Number: 4201
Drilling Method: Geoprobe 7822 DT
Logged By: Karsten Lehner
Date Started: 5/22/18 Completed: 5/22/18

Ground Elevation:
Top of Casing Elevation:
GPS Coordinates:
Groundwater Level:
▽ At Time of Drilling:
▼ At End of Drilling:

Depth (feet)	Sample Type and Number	Lab Tests	Recovery (inches)	Blow Count	Soil Description	PID (ppmv) Value	PID (ppmv) Profile 0 1000	Graphic	USCS Classification	Well Construction BA
	DT 0-2		16		Top soil -0.25	1.2			FILL	
	DT 2-4		16		Black, moist-wet, debris: sinder, gravel and SAND. -1.5	0.2			CL	
5	DT 4-6		21		Brown-grey, moist, med-stiff, mottled CLAY. -2.13	0.6			FILL	
	DT 6-8		21		Debis: wood. -2.63	0.1				
	DT 8-10		24		Brown-grey, moist, med-stiff, mottled, CLAY with organics. Grey-brown, moist, stiff, mottled, CLAY, trace organics and fine-med gravel. As above, no organics.	0			CL	
10	DT 10-12		24			0.1				
	DT 12-14		24		Brown, moist, stiff, CLAY, trace medium gravel.	0.1				
15	DT 14-16		24		-14.58 Brown, saturated, rounded, medium gravel. -14.67	0			GW	
					Brown, moist, stiff, CLAY with trace medium gravel. -16 End of Boring				CL	
20										
25										
30										

Notes:

SES Environmental
3807 Transportation Dr.
Fort Wayne, IN 46818
Phone: (260)497-7645
Fax: (260)497-7646

Boring/Well Number: BB

Client: City of Butler
Project Name: Former Butler Company
Project Number: 2018-364
Project Location: 325 South Broadway St. Butler, IN

Drilling Contractor: SCS Contracting
Driller Name: Philip Weaver
Driller Number: 4201
Drilling Method: Geoprobe 7822 DT
Logged By: Karsten Lehner
Date Started: 5/22/18 Completed: 5/22/18

Ground Elevation:
Top of Casing Elevation:
GPS Coordinates:
Groundwater Level:
▽ At Time of Drilling:
▼ At End of Drilling:

Depth (feet)	Sample Type and Number	Lab Tests	Recovery (inches)	Blow Count	Soil Description	PID (ppmv) Value	PID (ppmv) Profile 0–1000	Graphic	USCS Classification	Well Construction BB
	DT 0-2		12		Concrete surface –0.25 Top soil and gravel. –0.83	2.3			FILL	
	DT 2-4		12		Debris: bricks Black, moist, SAND and debris: sinder and bricks. –2.67	56.2			SW	
5	DT 4-6		14		Tan, wet, SAND. –3	36.5			FILL	
	DT 6-8		14		Brown-black, wet, sinder and debris. Coarse gravel, sinder and debris. –4.29	3.8				
	DT 8-10		18		Dark brown, moist, med-soft, peat-like soil with organic debris. –8.44	2.0			VC	
10	DT 10-12		18		Grey, moist, soft, SILTY SANDY CLAY. –8.55 Grey, moist, med-stiff, CLAY with trace medium gravel. –12	0.8			CL	
					End of Boring					
15										
20										
25										
30										

Notes:

SES Environmental
3807 Transportation Dr.
Fort Wayne, IN 46818
Phone: (260)497-7645
Fax: (260)497-7646

Boring/Well Number: BC

Client: City of Butler
Project Name: Former Butler Company
Project Number: 2018-364
Project Location: 325 South Broadway St. Butler, IN

Drilling Contractor: SCS Contracting
Driller Name: Philip Weaver
Driller Number: 4201
Drilling Method: Geoprobe 7822 DT
Logged By: Karsten Lehner
Date Started: 5/22/18 Completed: 5/22/18

Ground Elevation:
Top of Casing Elevation:
GPS Coordinates:
Groundwater Level:
▽ At Time of Drilling:
▼ At End of Drilling:

Depth (feet)	Sample Type and Number	Lab Tests	Recovery (inches)	Blow Count	Soil Description	PID (ppmv) Value	Graphic	USCS Classification	Well Construction BC
	DT 0-2		10		Black slag	1.8		FILL	
	DT 2-4		10		Wet debris: bricks, paint chips, slag, sinder.	8.0			
					-4				
5	DT 4-6		14		Black, moist, peat-like soil with orgaincs.	0.5			
					-5.14				
	DT 6-8		14		Grey, moist, med-soft, CLAY.	0.3		CL	
	DT 8-10		23		Grey-brown, moist, med-stiff, CLAY with trace mottling and fine gravel .	0.1			
10									
	DT 10-12		23			0.1			
	DT 12-14		24		Grey, moist, stiff, CLAY with trace medium gravel.	0.2			
15	DT 14-16		24			0.2			
	DT 16-18		15			0.2			
					-18				
					End of Boring				
20									
25									
30									

PID (ppmv) Profile: 0 – 1000

Notes:

SES Environmental
3807 Transportation Dr.
Fort Wayne, IN 46818
Phone: (260)497-7645
Fax: (260)497-7646

Boring/Well Number: BD

Client: City of Butler
Project Name: Former Butler Company
Project Number: 2018-364
Project Location: 325 South Broadway St. Butler, IN

Drilling Contractor: SCS Contracting
Driller Name: Philip Weaver
Driller Number: 4201
Drilling Method: Geoprobe 7822 DT
Logged By: Karsten Lehner
Date Started: 5/22/18 Completed: 5/22/18

Ground Elevation:
Top of Casing Elevation:
GPS Coordinates:
Groundwater Level:
▽ At Time of Drilling:
▼ At End of Drilling:

Depth (feet)	Sample Type and Number	Lab Tests	Recovery (inches)	Blow Count	Soil Description	PID (ppmv) Value	PID (ppmv) Profile 0–1000	Graphic	USCS Classification	Well Construction BD
	DT 0-2		9		Limestone gravel. -0.42 Brown-black, wet, debris: slag, sinder.	6.1			FILL	
	DT 2-4		9		-3.17 Grey, moist, med-stiff, CLAY, trace fine gravel.	3.2				
5	DT 4-6		17		Brown-grey, moist, med-stiff, mottled, CLAY, trace gravel.	0.5				
	DT 6-8		17			0.4				
10	DT 8-10		24		Brown, moist, stiff, CLAY, trace fine gravel.	0.4				
	DT 10-12		24			0.3			CL	
15	DT 12-15		48		As above, grey, swelling.	0.3				
	DT 15-18		48			0.2				
20	DT 18-20		24		-17.75 Grey, wet, SAND. Grey, saturated, SAND. -20	0.3			SP	
25					End of Boring					
30										

Notes:

SES Environmental
3807 Transportation Dr.
Fort Wayne, IN 46818
Phone: (260)497-7645
Fax: (260)497-7646

Boring/Well Number: BE

Client: City of Butler
Project Name: Former Butler Company
Project Number: 2018-364
Project Location: 325 South Broadway St. Butler, IN

Drilling Contractor: SCS Contracting
Driller Name: Philip Weaver
Driller Number: 4201
Drilling Method: Geoprobe 7822 DT
Logged By: Karsten Lehner
Date Started: 5/22/18 Completed: 5/22/18

Ground Elevation:
Top of Casing Elevation:
GPS Coordinates:
Groundwater Level:
▽ At Time of Drilling:
▼ At End of Drilling:

Depth (feet)	Sample Type and Number	Lab Tests	Recovery (inches)	Blow Count	Soil Description	PID (ppmv) Value	PID (ppmv) Profile 0 1000	Graphic	USCS Classification	Well Construction BE
	DT 0-2		7		Black, moist, debris: sinder, bricks. Poor recovery due to debris.	0.2			FILL	
	DT 2-4		7			5.3				
5	DT 4-6		7			1.5				
	DT 6-8		7		-7	0.4				
	DT 8-10		21		Brown-grey, moist, stiff, mottled, CLAY.	0.3			CL	
10	DT 10-12		21			0.3				
	DT 12-14		24		Brown, moist, med-stiff, CLAY, trace fine-medium gravel.	0.2				
					-14				GP-SP	
15	DT 14-16		24		Brown, moist, SAND and coarse gravel. -14.04	0.3			CL	
					Brown, moist, med-stiff, CLAY, trace fine gravel. -16					
					End of Boring					
20										
25										
30										

Notes:

SES Environmental
3807 Transportation Dr.
Fort Wayne, IN 46818
Phone: (260)497-7645
Fax: (260)497-7646

Boring/Well Number: BF

Client: City of Butler
Project Name: Former Butler Company
Project Number: 2018-364
Project Location: 325 South Broadway St. Butler, IN

Drilling Contractor: SCS Contracting
Driller Name: Philip Weaver
Driller Number: 4201
Drilling Method: Geoprobe 7822 DT
Logged By: Karsten Lehner
Date Started: 5/22/18 Completed: 5/22/18

Ground Elevation:
Top of Casing Elevation:
GPS Coordinates:
Groundwater Level:
▽ At Time of Drilling:
▼ At End of Drilling:

Depth (feet)	Sample Type and Number	Lab Tests	Recovery (inches)	Blow Count	Soil Description	PID (ppmv) Value	PID (ppmv) Profile 0 1000	Graphic	USCS Classification	Well Construction BF
	DT 0-2		12		Gravel, debris and sinder.	3.9			FILL	
					-1.5					
	DT 2-4		12		Brown, moist, stiff, mottled-grey, CLAY, trace fine gravel.	1.1				
5	DT 4-6		24			0.6				
	DT 6-8		24			0.5				
10	DT 8-10		24			0.6				
	DT 10-12		24			0.5			CL	
	DT 12-14		24		As above, no mottling.	0.5				
15	DT 14-16		24			0.5				
	DT 16-19		48		Grey, moist, stiff, swelling, CLAY.	0.2				
					-18.86					
20					Grey, moist, SAND. Refusal at 19'				SP	
					-19					
					End of Boring					
25										
30										

Notes:

SES Environmental
3807 Transportation Dr.
Fort Wayne, IN 46818
Phone: (260)497-7645
Fax: (260)497-7646

Boring/Well Number: BG

Client: City of Butler
Project Name: Former Butler Company
Project Number: 2018-364
Project Location: 325 South Broadway St. Butler, IN

Drilling Contractor: SCS Contracting
Driller Name: Philip Weaver
Driller Number: 4201
Drilling Method: Geoprobe 7822 DT
Logged By: Karsten Lehner
Date Started: 5/22/18 Completed: 5/22/18

Ground Elevation:
Top of Casing Elevation:
GPS Coordinates:
Groundwater Level:
▽ At Time of Drilling:
▼ At End of Drilling:

Depth (feet)	Sample Type and Number	Lab Tests	Recovery (inches)	Blow Count	Soil Description	PID (ppmv) Value	PID (ppmv) Profile 0 1000	Graphic	USCS Classification	Well Construction BG
	DT 0-2		15		Brown, moist, top soil and mixed gravel. -0.93 Gravel and concrete.	0.5			GP	
	DT 2-4		15		-3.2 Brown-grey, moist, soft, mottled, CLAY.	0.3			CL	
5	DT 4-6		17		As above, med-stiff. -6	0			SP	
	DT 6-8		17		Grey, wet, coarse, SAND. -6.11 Brown-grey, moist, med-stiff, mottled, CLAY, trace fine gravel.	0.1			CL	
10	DT 8-10		24		Brown, moist, stiff, CLAY with trace fine-medium gravel.	0				
	DT 10-12		24			0				
	DT 12-14		24			0				
15	DT 14-16		24			0				
	DT 16-18		24			0				
20	DT 18-20		24		-20	0				
					End of Boring					
25										
30										

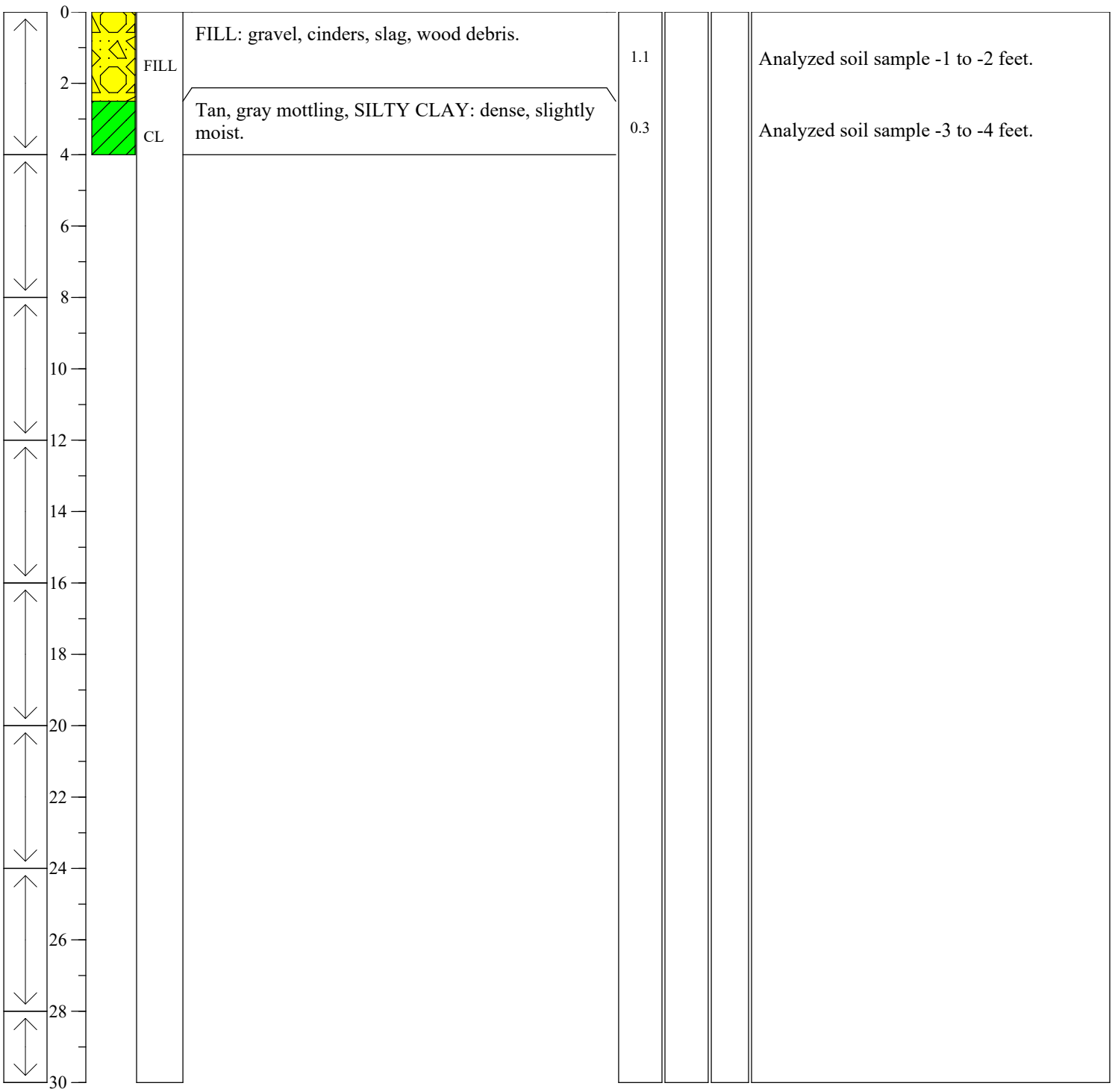
Notes:

Soil Boring: BC-GP1

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

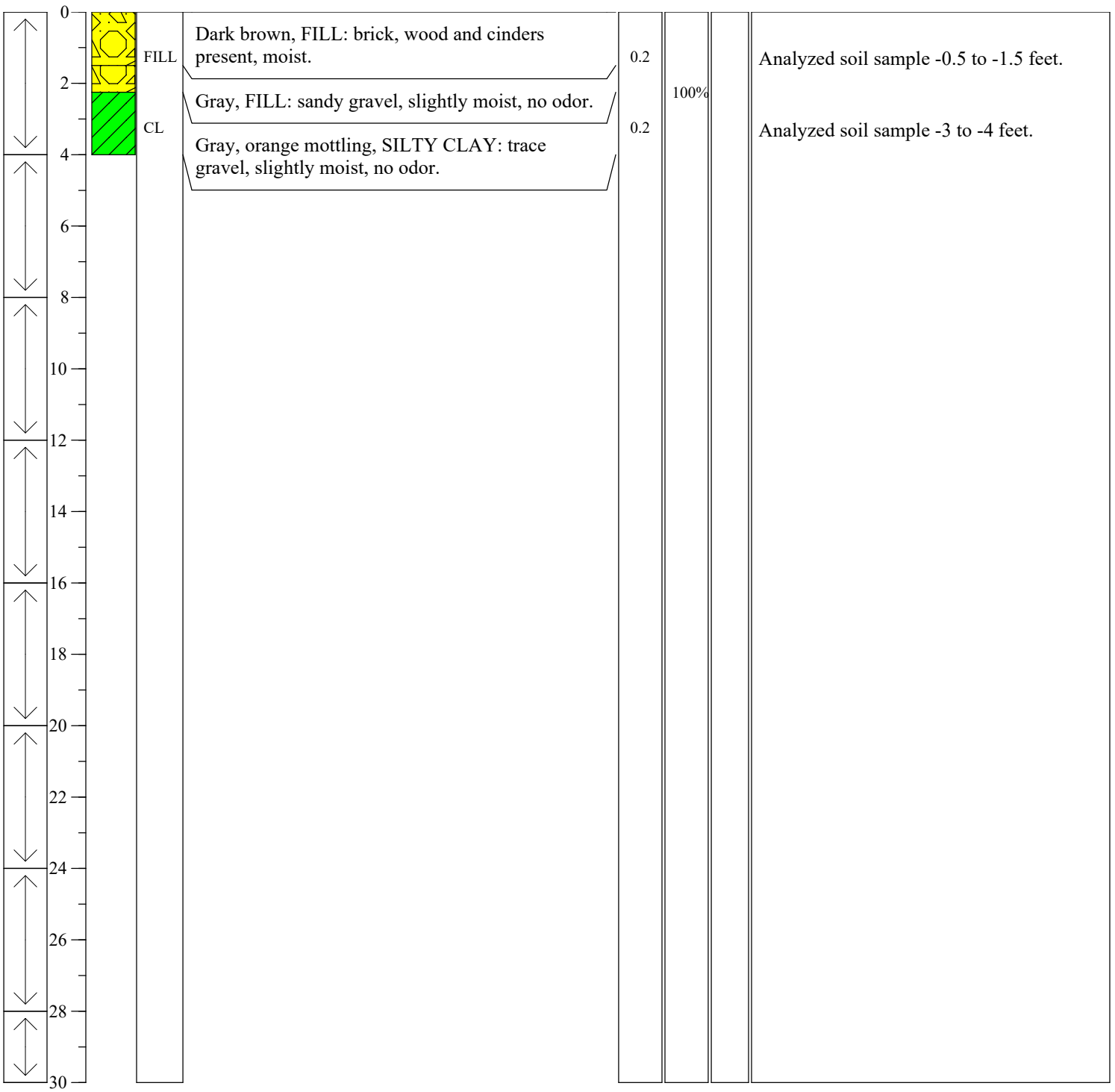


Soil Boring: BC-GP2

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

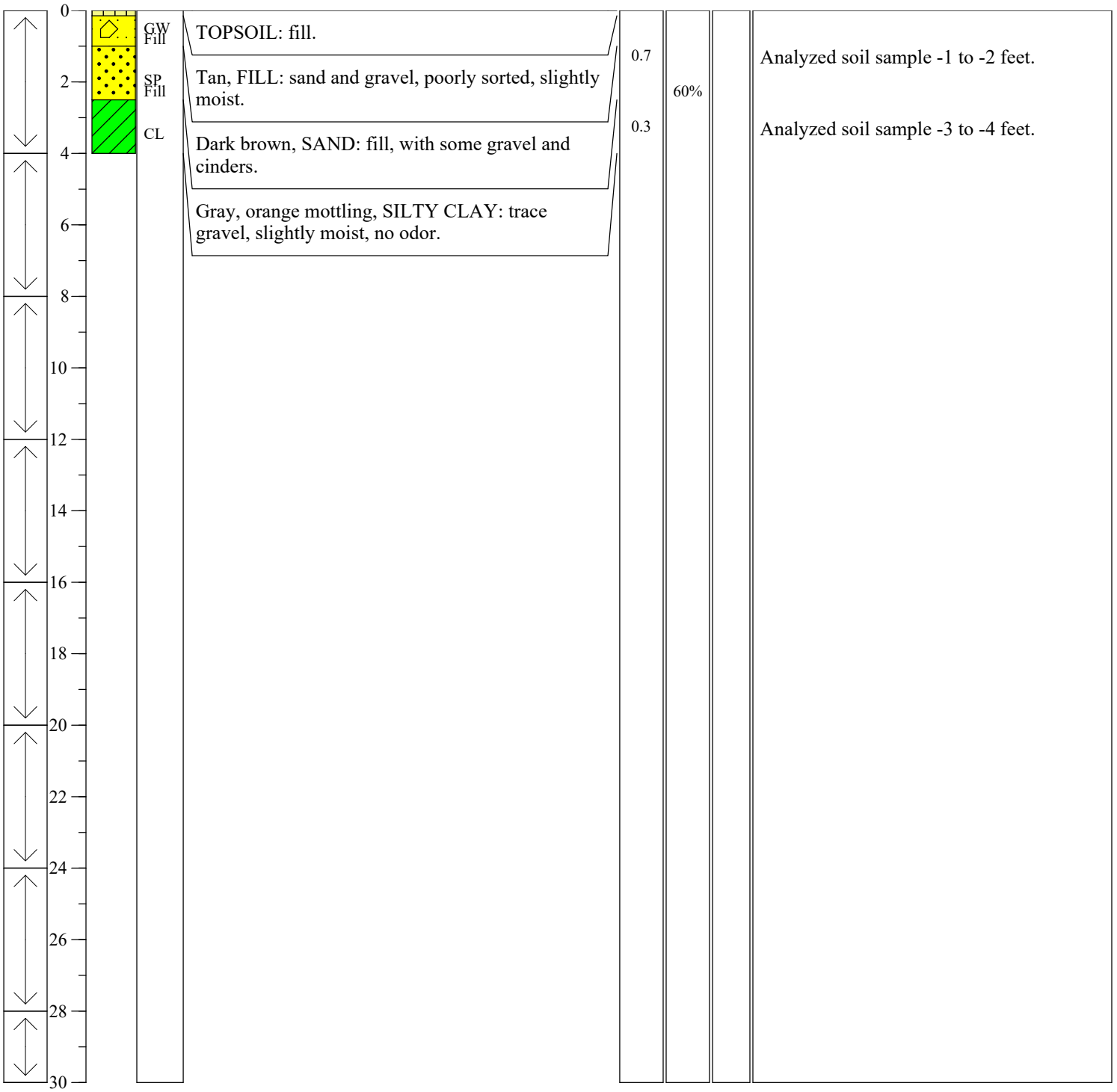


Soil Boring: BC-GP3

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube



Soil Boring: BC GP3-N5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		OL	TOPSOIL: organics present, moist, no odor.			
			SP	Brown, GRAVELLY, CLAYEY SAND: moist, no odor.			
			SP	Brown, GRAVELLY, CLAYEY SAND: some bricks, moist, no odor.			Soil sample analyzed between -1 and -2 feet.
			CL	Gray, brown mottling, SILTY CLAY: slightly dense, slightly moist, no odor.			
	2						

Soil Boring: BC GP3-E5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		OL	TOPSOIL: organics present, moist, no odor.			
				Brown, GRAVELLY, CLAYEY SAND: medium to large grained, slightly moist, no odor.			
			SP	Black, SAND: foundry sand and slag, clay at -2 feet.			Soil sample analyzed between -1 and -2 feet.
	2						

Soil Boring: BC GP3-S5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -1.25

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		OL	TOPSOIL: organics present, moist, no odor.			
				Brown, GRAVELLY, CLAYEY SAND: medium to large grained, slightly moist, no odor.			
			SP	Black, SAND: foundry sand and slag.			Soil sample analyzed between -1 and -1.25 feet.
				Refusal at -14 inches.			
	2						

Soil Boring: BC GP3-W5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -1.5

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0			Brown, GRAVELLY, CLAYEY SAND: organics present between 0 to -0.5 feet, slightly moist, no odor.			
			SP	Dark brown, GRAVELLY, CLAYEY SAND: slightly moist, no odor.			Soil sample analyzed between -1 and -1.75 feet.
				Brown, GRAVELLY SAND: slightly moist, no odor.			
	2						

Soil Boring: BC GP3-E10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0			Brown, GRAVELLY SAND: medium to large grained, with cobbles, slightly moist, no odor.			
			SP	Black, SAND: foundry sand, some slag, clay at -2 feet, slightly moist, no odor.			Soil sample analyzed between -1 and -2 feet.
	2						

Soil Boring: BC GP3-S10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		SP	Brown, GRAVELLY SAND: medium to large grained, with cobbles, slightly moist, no odor.			
				Black, SAND: foundry sand and slag.			Soil sample analyzed between -1 and -2 feet.
	2						

Soil Boring: BC GP3-W10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -1.75

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

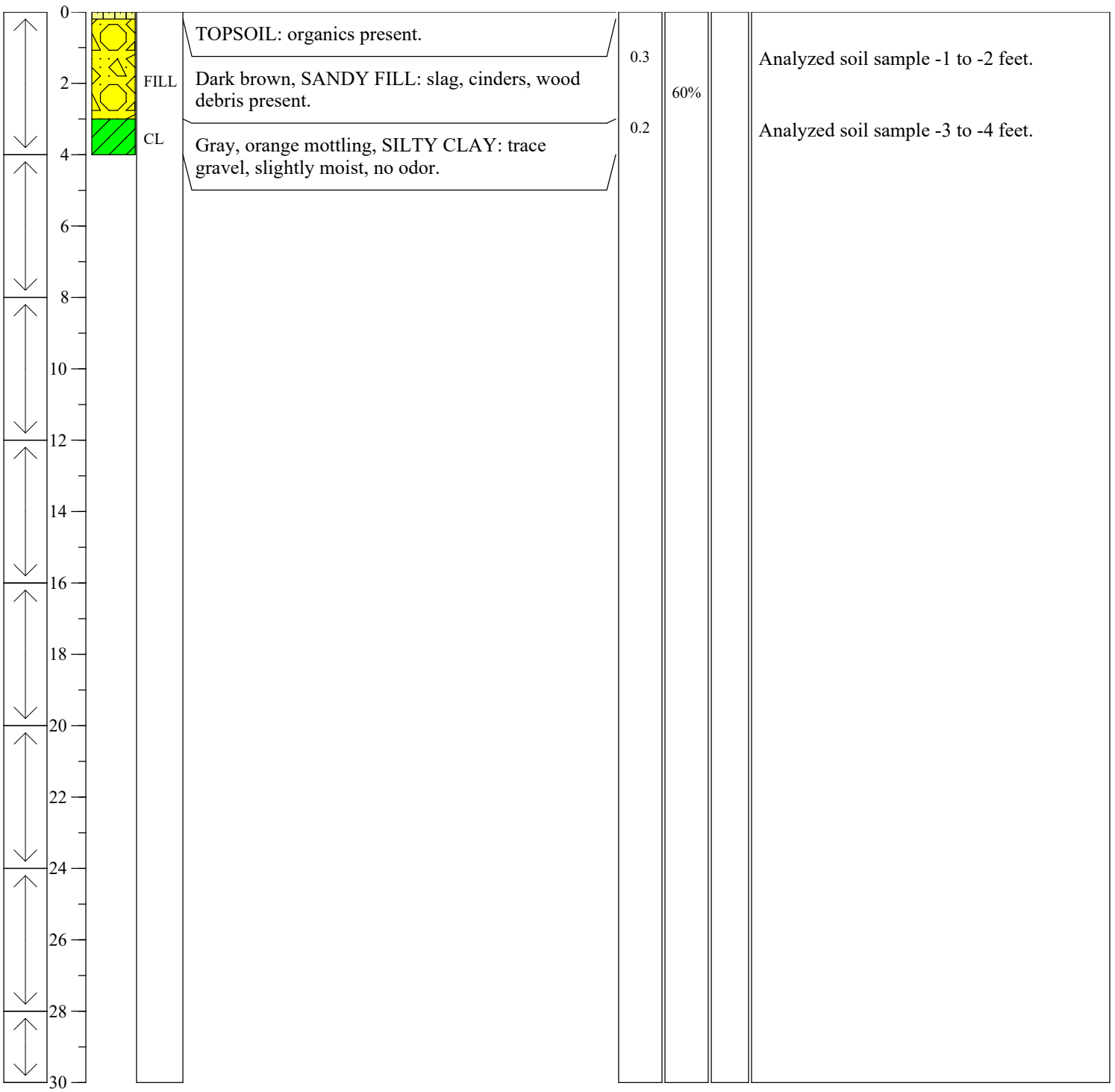
Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0			Brown, GRAVELLY, CLAYEY SAND: organics present between 0 to -0.5 feet, slightly moist, no odor.			
			SP	Dark brown, GRAVELLY, CLAYEY SAND: slightly moist, no odor.			Soil sample analyzed between -1 and -1.75 feet.
				Brown, GRAVELLY SAND: slightly moist, no odor.			
	2						

Soil Boring: BC-GP4

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

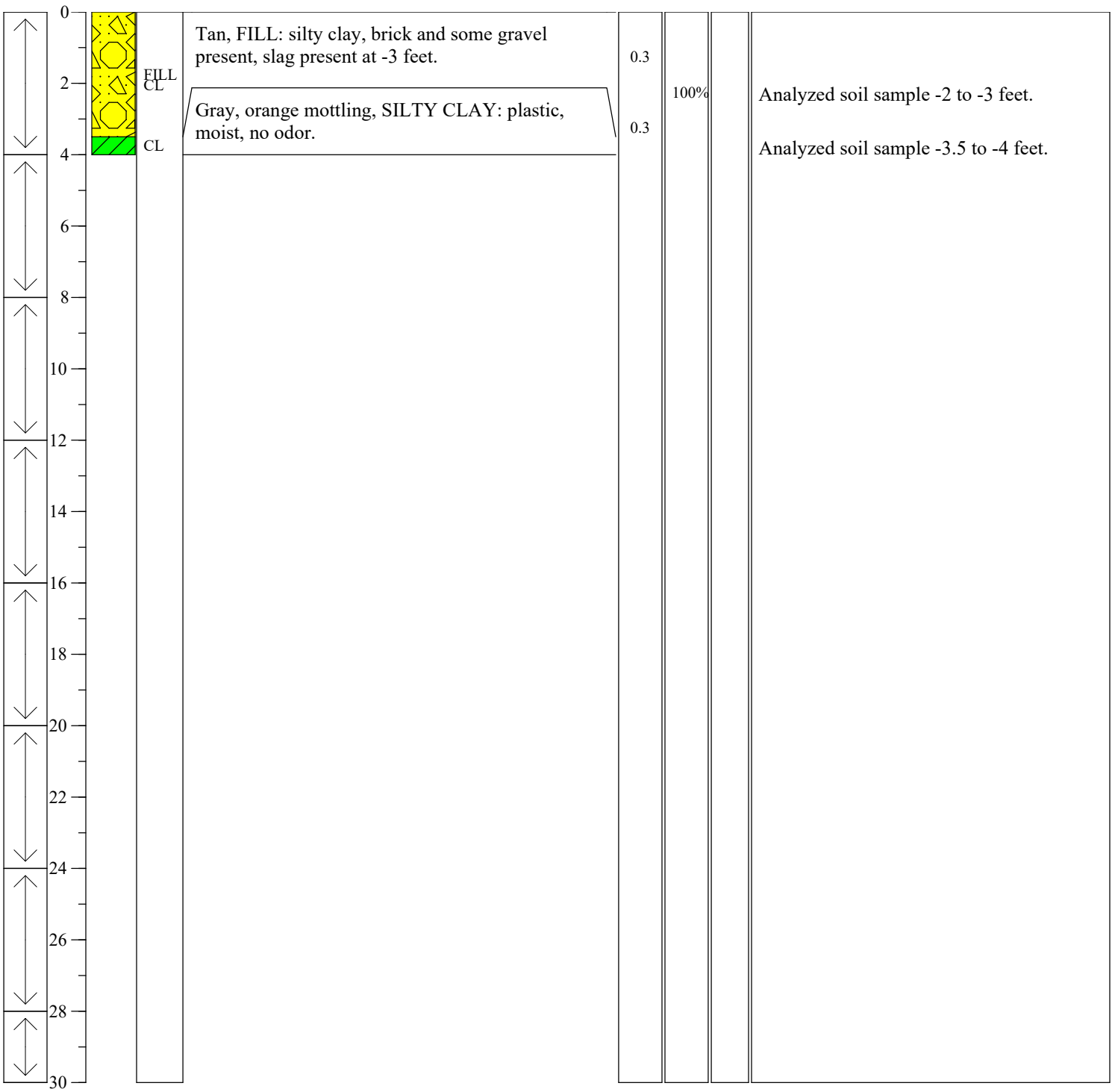


Soil Boring: BC-GP5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

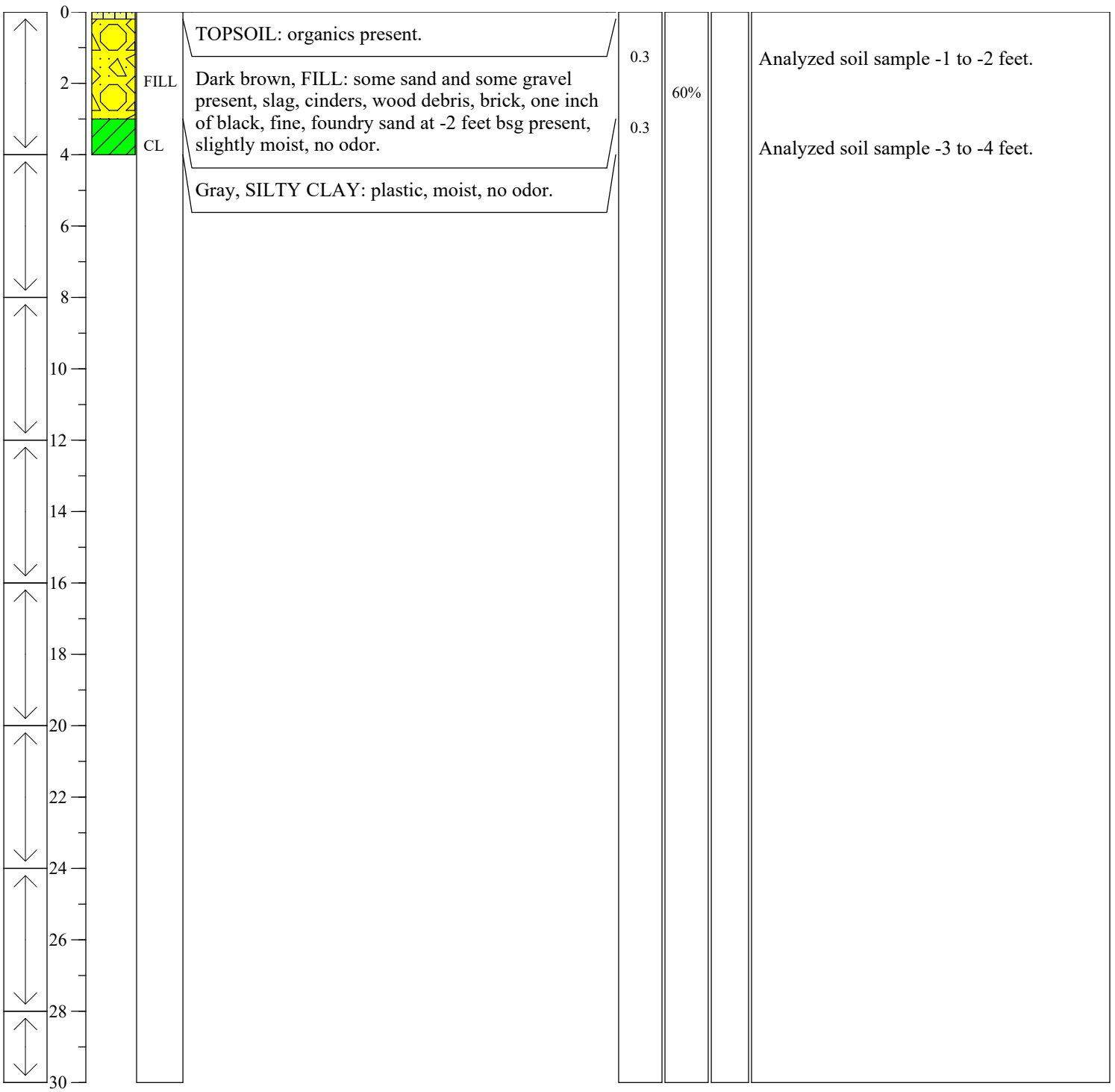


Soil Boring: BC-GP6

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

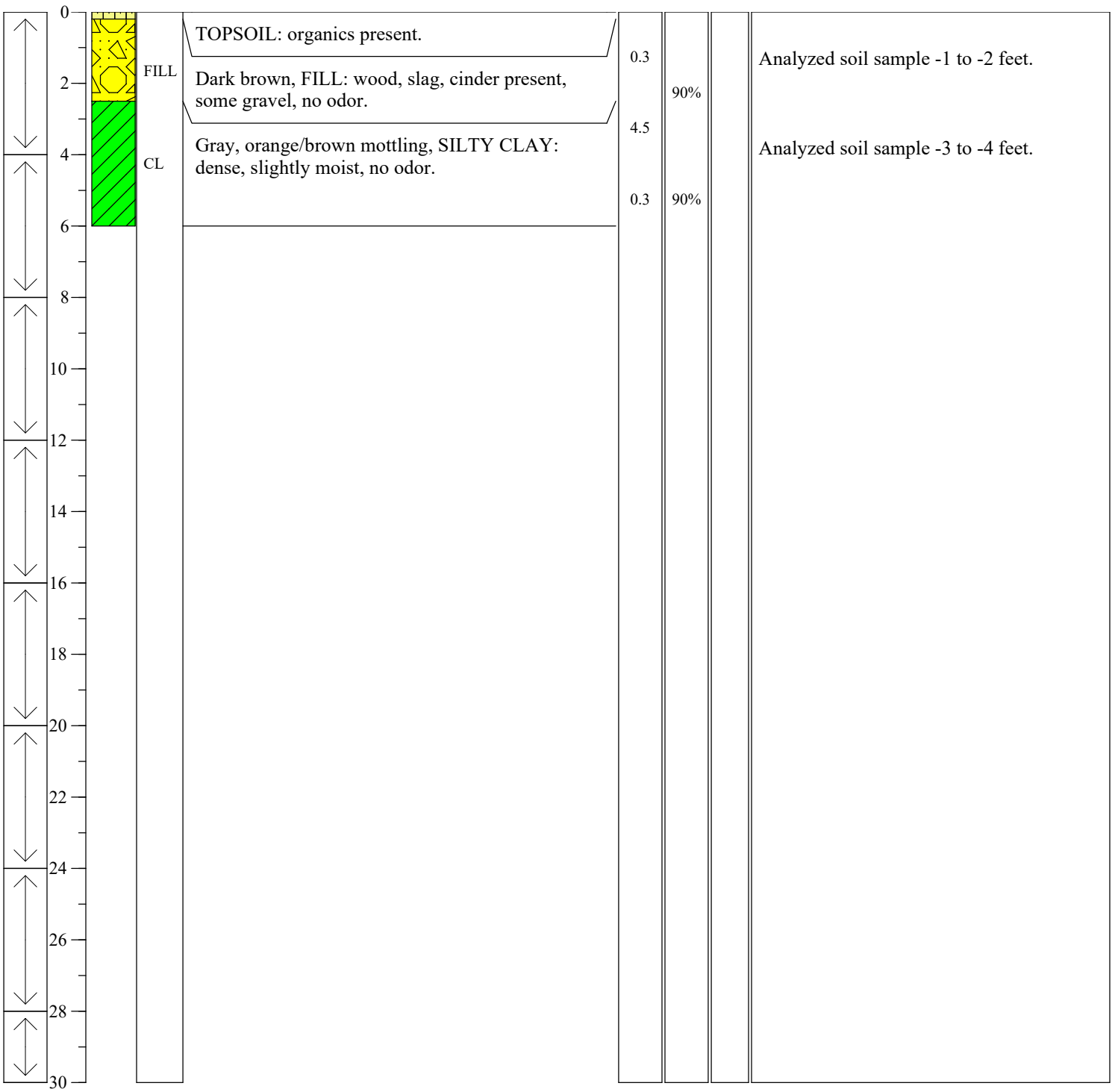


Soil Boring: BC-GP7

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -6'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

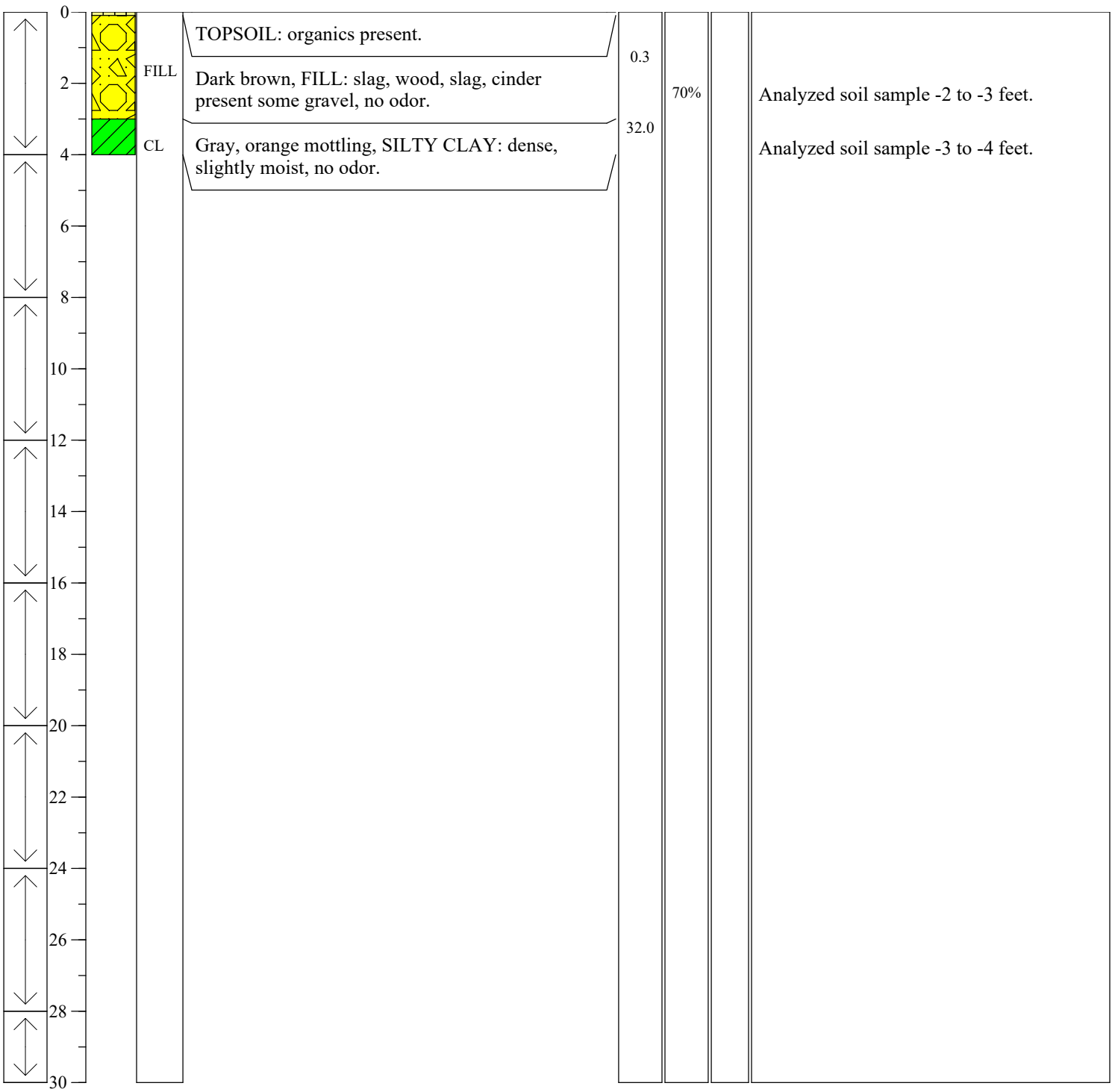


Soil Boring: BC-GP8

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

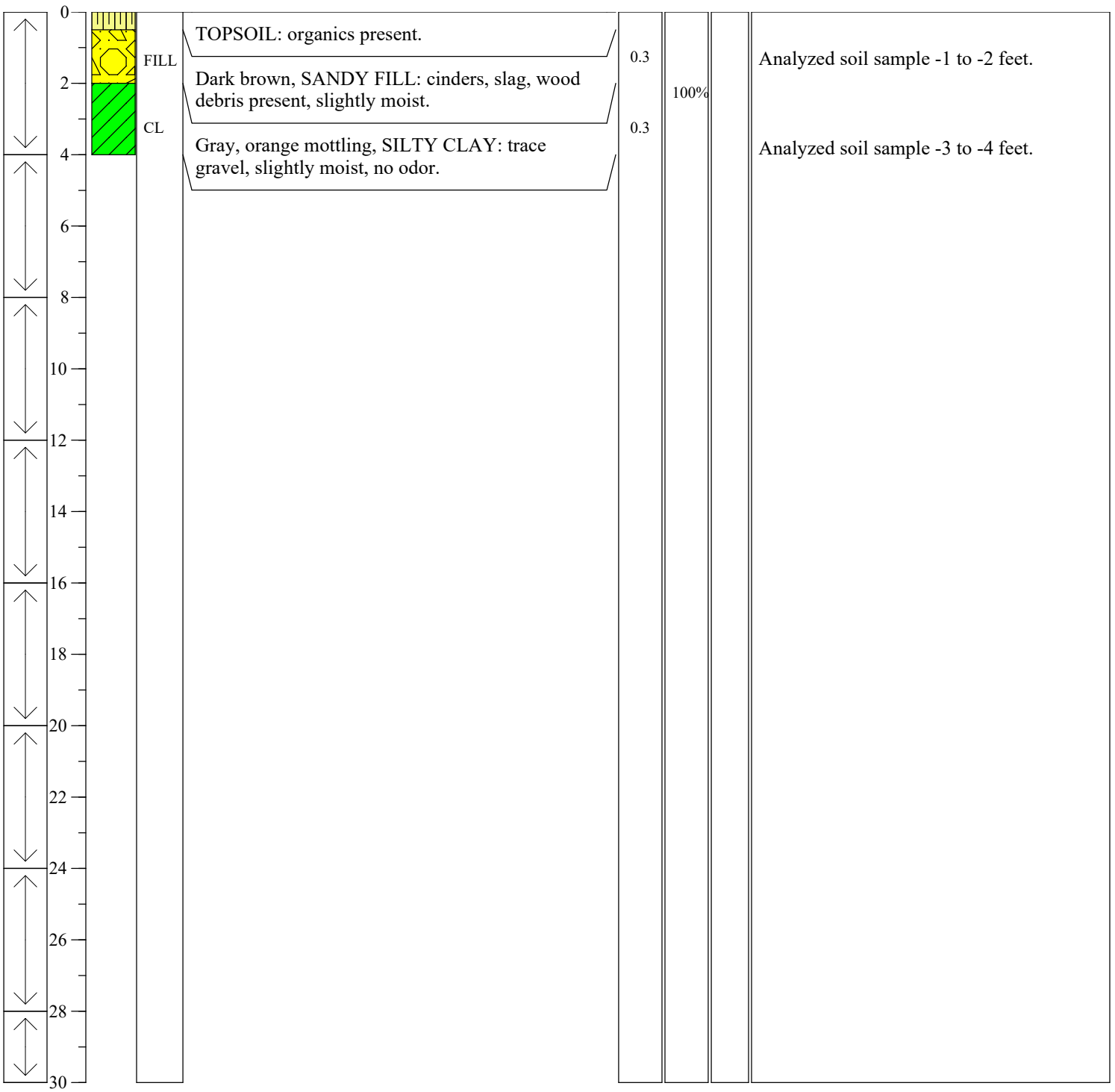


Soil Boring: BC-GP9

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -4'

Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube



Temporary Well: BC-GP10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft): -24'
Final Water Level (ft):
Total Depth of Boring (ft): -28"
Top of Casing Elevation (ft):

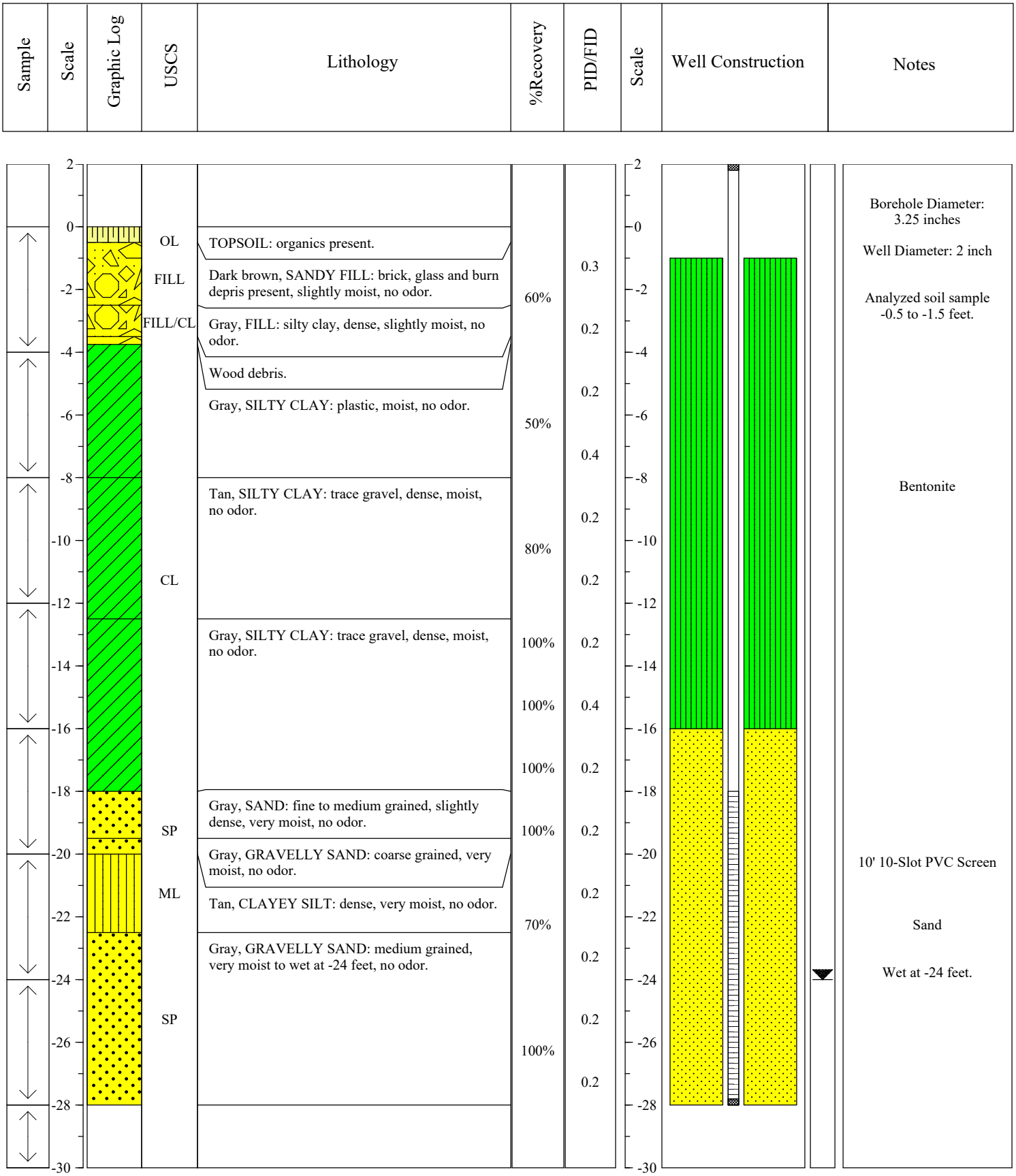
Sample	Scale	Graphic Log	USCS	Lithology	%Recovery	PID/FID	Scale	Well Construction	Notes
	2 to -30		FILL	Tan, SANDY FILL: brick, cinders and slag present.	40%	0.2			Borehole Diameter: 3.25 inches
				Orange, gray mottling, SILTY CLAY: trace gravel, dense, moist, no odor.		0.2			Well Diameter: 2 inch
			CL	Tan, gray mottling, SILTY CLAY: trace gravel, dense, moist, no odor.	90%	0.3			Analyzed soil sample -1 to -2 feet.
						0.7			
					100%	0.2			Bentonite
				Gray, tan-brown mottling, SILTY CLAY: dense, slightly moist, no odor.	100%	0.2			
					100%	0.2			
					100%	0.2			
			SP	Gray, SAND: fine to medium grained, two inch sand seam at -19 feet, very moist, no odor.	100%	0.2			
				Gray, GRAVELLY SAND: coarse grained, very moist, no odor.		0.2			10' 10-Slot PVC Screen
			ML	Tan, SANDY SILT: tight, plastic, very moist, no odor.	100%	0.2			Sand
						0.2			Wet at -24 feet.
			SP	Gray, SAND: medium grained, trace gravel, wet at -24 feet, no odor.	100%	0.2			
						0.2			

Temporary Well: BC-GP11

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft): -24'
Final Water Level (ft):
Total Depth of Boring (ft): -28'
Top of Casing Elevation (ft):

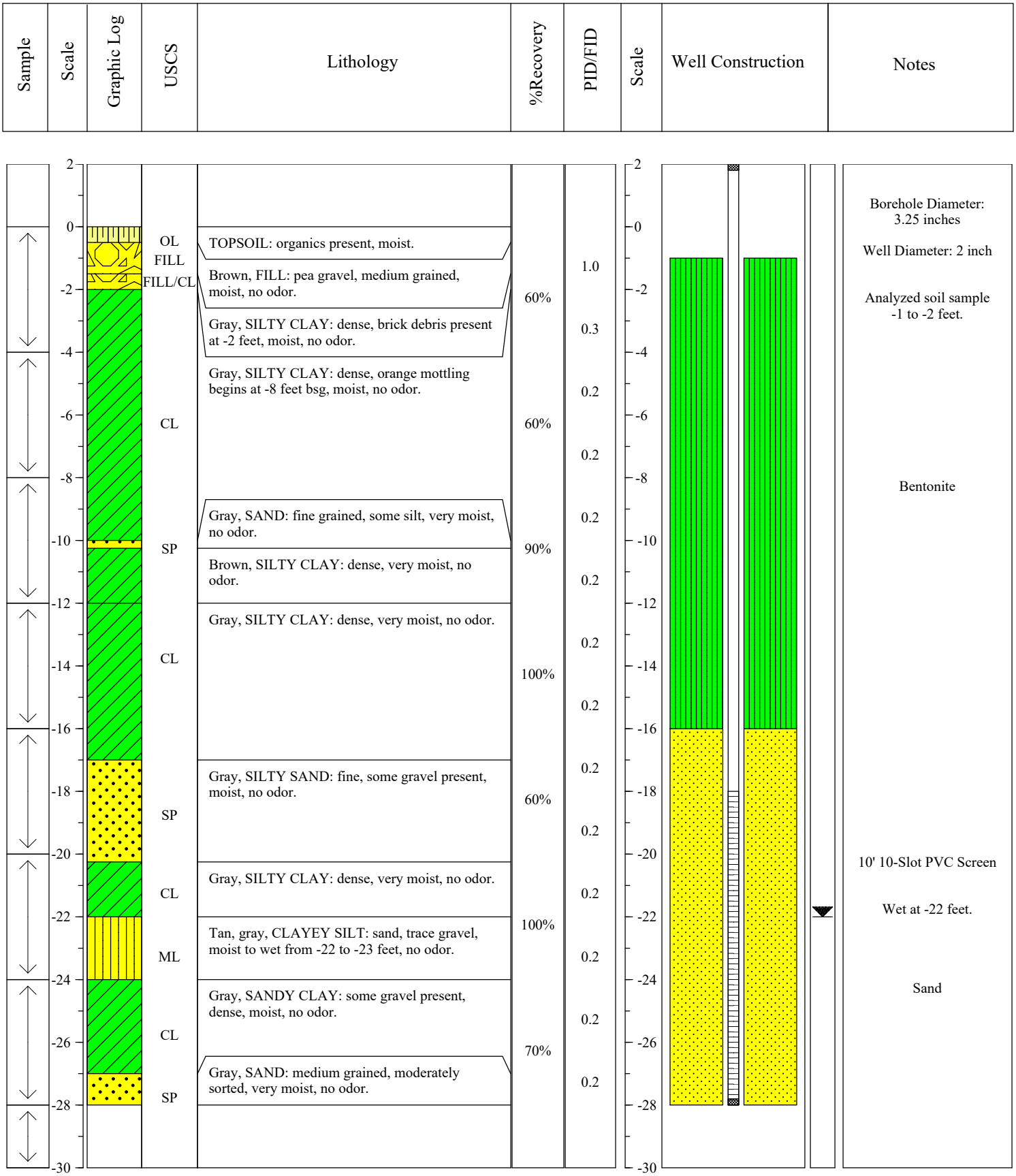


Temporary Well: BC-GP12

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/20/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft): -22'
Final Water Level (ft):
Total Depth of Boring (ft): -28'
Top of Casing Elevation (ft):



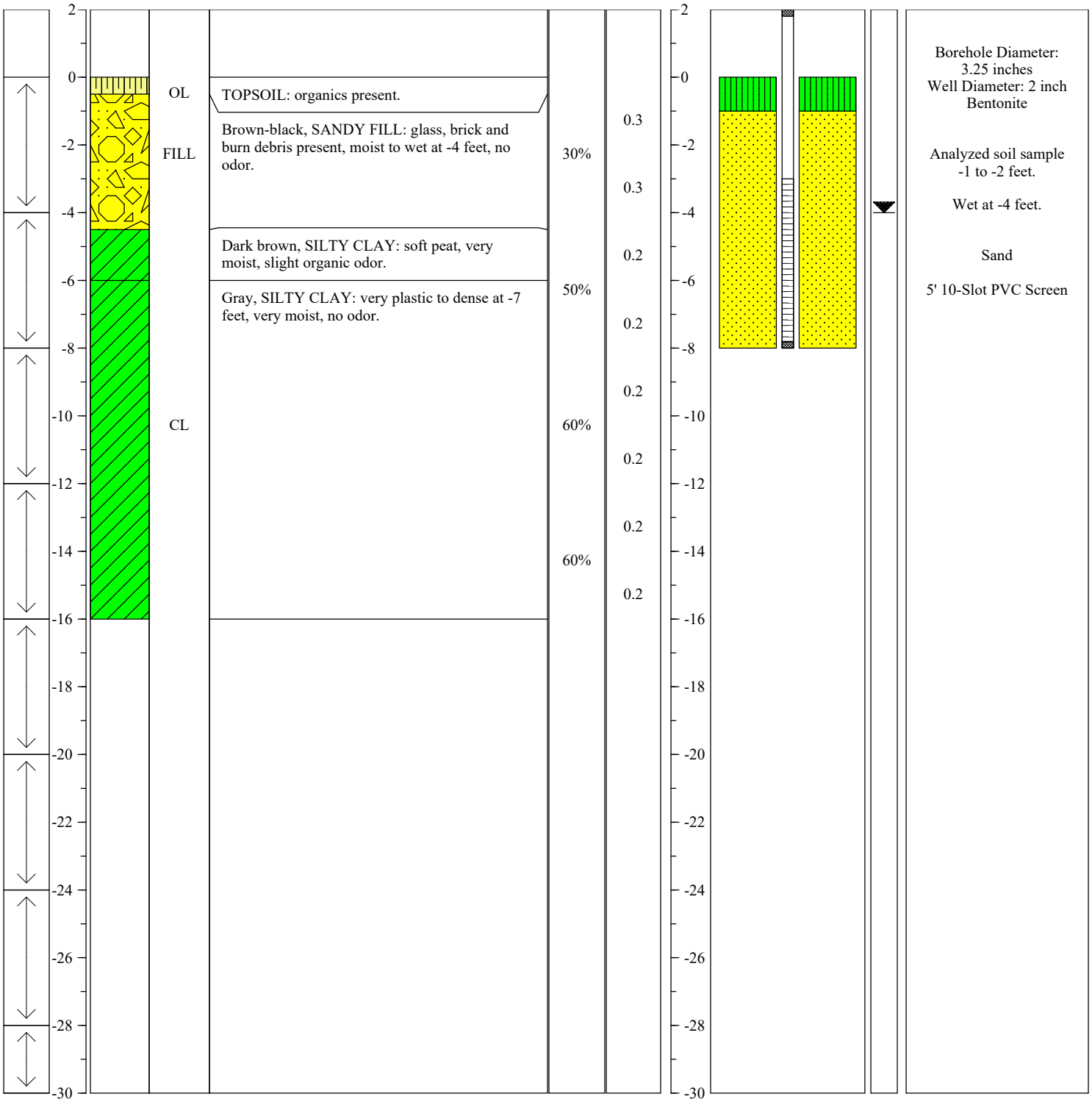
Temporary Well: BC-GP13

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/20/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft): -4'
Final Water Level (ft):
Total Depth of Boring (ft): -16'
Top of Casing Elevation (ft):

Sample	Scale	Graphic Log	USCS	Lithology	%Recovery	PID/FID	Scale	Well Construction	Notes

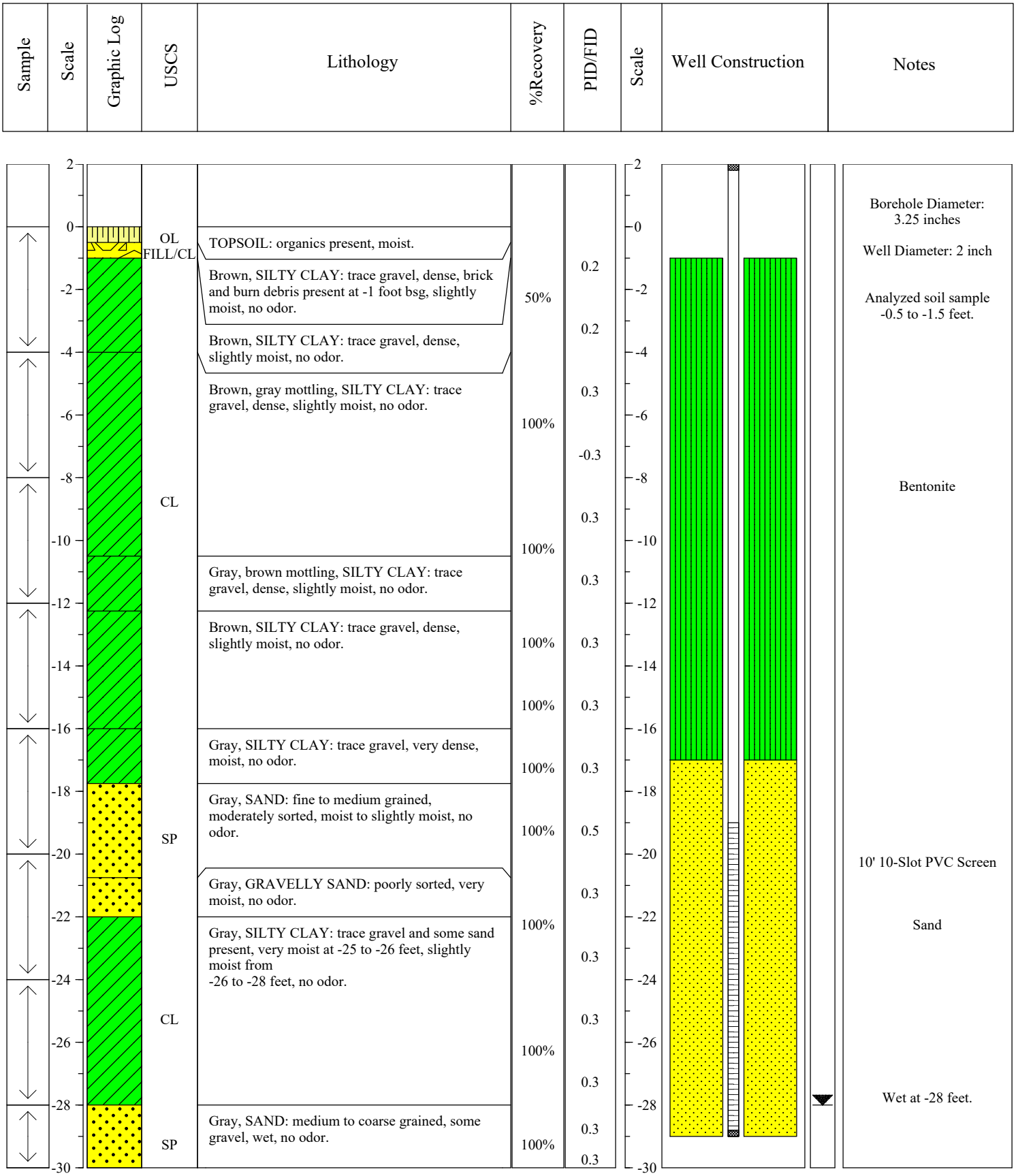


Temporary Well: BC-GP14

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/20/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft): -28'
Final Water Level (ft):
Total Depth of Boring (ft): -30'
Top of Casing Elevation (ft):



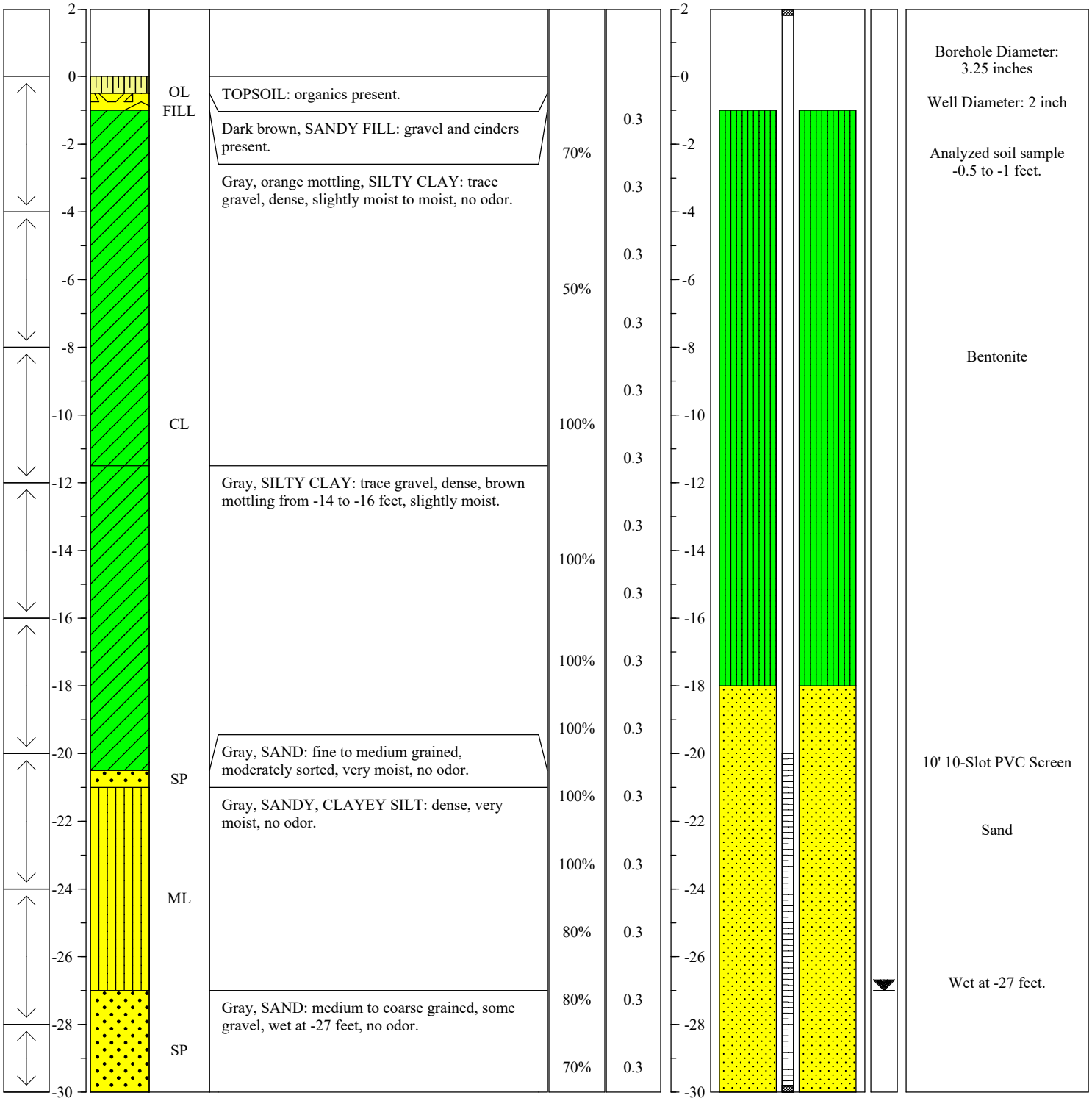
Temporary Well: BC-GP15

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft): -27'
Final Water Level (ft):
Total Depth of Boring (ft): -30'
Top of Casing Elevation (ft):

Sample	Scale	Graphic Log	USCS	Lithology	%Recovery	PID/FID	Scale	Well Construction	Notes



Soil Boring: BC GP16-N5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0			Black, SAND: foundry sand and slag prsent, slightly moist, no odor.			
			SP	Brown, SAND: fine to medium grained, brick present, moist, no odor.			Soil sample analyzed between -1 and -2 feet.
	2						

Soil Boring: BC GP16-E5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -1.75

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		SP	Black, SAND: foundry sand and slag prsent, slightly moist, no odor.			Soil sample analyzed between -1 and -1.75 feet.
				Brown, SAND: fine to medium grained, brick present, moist, no odor.			
	2						

Soil Boring: BC GP16-S5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -1.5'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		SP	Black, SAND: foundry sand, some slag, slightly moist, no odor.			Soil sample analyzed between -1 and -1.5 feet.
	2						

Soil Boring: BC GP16-W5

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -1.5'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		SP	Black, SAND: foundry sand, some slag, slightly moist, no odor.			Soil sample analyzed between -1 and -1.5 feet.
	2						

Soil Boring: BC GP16-N10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0			Black, SAND: foundry sand and slag prsent, slightly moist, no odor.			
			SP	Brown, SAND: fine to medium grained, brick present, moist, no odor.			Soil sample analyzed between -1 and -2 feet.
	2						

Soil Boring: BC GP16-E10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -1.5'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		SP	Black, SAND: foundry sand, some slag and brick, slightly moist, no odor.			
	2						

Soil Boring: BC GP16-S10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0 – 2		SP	Black, SAND: foundry sand, some slag, slightly moist, no odor.			Soil sample analyzed between -1 and -2 feet.

Soil Boring: BC GP16-W10

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Initial Water Level (ft):
Total Depth of Boring (ft): -2'

Date Drilled: 6/18/19
Drilled By: SCS
Sample Tool: Hand Auger

Sample	Scale	Graphic Log	USCS	Lithology	PID/FID (ppmv)	%Recovery	Notes
	0		SP	Black, SAND: foundry sand, some slag, slightly moist, no odor.			Soil sample analyzed between -1 and -2 feet.
	2						

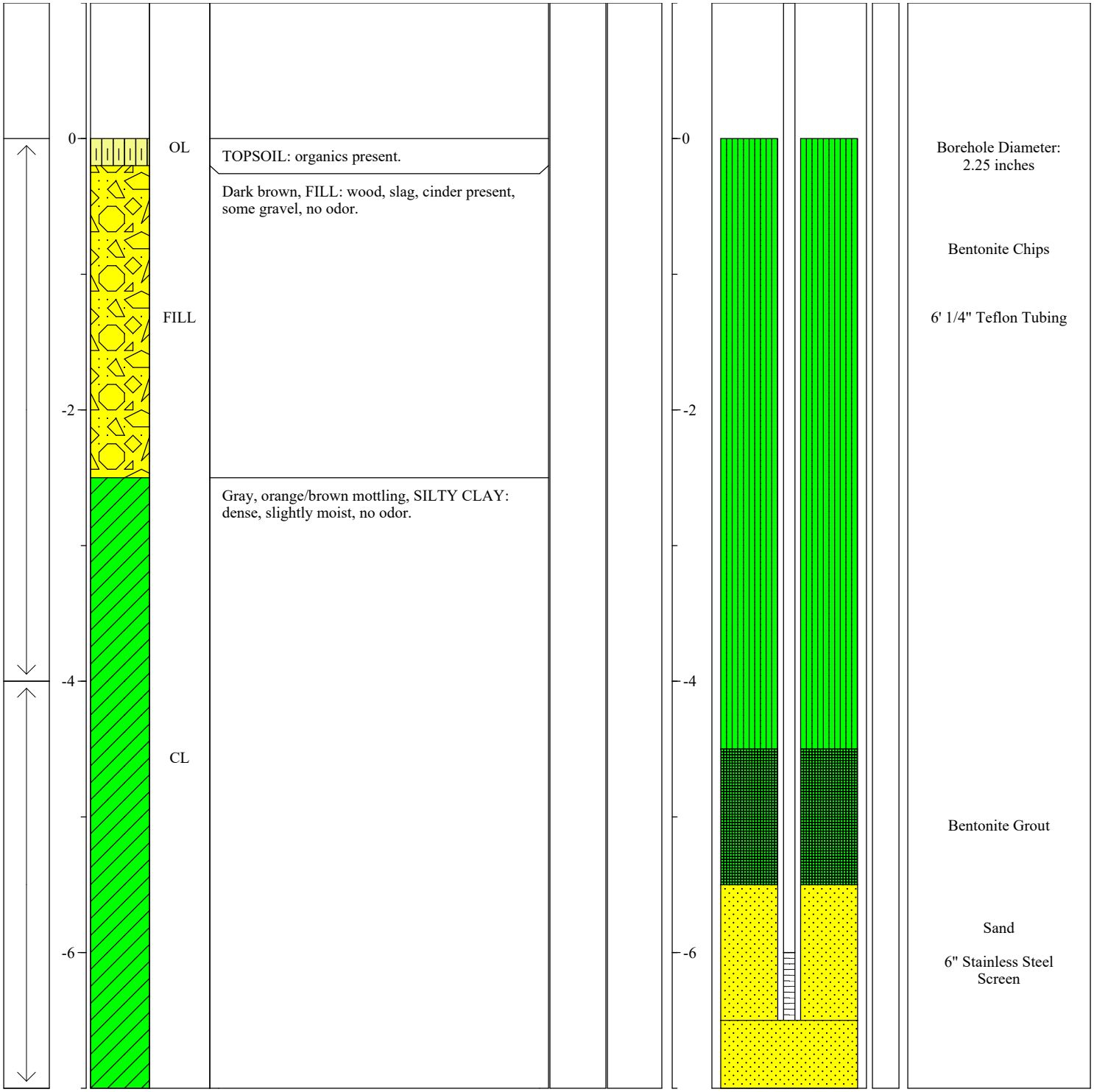
Soil Vapor Probe:BC-SG1

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft):
Final Water Level (ft):
Total Depth of Boring (ft): -7
Top of Casing Elevation (ft):

Sample	Scale	Graphic Log	USCS	Lithology	%Recovery	PID/FID	Scale	Well Construction	Notes



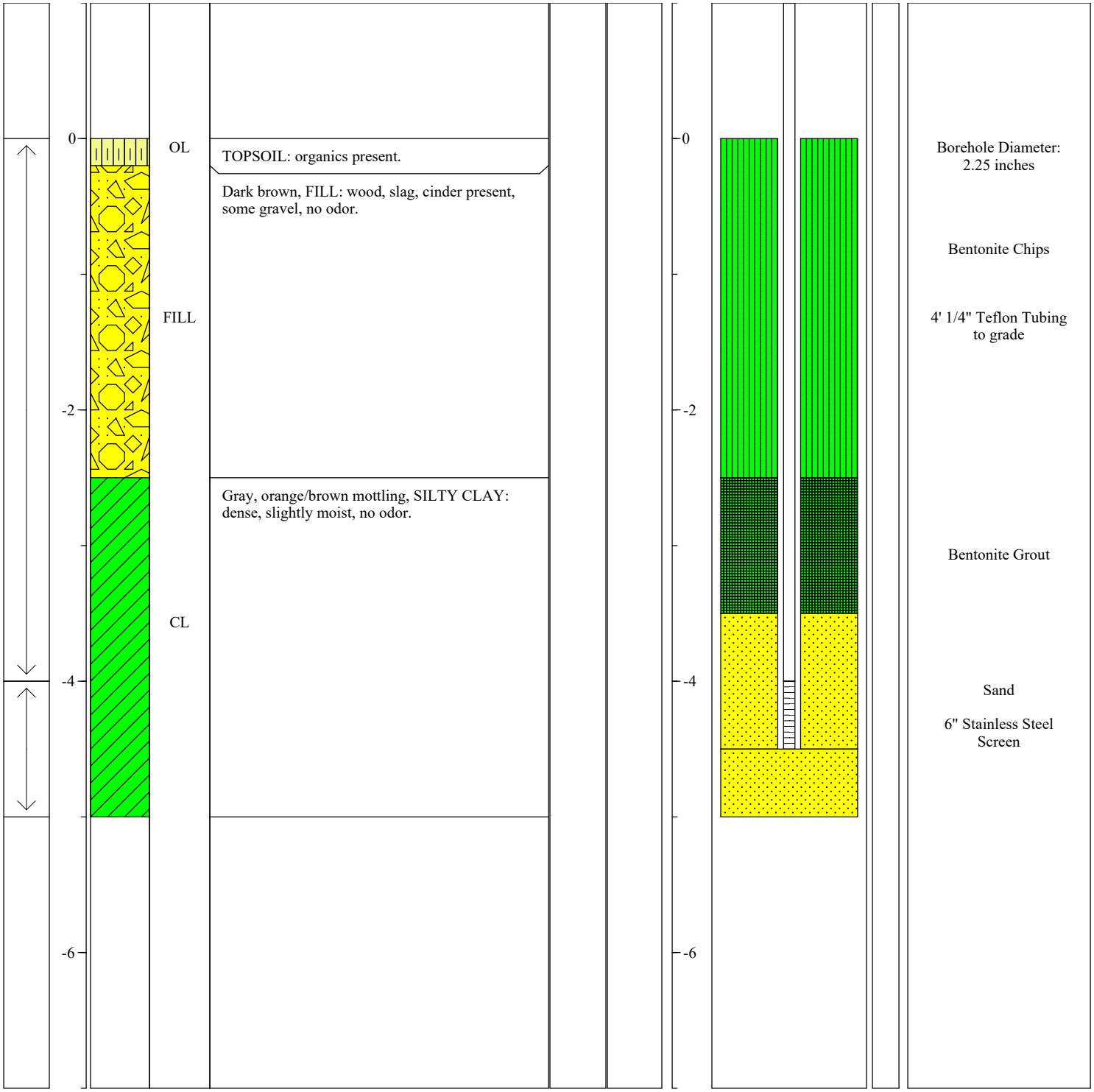
Soil Vapor Probe:BC-SG2

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft):
Final Water Level (ft):
Total Depth of Boring (ft): -5
Top of Casing Elevation (ft):

Sample	Scale	Graphic Log	USCS	Lithology	%Recovery	PID/FID	Scale	Well Construction	Notes



Soil Vapor Probe:BC-SG3

Project Name: Butler
Project Number: 19-716-10

Logged By: CGP
Date Drilled: 5/21/19
Drilled By: SCS
Sample Tool: Dual Tube

Initial Water Level (ft):
Final Water Level (ft):
Total Depth of Boring (ft): -4
Top of Casing Elevation (ft):

Sample	Scale	Graphic Log	USCS	Lithology	%Recovery	PID/FID	Scale	Well Construction	Notes

REMEDIATION WORK PLAN

APPENDIX D. DATA COMPILATION TABLES AND FIGURES

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705

EXCERPTS FROM SES'S PHASE II SCREENING (June 13, 2018)

PHASE II ENVIRONMENTAL SCREENING REPORT

The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana

June 13, 2018

Prepared for:

City of Butler
215 South Broadway
Butler, IN 46721

Prepared By:

Office Locations

Detroit, Michigan	Grand Rapids, Michigan	Lansing, Michigan	Fort Wayne, Indiana	Indianapolis, Indiana	Louisville, Kentucky
(248) 459-7263	(616) 531-0503	(517) 999-5800	(260) 497-7645	(317) 841-8280	(502) 526-5179

- Samples were discharged directly into two laboratory-provided 40-ml glass sample vials containing HCl acid preservative, leaving no headspace for VOC analysis in accordance with SW846 Method 8260.
- Groundwater was then discharged into three 40-amber glass containers, containing no preservative. These samples were analyzed for PAHs in accordance with SW846 Method 8270.
- The final sample portion was discharged into one 500-mL plastic container with nitric acid preservative for metals analyses in accordance with SW846 Method 6010 and 7470. Additional sample volume was retained for dissolved metals analysis due to observed sediment in the samples. These additional samples were filtered by the laboratory using 0.45 µm membrane high capacity disposable filters
- Samples were labeled, entered chain-of-custody, placed into a cooler filled with ice, and transported to ENVision.

The groundwater sampling included the collection of a duplicate sample. This duplicate sample was obtained at boring C and was identified as BH. The duplicate groundwater sample was analyzed for VOCs, PAHs, and metals. As previously noted, a trip blank accompanied investigation samples during transport to laboratory. The trip blank was analyzed for VOCs.

Following completion of sampling, the sampling points were removed in general accordance with 312 IAC 13-10-2.

3.3 Screening Results

3.3.1 Soil and Groundwater Conditions

A mixture of sand, clay, gravel, cinders, debris, and brick fragments was present at the surface. At boring C, paint chips were observed. This fill material extended to depths of approximately 3 to 9 feet, followed by clay that extended to a depth of at least 20 feet (depth of exploration). Sand seams were occasionally interspersed with the clay and where present yielded groundwater, expect at boring A. Perched water was also observed in the fill material. Groundwater flow direction was not assessed. Soil conditions are depicted on boring logs provided in Appendix A.

- At boring A, groundwater was observed in sand at a depth of 15 feet.
- At boring B, perched water was observed in fill material that extended to a depth of 9 feet.
- At boring C, perched water was observed in fill material that extended to a depth of 5 feet.
- At boring D, groundwater was observed in sand at a depth of 18 feet.
- At boring E, groundwater was observed in sand at a depth of 14 feet.
- At boring F, clay extended from the near surface to a depth of 19 feet and groundwater was not observed.
- At boring G, groundwater was observed in sand at a depth of 6 feet.

Field evidence of contamination such as elevated PID responses and/or black staining was associated with the fill material. PID responses associated with the fill material generally ranged between 2 and 8 ppmv; however, PID responses ranged up to 56 ppmv at boring B.

3.3.2 Soil Testing Results

Five samples of fill material (borings A, B (two depth intervals), C, and D) were collected and analyzed for VOCs, PAHs, RCRA 8 metals, copper and zinc as a screening for contaminants of concern. Samples of native clay soil at borings E, F, and G were also collected and analyzed for the same parameters. Material described as dark and peat-like was observed at boring B and this material was sampled and analyzed for PCBs. A laboratory report is provided in Appendix B and soil testing results are depicted on Figure 2.

Soil testing results are summarized in the following table. *Remediation screening levels* published in IDEM's *Remediation Closure Guide* (*RCG)* are included for reference. IDEM's RCG describes approaches to investigation and risk-based closure of contaminated or potentially contaminated sites. Its purpose is to

provide for consistent application of Indiana Code (IC) 13-12-3-2 and IC 13-25-5-8.5, which form the statutory basis for risk-based cleanup in Indiana.

Table 1. Soil Testing Results
325 South Broadway Street, Butler, Indiana

Soil Boring ID (depth interval)	Sample Collection Date	Detected Parameter	Concentration (mg/kg)	*Indiana Remediation Closure Guide Remediation Screening Levels*			
				Residential Direct Contact Screening Level *(mg/kg)*	***Commercial/ Industrial Direct Contact Screening Level*** *(mg/kg)*	***Excavation Direct Contact Screening Level*** *(mg/kg)*	***Residential Migration to Groundwater Screening Level*** *(mg/kg)*
BA (0-2')	5/22/2018	No VOCs Detected					
		No PAHs Detected					
		Detected RCRA Metals					
Debris, Gravel, Sand and Cinders		Arsenic	<3	9.5	30	920	5.9
		Barium	364	21000	100000	100000	1700
		Chromium	7.8				1,000,000
		Copper	104	4300	47000	79000	920
		Lead	**299**	400	800	1000	270
		Zinc	1210	32000	100000	100000	7500
BB (2-4')	5/22/2018	No VOCs Detected					
		No PAHs Detected					
		Detected RCRA Metals					
Bricks, Debris, Sand and Cinders		Arsenic	<2	9.5	30	920	5.9
		Barium	26	21000	100000	100000	1700
		Chromium	8.9				1,000,000
		Copper	21	4300	47000	79000	920
		Lead	35	400	800	1000	270
		Zinc	58	32000	100000	100000	7500
BB (4-6') Peat-like material	5/22/2018	No PCBs Detected					
BC (2-4')	5/22/2018	No VOCs Detected					
		Detected PAHs					
		Benzo(a)pyrene	0.094	1.5	21	500	4.7
Bricks, Paint Chips, Cinders, and Debris		Detected RCRA Metals					
		Arsenic	<2	9.5	30	920	5.9
		Barium	549	21000	100000	100000	1700
		Cadmium	5.6	99	980	1900	7.5
		Chromium	56				1,000,000
		Copper	617	4300	47000	79000	920
		Lead	**7,160**	400	800	1000	270
		Zinc	1,790	32000	100000	100000	7500
		Mercury	1.23	3.1	3.1	3.1	2.1
BD (0-2')	5/22/2018	No VOCs Detected					
		No PAHs Detected					
		Detected RCRA Metals					
Cinders and Debris		Arsenic	<2	9.5	30	920	5.9
		Barium	45	21000	100000	100000	1700
		Chromium	6.3				1,000,000
		Copper	6.3	4300	47000	79000	920
		Lead	8.6	400	800	1000	270
		Zinc	29	32000	100000	100000	7500
BE (6-8')	5/22/2018	No VOCs Detected					
		Detected PAHs Detected					
		Detected RCRA Metals					
Clay		Arsenic	<3	9.5	30	920	5.9
		Barium	75	21000	100000	100000	1700
		Chromium	14				1,000,000
		Copper	15	4300	47000	79000	920
		Lead	9.4	400	800	1000	270
		Zinc	34	32000	100000	100000	7500

Continued next page

Table 1 Continued. Soil Testing Results
325 South Broadway Street, Butler, Indiana

Soil Boring ID (depth interval)	Sample Collection Date	Detected Parameter	Concentration (mg/kg)	*Indiana Remediation Closure Guide Remediation Screening Levels*			
				Residential Direct Contact Screening Level *(mg/kg)*	***Commercial/ Industrial Direct Contact Screening Level*** *(mg/kg)*	***Excavation Direct Contact Screening Level*** *(mg/kg)*	***Residential Migration to Groundwater Screening Level*** *(mg/kg)*
BF (2-4')	5/22/2018	No VOCs Detected					
		Detected PAHs Detected					
		Detected RCRA Metals					
Clay		Arsenic	<2	9.5	30	920	5.9
		Barium	61	21000	100000	100000	1700
		Chromium	8.5				1,000,000
		Copper	9.1	4300	47000	79000	920
		Lead	7.3	400	800	1000	270
		Zinc	24	32000	100000	100000	7500
BG (6-8')	5/22/2018	No VOCs Detected					
		Detected PAHs Detected					
		Detected RCRA Metals					
Clay		Arsenic	<2	9.5	30	920	5.9
		Barium	39	21000	100000	100000	1700
		Chromium	7.1				1,000,000
		Copper	10	4300	47000	79000	920
		Lead	6.0	400	800	1000	270
		Zinc	18	32000	100000	100000	7500
BH (6-8')	5/22/2018	No VOCs Detected					
Dup BC (2-4')		No PAHs Detected					
		Detected RCRA Metals					
		Arsenic	<3	9.5	30	920	5.9
		Barium	**2,220**	21000	100000	100000	1700
		Cadmium	**9.5**	99	980	1900	7.5
		Chromium	247				1,000,000
		Copper	**2,090**	4300	47000	79000	920
		Lead	**28,700**	400	800	1000	270
		Zinc	2,980	32000	100000	100000	7500
		Mercury	1.78	3.1	3.1	3.1	2.1

mg/kg – milligrams per kilogram (parts per million)
PAH – polycyclic aromatic hydrocarbons
PCB – Polychlorinated Biphenyls
RCRA – Resource Conservation Recovery Act
SVOC – Semi-Volatile Organic Compounds
VOCs – Volatile Organic Compounds
Bold – indicates concentration exceeds the migration to groundwater screening level
Bold Underline – indicates concentration exceeds the residential direct contact screening level
Yellow Highlighted – indicates concentration exceeds the industrial direct contact screening level
Grey Shading indicates a potentially elevated concentration and evidence of contamination. Cadmium and mercury were not detected in any soil samples except sample BC. The chromium concentrations in the BC and BH samples ranged between 56 was 249 mg/kg, while the maximum concentration in all other samples was 14 mg/kg.

The tabulated soil testing results reveal the following:

- Volatile organic compounds (VOCs) were not detected in soil samples or the fill sample.
- Polychlorinated biphenyls (PCBs) were not detected in the collected peat-like material sample.
- Polycyclic aromatic hydrocarbons (PAHs) were not detected in soil or fill samples, except for a trace concentration of benzo(a)pyrene (BaP) in fill at boring C. The detected benzo(a)pyrene concentration did not exceed any *residential* or *commercial/industrial remediation screening level.* In addition, BaP was not detected in the duplicate sample collected at boring C.
- Metals including barium, chromium, copper, lead, and zinc were detected in clay soil samples. These metals are known to occur naturally in soils and detected concentrations in clay soil samples did not exceed any *residential* or *commercial/industrial remediation screening level.*
- Metals including barium, cadmium, chromium, copper, lead, zinc, and mercury were detected in surface fill samples. The lead concentration in surface fill at boring A exceeded the *migration to groundwater screening level but* did not exceed *direct contact screening levels.* The lead concentration in near surface fill at boring C was 7,160 mg/kg and exceeded *remediation screening levels* that range from the most conservative 270 mg/kg to 1,000 mg/kg. Cadmium and mercury were also detected in the surface fill at boring C, along with paint chips and a potentially

elevated chromium concentration. The chromium concentrations in the BC and BH samples ranged between 56 and 249 mg/kg, while the maximum concentration in all other samples was 14 mg/kg. The duplicate sample collected at boring C exhibited barium, cadmium, copper, and lead concentrations exceeding *remediation screening levels.*

3.3.3 Groundwater Testing Results

Samples of perched water were obtained at borings B and C and samples of groundwater in sand were obtained at borings D, E, and G. These five perched water/groundwater samples were analyzed for VOCs, PAHs, RCRA 8 metals, copper, and zinc as a screening for contaminants. Groundwater testing results are summarized in the following table. *Remediation screening levels* published in IDEM's *Remediation Closure Guide* (*RCG)* are also included for reference. A laboratory report is provided in Appendix B and groundwater sampling results are depicted on Figure 3.

Table 2. Groundwater Testing Results
325 South Broadway Street, Butler, Indiana

Sampling Location	Date	Detected Parameter	Concentration (ug/l)	*Indiana Remediation Closure Guide Water Screening Level (ug/l)*
BA	5/22/2018	Dry Sampling Point (screened 6-16 feet)		
BB Groundwater in fill material that extends to a depth of 9 feet Screen 3-8'	5/22/2018	No VOCs Detected No PAHs Detected RCRA 8 Metals Detected, Totals Barium, Total Lead, Total Zinc, Total No Dissolved RCRA 8 Metals Detected	 490 **70** 980	 2,000 15 6,000
BC Groundwater in fill material that extends to a depth of 5 feet Screen 3-8'	5/22/2018	No VOCs Detected No PAHs Detected RCRA 8 Metals Detected, Totals Barium, Total Cadmium, Total Chromium, Total Lead, Total Selenium, Total Copper, Total Zinc, Total RCRA 8 Metals Detected, Dissolved Barium, Dissolved Zinc, Dissolved	 570 **50** 70 **57,000** **50** **2,100** **17,000** 100 2,200	 2,000 5 100 15 50 1,300 6,000 2,000 6,000
BD Groundwater in sand at a depth of 18 feet Screen 15-20'	5/22/2018	No VOCs Detected No PAHs Detected RCRA 8 Metals Detected, Totals Barium, Total Chromium, Total Lead, Total Zinc, Total RCRA 8 Metals Detected, Dissolved Barium, Dissolved	 320 10 **50** 50 100	 2,000 100 15 6,000 2,000
BE Groundwater in sand seam at 14 feet Screen 11-16'	5/22/2018	No VOCs Detected No PAHs Detected RCRA 8 Metals Detected, Totals Barium, Total Lead, Total Copper, Total Zinc, Total No Dissolved RCRA 8 Metals Detected	 850 **330** 100 1,000	 2,000 15 1,300 6,000
BF	5/22/2018	Clay extends from near surface to 19 feet, no groundwater observed		
BG Groundwater in sand seam at 6 feet. Screen 6-16'	5/22/2018	No VOCs Detected No PAHs Detected RCRA 8 Metals Detected, Totals Barium, Total No Dissolved RCRA 8 Metals Detected	 490	 2,000

Continued next page

Table 2 Continued. Groundwater Testing Results
325 South Broadway Street, Butler, Indiana

Sampling Location	Date	Detected Parameter	Concentration (ug/l)	*Indiana Remediation Closure Guide Water Screening Level (ug/l)*
BH Duplicate of BC	5/22/2018	No VOCs Detected No PAHs Detected RCRA 8 Metals Detected, Totals		
Groundwater in fill material that extends to a depth of 5 feet		Barium, Total	620	2,000
		Cadmium, Total	**60**	5
		Chromium, Total	**100**	100
		Lead, Total	**64,000**	15
		Selenium, Total	**100**	50
		Copper, Total	**2,300**	1,300
		Zinc, Total	**19,000**	6,000
		RCRA 8 Metals Detected, Dissolved		
		Barium, Dissolved	120	2,000
		Zinc, Dissolved	2,200	6,000
Trip Blank	5/22/2018	No VOCs Detected		

µg/l - micrograms per liter (parts per billion)
RCRA – Resource Conservation Recovery Act
PAH – Polycyclic Aromatic Hydrocarbon
VOCs – Volatile Organic Compounds
Grey Shading is intended to show the sample consisted of perched water.

The tabulated groundwater testing results reveal the following:

- Volatile organic compounds (VOCs) were not detected in perched water or groundwater samples.
- Polycyclic aromatic hydrocarbons (PAHs) were not detected in perched water or groundwater samples.
- Metals including barium, chromium, copper, lead, and/or zinc were detected in groundwater samples. The total lead concentration in groundwater samples D and E exceeded the *tap water screening level.* However, dissolved lead was not detected in these samples.
- Metals including barium, cadmium, chromium, copper, lead, selenium, and zinc were detected in perched water samples. The total lead, selenium, copper, and/or zinc concentrations exceeded *tap water screening levels.* However, dissolved metal concentrations did not exceed *tap water screening levels.*

4.0 SUMMARY

This screening consisted of advancing seven soil borings within and around former manufacturing buildings/areas. Samples of surface fill material, native clay soil, perched water, and groundwater were collected and analyzed for VOCs, PAHs, RCRA 8 metals, copper and zinc as a screening for contaminants of concern. Collectively, borings were used to evaluate overall site conditions.

Contaminants of concern including barium, cadmium, chromium, copper, lead, zinc, and mercury were detected in surface fill. The highest metal concentrations were detected at the north portion of the site at borings A and C where painting and foundry operations were historically conducted. This screening found no evidence of VOC contamination in soil or fill material and no significant PAH constituent contamination in soil or fill material.

Contaminants of concern including barium, cadmium, chromium, copper, lead, selenium, and zinc were detected in perched water samples. The highest metal concentrations were detected at the former foundry area. Lead groundwater contamination was also detected; however, dissolved lead contamination was not detected. This screening found no evidence of VOC or PAH contamination in perched water or groundwater. Groundwater flow was not assessed.

5.0 OPINIONS AND RECOMMENDATIONS

Historic manufacturing operations conducted at the site from at least 1898 until 1997 (REC #1) have resulted in surface fill material being distributed over most of the site. With respect to surface fill material, the barium, cadmium, chromium, copper, lead, zinc, and mercury concentrations are evidence of contamination that poses a concern. SES recommends establishing *remediation objectives,* and conducting additional investigation to characterize the fill material, extent of metals (in solids and perched water), and potential exposure pathways.

Once the site characterization is complete remedial efforts can be initiated. Typically, surface impact is addressed by (1) removing the impacted media, (2) by placing a barrier (pavement/clean soil) over the impact, or (3) a combination of removal and isolation.

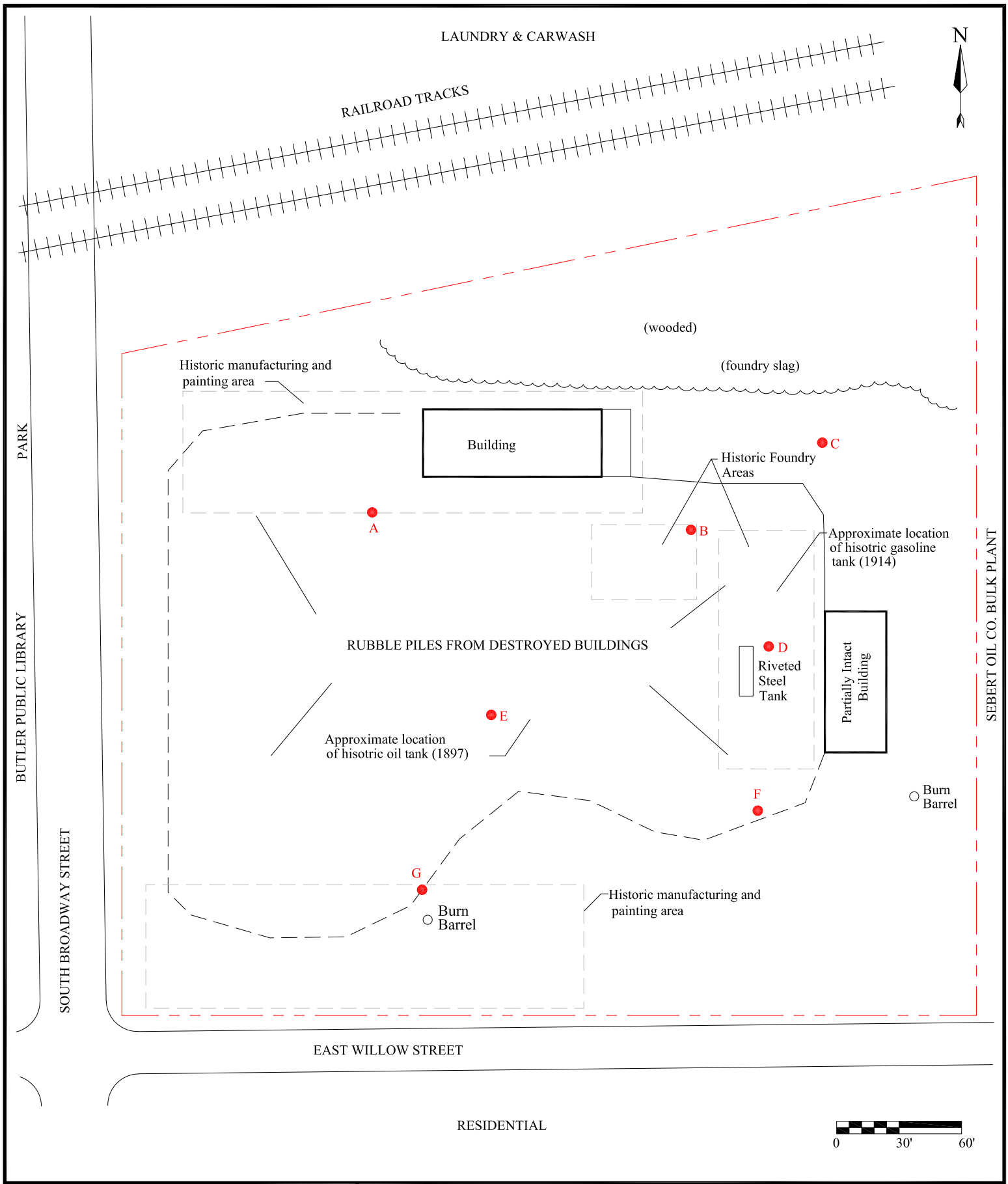
With respect to the various other metals detected in native clay soil and groundwater during this screening investigation, metal concentrations in soil were well below *residential screening levels* and dissolved metals were not detected in groundwater. Based on this firm's review of native clay soil and groundwater testing results, these detected metals are consistent with naturally-occurring concentrations, and therefore do not pose a concern and no further inquiry is recommended, at this time. If a higher level of confidence is required, background samples and permanent monitor wells would need to be collected and installed to statistically establish naturally occurring metal concentrations.

This screening found no evidence of chlorinated solvent contamination and no further assessment of REC #2 is recommended at this time. This screening found no evidence of petroleum contamination (REC #3); however, this screening investigation did not rule-out the possibility of localized petroleum contamination at historical buried tank areas.

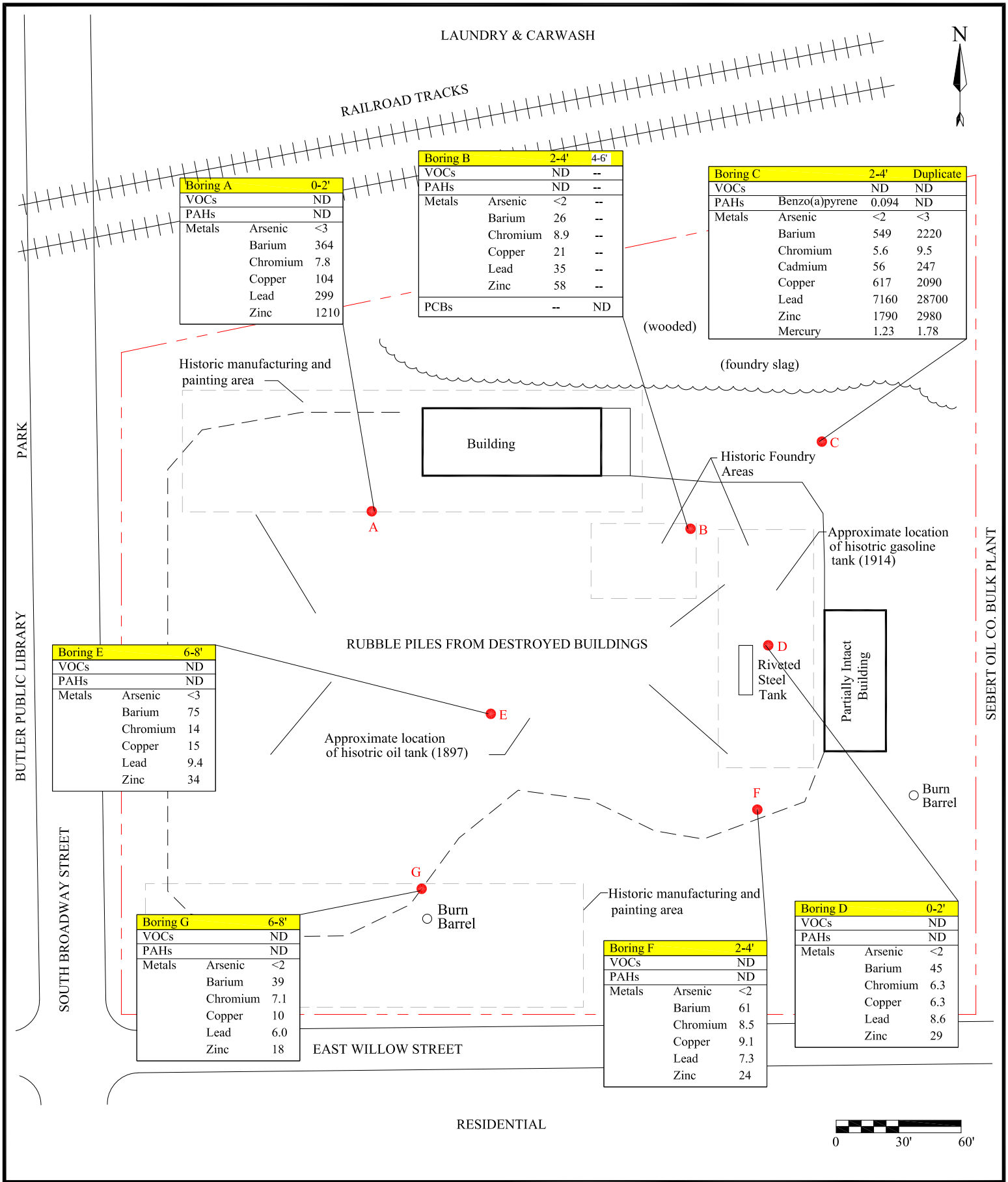
PHASE II ENVIRONMENTAL SCREENING REPORT

FIGURES

The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana



TITLE: SITE MAP	LEGEND: Approximate site boundary; Soil Boring	PROJECT: 2018-364	
LOCATION: The Butler Company, 325 South Broadway Street, Butler, DeKalb County, Indiana		SCALE: 1" = 60'	FILE: 2017699map
		DRAWN: dn	CHECKED: wg
		DATE: 6/4/18	FIGURE: 1



TITLE

SOIL TESTING RESULTS

LOCATION

The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana

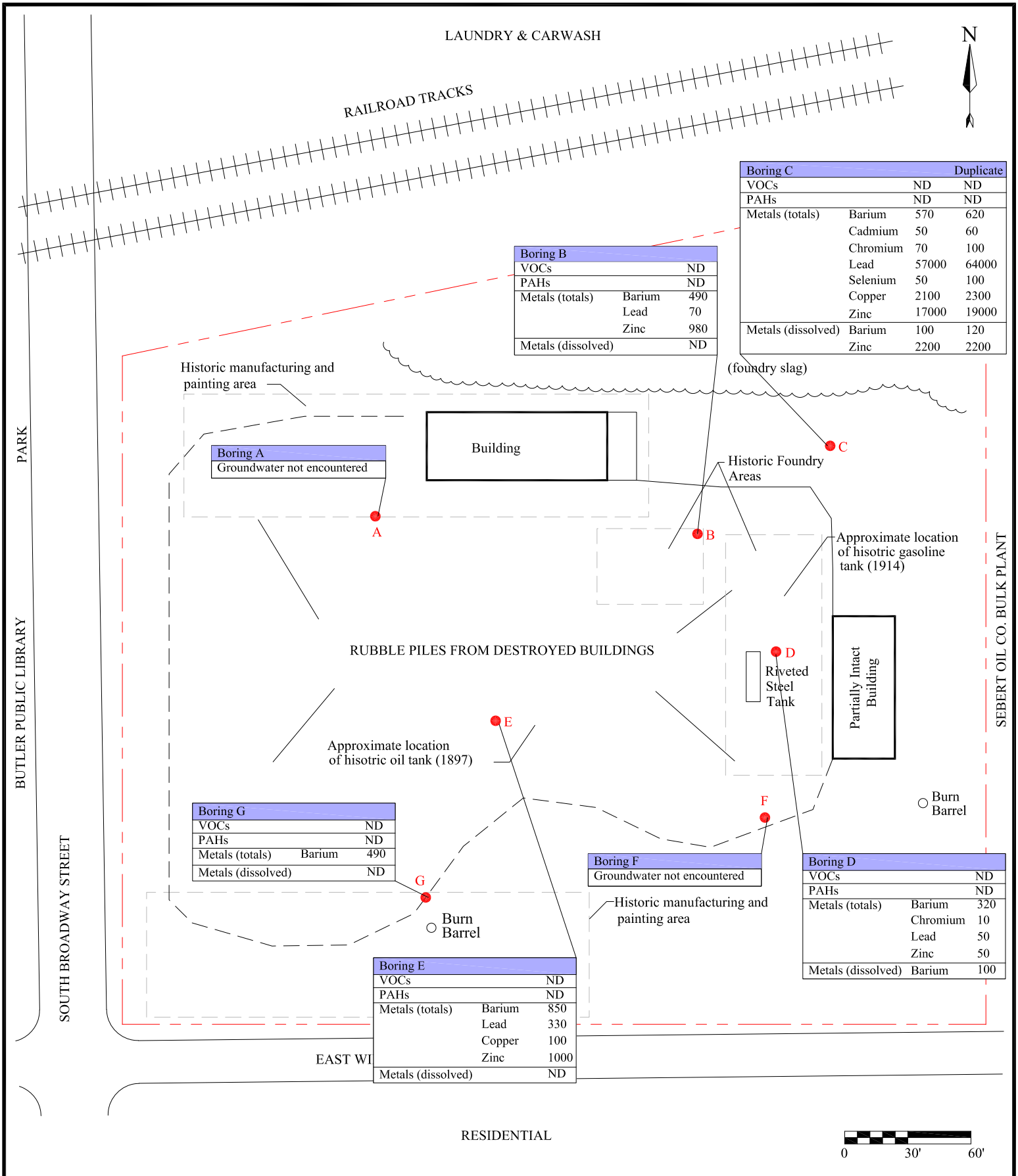
LEGEND

Approximate site boundary

Soil Boring

Testing results reported in mg/kg (ppm)

PROJECT	2018-364
SCALE	1" = 60'
FILE	2017699map
DRAWN	dn
CHECKED	wg
DATE	6/12/18
FIGURE	2



TITLE
GROUNDWATER TESTING RESULTS

LOCATION
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana

LEGEND
Approximate site boundary
Soil Boring
Testing results reported in ug/l (ppb)

PROJECT	2018-364
SCALE	1" = 60'
FILE	2017699map
DRAWN	dn
CHECKED	wg
DATE	6/12/18
FIGURE	3

EXCERPTS FROM IWM'S PHASE II (July 31, 2019)

PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
128(a) Response Program Grant
Indiana Brownfields Site ID: 4170705

Prepared For:

Ms. Tracey Michael, Project Manager
Indiana Brownfields Program
100 N. Senate Ave., Rm. 1275
Indianapolis, IN 46204

Prepared by:

IWM Consulting Group, LLC
1015 Production Road
Fort Wayne, Indiana 46808
(260) 497-9620

Project: 19-716-10

Date: July 31, 2019

TABLE 1
Summary of Bulk Asbestos Sample Laboratory Results
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Material Description	Sample ID	HA	Sample Location	ACM Class.[1]	Results (% Asbestos)
Roofing (a) Felt (b)	BC-AB1a	1	West Central Building Debris	I	ND
	BC-AB1b			I	ND
	BC-AB2a			I	ND
	BC-AB2b			I	ND
Mortar	BC-AB3	2	West Central Building Debris	II	ND
	BC-AB4			II	ND
	BC-AB5			II	ND
Electrical Wire Insulation	BC-AB6	3	West Central Building Debris	I	ND
	BC-AB7a			I	ND
	BC-AB7b			I	ND
Roofing (a) Shingle (b)	BC-AB8a	4	East Central Building Debris	I	2%
	BC-AB8b			I	<1%
	BC-AB9a			I	2%
	BC-AB9b			I	<1%
Mortar	BC-AB10	5	East Central Building Debris	II	ND
	BC-AB11			II	ND
	BC-AB12			II	ND
Transite Panels	BC-AB13	6	East Central Building Stack Debris	II	20%
	BC-AB14			II	15%
Fire Brick Mortar	BC-AB15	7	East Central Building Stack Debris	II	ND
	BC-AB16			II	ND
Fire Brick	BC-AB17	8	East Central Building Stack Debris	II	ND
	BC-AB18			II	ND
Fire Brick Glazing	BC-AB19	9	East Central Building Stack Debris	II	ND
	BC-AB20			II	ND

[1] Asbestos Containing Material Classification: Friable (F), Category I (I), Category II (II).
HA – Homogeneous Area; ND – None Detected

IWM CONSULTING GROUP

TABLE 1
Summary of Bulk Asbestos Sample Laboratory Results
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Material Description	Sample ID	HA	Sample Location	ACM Class.[1]	Results (% Asbestos)
Paper Backing	BC-AB21	10	East Central Building Debris	F	40%
Window Sealant	BC-AB22	11	East Central Building Debris	F	ND
	BC-AB23			F	ND
Window Sealant	BC-AB24	12	Central Shed	F	ND
	BC-AB25			F	ND
Roofing (a) Felt (b), Tar (c) and Shingle (d)	BC-AB26a	13	North Building	I	ND
	BC-AB26b			I	ND
	BC-AB26c			I	2%
	BC-AB27b			I	ND
	BC-AB27c			I	5%
	BC-AB27d			I	ND
Mortar	BC-AB28	14	North Building	II	ND
	BC-AB29			II	ND
	BC-AB30			II	ND

[1] Asbestos Containing Material Classification: Friable (F), Category I (I), Category II (II).
HA – Homogeneous Area; ND – None Detected

TABLE 2
Summary of Lead Paint Screening Results
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No: 4170705

Sample Location	XRF Result	Lab Sample Collected	Sample ID	Laboratory Results (ppm)
West Central Building				
Handrail - Yellow	Negative	No	NA	NA
Handrail - White	Negative	No	NA	NA
Grout on Bricks - Yellow	Negative	No	NA	NA
Grout on Bricks - White	Negative	No	NA	NA
Central Shed				
Windows/Doorframes - Green/Blue	Negative	No	NA	NA
East Central Building				
Grout on Bricks - Light Blue	Negative	No	NA	NA
Roof Tile Glaze - Brown	Negative	No	NA	NA
East Building				
Door and Doorframe - Red	0.96 ± 0.15	Yes	BC-PB1	18,000
Sheet Metal - Red	0.60 ± 0.10	No	NA	NA
North Building				
Outer Wall - Yellow	Negative	No	NA	NA
Steps - Light Blue	Negative	No	NA	NA
Metal Soffit - Red	Negative	No	NA	NA
Interior Wall - White	Negative	No	NA	NA
Basement Wall - White	Negative	No	NA	NA

Negative = Instrument displayed "negative" for the detection of lead

Table 3 - Chemical Inventory (May 15, 2019) - The Butler Company

Building/Area	Chemical Name	No. of Containers	Container Volume	Container Type	Volume of Material	Liquid/Solid	Description
Outside - east side of site	no labels	2	200-gallon	tote	unknown	solid	200-gallon totes with residue/solid material in bottom
Outside various locations	no labels and Ferric Chloride	5	55-gal	drum	unknown	NA	steel drums used for burn barrels and plastic drums used for trash cans, one (1) plastic drum labeled Ferric Chloride
Inside North Building	PCBs	4	ounces	light ballast	unknown	NA	there are four (4) old transformers in fluorescent light ballasts with possible PCBs
Inside North Building	mercury vapor	8	unknown	fluorescent bulbs	unknown	NA	fluorescent light bulbs, four (4) 4-foot and four (4) 8-foot
Inside North Building	oil based stain, water based paint, naphtha, petroleum distillates, heptane solvent, paint thinner, clear lacquer, polyurethane, acetone, toluene, methanol, methylene chloride, xylenes, trimethylbenzene, 1,2,4-trimethylbenzene, methyl 1b ketone, n-butyl acetate, petroleum oil, vegetable oil	60+	8 ounce to 1-gallon	plastic bottles from 8-ounces to 1-gallon, metal paint cans from 8-ounces to 1-gallon, 12 ounce aerosol paint cans	varies from empty containers, solidified contents, less than 10-gallons total	both	various sized plastic and metal containers from 8-ounces to 1-gallon. Most containers have minimal amounts present, some paint materials and putty materials have soldified. Most small containers are located on plastic shelving in North Building. See photograph log in Appendix F.

TABLE 4
Summary of Groundwater and Well Measurements - May 22, 2019
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Well	Groundwater Observations	TOC Elevation[1]	Depth to Groundwater	Groundwater Elevation[1]
BC-GP10	brn, mod turb, no odor, no sheen	868.22	22.76	845.46
BC-GP11	brn, v sl turb, no odor, no sheen	867.16	21.81	845.35
BC-GP12	lt brn, v sl turb, no odor, no sheen	866.67	21.68	844.99
BC-GP13	cl, v sl turb, no odor, no sheen	866.66	4.88	861.78
BC-GP14	lt brn, sl turb, no odor, no sheen	866.36	21.52	844.84
BC-GP15	brn, sl turb, no odor, no sheen	865.78	20.94	844.84

Notes:

[1]Elevation in feet based on survey data prepared by Maxwell Surveying & Engineering, May 24, 2019.

Groundwater observations may include: color (cl–clear, gry–gray, blk–black, brn–brown, orn–orange), turbidity (turb), odor (gas–gasoline, die–diesel, sep–septic), shade (lt–light, dk–dark), modifier (v–very, sl–slight, mod–moderate, sig–significant)

Groundwater Observations were made at the time the well was purged.

Table 5
Summary of Soil Metals Analytical Results (mg/kg)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Depth in Feet	Sample Date	Arsenic	Barium	Cadmium	Chromium	Hexavalent Chromium	Copper	Lead	Mercury	Selenium	Zinc
			METALS									
BC-GP1-SS1	1-2	05/21/19	**14.0**	80.2	<0.54	19.1	NA	55.6	61.6	0.92	<1.1	101
BC-GP1-SB1	3-4	05/21/19	2.6	127	<0.54	24.1	NA	15.2	11.3	<0.24	<1.1	58.8
BC-GP2-SS1	0.5-1.5	05/21/19	**8.6**	81.1	4.3	13.3	NA	127	97.7	0.58	<1.0	290
BC-GP2-SB1	3-4	05/21/19	**9.3**	87.5	<0.60	22.8	NA	21.7	9.4	<0.24	<1.2	57.7
BC-GP3-SS1	1-2	05/21/19	**6.7**	651	1.2	15.3	NA	90.0	**3,160**	0.46	<1.1	446
BC-GP3-SB1	3-4	05/21/19	5.5	136	<0.59	27.3	NA	17.0	11.5	<0.24	<1.2	72.5
BC-GP4-SS1	1-2	05/21/19	**12.0**	269	1.9	16.6	NA	88.1	**395**	<0.24	1.4	837
BC-SB-FD2			**11.5**	416	1.5	15.2	NA	59.2	**691**	<0.26	1.4	684
BC-GP4-SB1	3-4	05/21/19	3.0	76.4	<0.57	22.0	NA	15.4	11.3	<0.26	<1.1	71.6
BC-GP5-SS1	2-3	05/21/19	**10.4**	57.7	<0.58	10.9	NA	62.5	63.1	<0.24	<1.2	73.1
BC-GP5-SB1	3.5-4	05/21/19	5.9	81.8	0.73	19.6	NA	29.1	13.6	<0.23	<1.1	57.8
BC-GP6-SS1	1-2	05/21/19	**13.2**	55.8	0.77	19.7	NA	90.1	62.5	<0.22	<1.0	241
BC-GP6-SB1	3-4	05/21/19	5.5	250	2.8	32.7	**<0.423**	128	15.6	<0.32	2.3	77.6
BC-GP7-SS1	1-2	05/21/19	**44.0**	694	1.2	24.2	NA	222	159	<0.26	<1.3	273
BC-GP7-SB1	3-4	05/21/19	**28.2**	116	1.2	17.3	NA	52.9	198	<0.25	1.3	203
BC-GP8-SS1	2-3	05/21/19	**33.9**	46.2	<0.54	38.4	**<0.263**	39.7	25.4	<0.22	<1.1	91.5
BC-GP8-SB1	3-4	05/21/19	2.8	116	<0.55	25.6	NA	15.8	10.7	<0.26	<1.1	66.3
BC-SB-FD3			**27.7**	35.9	<0.50	32.5	NA	35.6	27.0	<0.23	<1.0	63.0
BC-GP9-SS1	1-2	05/21/19	**25.5**	169	2.4	44.0	**0.600 J**	688	**448**	<0.26	<1.1	745
BC-GP9-SB1	3-4	05/21/19	**13.8**	85.2	<0.58	23.5	NA	25.9	12.6	<0.23	<1.2	77.6
BC-GP10-SS1	1-2	05/21/19	**11.6**	228	0.60	32.2	NA	212	158	0.54	<1.2	159
BC-GP11-SS1	0.5-1.5	05/21/19	**15.0**	323	5.3	16.7	NA	385	**282**	<0.25	1.8	1,230
BC-GP12-SS1	1-2	05/20/19	3.1	131	<0.54	21.2	NA	13.7	84.7	<0.22	<1.1	102
BC-GP13-SS1	1-2	05/20/19	**13.5**	93.7	1.2	13.1	NA	124	137	0.32	<1.1	355
BC-SB-FD1			**17.1**	197	1.1	19.1	NA	68.3	150	<0.24	<1.1	339
BC-GP14-SS1	0.5-1.5	05/20/19	**49.2**	192	0.80	19.2	NA	98.1	156	<0.22	1.7	211
BC-GP15-SS1	0.5-1	05/21/19	**12.8**	29.2	<0.46	14.7	NA	27.1	20.8	<0.22	<0.93	116
RDCSL			9.5	21,000	99	100,000	4.2	4,300	400	3.1	550	32,000
IDCSL			30	100,000	980	100,000	63	47,000	800	3.1	5,800	100,000
Res MTGSL			5.9	1,700	7.5	1,000,000	0.14	920	270	2.1	5.3	7,500
EX DCSL			920	100,000	1,900	100,000	2,700	79,000	1,000	3.1	9,800	100,000

Notes:
All concentrations are reported in mg/kg. NA = Not analyzed. NE = No IDEM RCG Screening Level established for this constituent.
Unlisted compounds below laboratory detection limits for all samples.
Bold values indicate concentrations above the RCG Residential Soil Exposure Direct Contact Screening Levels (RDCSLs) and/or RCG Residential Soil Migration to Groundwater Screening Levels (Res MTGSLs).
Bold outlined values indicate concentrations above the RCG Commercial/Industrial Soil Exposure Direct Contact Screening Levels (IDCSLs).
IDEM Remediation Closure Guide (RCG), Appendix A: Screening Levels, Table A-6: Screening Level Summary Table - March 2019 Screening Levels.

TABLE 6
Summary of Soil PAH Analytical Results (mg/kg)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Depth in Feet	Sample Date	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
			PAH													
BC-GP7-SB1	3-4	05/21/19	0.0081	0.015	0.011	0.011	0.017	0.013	0.017	0.024	0.012	0.079	0.11	0.10	0.043	0.027
BC-GP8-SB1	3-4	05/21/19	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063
BC-SB-FD3	3-4	05/21/19	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	0.0071	0.019	0.0085	<0.0056
RDCSL			25,000	15	1.5	15	NE	150	1,500	3,400	15	250	340	53	NE	2,500
IDCSL			100,000	210	21	210	NE	2,100	21,000	30,000	210	390	3,000	170	NE	23,000
Res MTGSL			1,200	2.1	4.7	60	NE	590	1,800	1,800	200	1.2	3.7	0.11	NE	260
EX DCSL			100000	12000	500	12000	NE	100,000	100,000	68,000	12,000	390	6,800	3,100	NE	51,000

Notes:
All concentrations are reported in mg/kg. NA = Not analyzed. NE = No IDEM RCG Screening Level established for this constituent. Unlisted compounds below laboratory detection limits for all samples.
Bold values indicate concentrations above the RCG Residential Soil Exposure Direct Contact Screening Levels (RDCSLs) and/or RCG Residential Soil Migration to Groundwater Screening Levels (Res MTGSLs).
IDEM Remediation Closure Guide (RCG), Appendix A: Screening Levels, Table A-6: Screening Level Summary Table - March 2019 Screening Levels.

Table 7
Summary of Soil VOC and PCB Analytical Results (mg/kg)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Depth in Feet	Sample Date	n-Hexane	PCBs
			VOC	**PCB**
BC-GP7-SB1	3-4	05/21/19	0.049	<0.13
BC-GP8-SB1	3-4	05/21/19	0.071	<0.13
BC-SB-FD3			0.30	<0.11
RDCSL			140	
IDCSL			140	
Res MTGSL			210	
EX DCSL			140	

Notes:

All concentrations are reported in mg/kg. NA = Not analyzed.

Unlisted compounds below laboratory detection limits for all samples.

Bold values indicate concentrations above the RCG Residential Soil Exposure Direct Contact Screening Levels (RDCSLs) and/or RCG Residential Soil Migration to Groundwater Screening Levels (Res MTGSLs).

IDEM Remediation Closure Guide (RCG), Appendix A: Screening Levels, Table A-6: Screening Level Summary Table - March 2019 Screening Levels.

TABLE 8
Summary of XRF and Lead Analytical Results
The Butler Company
325 South Broadway Street
Butler, Dekalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Date	XRF (ppm)	Lead (mg/kg)
BC-GP3-N5 (1-2)	06/18/19	151	51.7
BC-SB-FD4		151	228
BC-GP3-E5 (1-2)	06/18/19	101	NA
BC-GP3-E10 (1-2)	06/18/19	2,240	75.6
BC-GP3-W5 (1-2)	06/18/19	345	307
BC-GP3-W10 (1-2)	06/18/19	12	NA
BC-GP3-S5 (1-2)	06/18/19	380	NA
BC-GP3-S10 (1-2)	06/18/19	999	**660**
BC-GP16-N5 (1-2)	06/18/19	7,771	49.2
BC-GP16-N10 (1-2)	06/18/19	87	NA
BC-GP16-E5 (1-2)	06/18/19	448	NA
BC-GP16-E10 (1-2)	06/18/19	3,087	***4,470***
BC-GP16-W5 (1-2)	06/18/19	672	**964**
BC-GP16-W10 (1-2)	06/18/19	94	NA
BC-GP16-S5 (1-2)	06/18/19	141	NA
BC-GP16-S10 (1-2)	06/18/19	425	135
RDCSL		NE	400
IDCSL		NE	800
Res MTGSL		NE	270
EX DCSL		NE	1,000

Notes:

NA = Not analyzed.

NE = No IDEM RCG Screening Level established for this constituent.

Bold values indicate concentrations above the RCG Residential Soil Exposure Direct Contact Screening Levels (RDCSLs) and/or RCG Commercial/Industrial Soil Exposure Direct Contact Screening Levels (IDCSLs).

Bold and Italicize values indicate concentrations above the RCG Excavation Soil Exposure Direct Contact Screening Levels (ExDCSLs).

TABLE 9
Summary of Soil PFAS Analytical Results (µg/kg)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Depth in Feet	Sample Date	Perfluorooctanoic Acid (PFOA)	Perfluorooctanesulfonic Acid (PFOS)
			PFAS	
BC-GP10-SS1	1-2	05/21/19	0.61	<0.24
BC-GP10-SS1(DUP)	1-2	05/21/19	0.58	<0.22
BC-GP11-SS1	0.5-1.5	05/21/19	<0.23	0.54
BC-GP12-SS1	1-2	05/20/19	<0.23	<0.23
BC-GP13-SS1	1-2	05/20/19	<0.24	0.46
BC-SB-FD1			<0.23	<0.22
BC-GP14-SS1	0.5-1.5	05/20/19	<0.24	<0.23
BC-FRB1		05/20/19	<1.8	<1.8
BC-FRB2		05/21/19	<1.9	<1.8

Notes:
All concentrations are reported in µg/kg. NA = Not analyzed.
Field Reagent Blank (FRB) sample results presented in nanogram per liter (ug/L).
Unlisted compounds below laboratory detection limits for all samples.

TABLE 10
Summary of Groundwater Metals Analytical Results (µg/L)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Date	Barium	Dissolved Barium	Cadmium	Dissolved Cadmium	Chromium	Dissolved Chromium	Copper	Dissolved Copper	Lead	Dissolved Lead	Zinc	Dissolved Zinc
		METALS											
BC-GP10-GW1	05/22/19	117	72.0	<2.0	<2.0	17.4	<10.0	14.5	<10.0	<10.0	<10.0	27.6	<10.0
BC-GP11-GW1	05/22/19	134	115	<2.0	<2.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	56.1	24.4
BC-GPGW-FD1		133	116	<2.0	<2.0	<10.0	<10.0	10.2	<10.0	<10.0	<10.0	54.4	22.8
BC-GP12-GW1	05/22/19	121	114	<2.0	<2.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<20.0	<20.0
BC-GP13-GW1	05/22/19	136	140	3.9	3.8	<10.0	<10.0	35.0	<10.0	<10.0	<10.0	1,610	1,570
BC-GP14-GW1	05/22/19	158	123	<2.0	<2.0	10.9	<10.0	12.6	<10.0	<10.0	<10.0	22.3	<20.0
BC-GP15-GW1	05/22/19	150	131	<2.0	<2.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<20.0	<20.0
Res TAP GWSLs		2,000	2,000	5	5	100	100	1,300	1,300	15	15	6,000	6,000

Notes:
All concentrations are reported in µg/L. NA = Not analyzed. NE = No IDEM RCG Screening Level established for this constituent.
Unlisted compounds below laboratory detection limits for all samples.
Bold values indicate concentrations above the RCG Residential TAP Groundwater Screening Levels (Res TAP GWSLs).
IDEM Remediation Closure Guide (RCG), Appendix A: Screening Levels, Table A-6: Screening Level Summary Table - March 2019 Screening Levels.

TABLE 11
Summary of Groundwater PAH, VOC, and PCB Analytical Results (µg/L)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Date	PAH	VOC	PCB
BC-GP10-GW1	05/22/19	ND	ND	ND
BC-GP11-GW1	05/22/19	ND	ND	ND
BC-GPGW-FD1		ND	ND	ND
BC-GP12-GW1	05/22/19	ND	ND	ND
BC-GP13-GW1	05/22/19	ND	ND	ND
BC-GP14-GW1	05/22/19	ND	ND	ND
BC-GP15-GW1	05/22/19	ND	ND	ND

Notes:
All concentrations are reported in µg/L. NA = Not analyzed. ND = No detection.
NE = No IDEM RCG Screening Level established for this constituent.
Bold values indicate concentrations above the RCG Residential TAP Groundwater Screening Levels (Res TAP GWSLs).
IDEM Remediation Closure Guide (RCG), Appendix A: Screening Levels, Table A-6: Screening Levels Summary Table - March 2019 Screening Levels.

TABLE 12
Summary of Groundwater PFAS Analytical Results (ng/L)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Sample Date	Perfluorobutanoic Acid (PFBA)	Perfluoropentanoic Acid (PFPeA)	Perfluorobutanesulfonic Acid (PFBS)	Perfluorohexanoic Acid (PFHxA)	Perfluoroheptanoic Acid (PFHpA)	Perfluorohexanesulfonic Acid (PFHxS)	Perfluorooctanoic Acid (PFOA)	Perfluorooctanesulfonic Acid (PFOS)
		PFAS							
BC-GP10-GW1	05/22/19	<2.1	<2.1	<1.8	<2.1	<2.1	<1.9	<2.1	<2.0
BC-GP11-GW1	05/22/19	<2.0	<2.0	<1.8	<2.0	<2.0	<1.9	<2.0	<1.9
BC-GPGW-FD1		<2.0	<2.0	<1.8	<2.0	<2.0	<1.9	<2.0	<1.9
BC-GP12-GW1	05/22/19	7.3	<1.9	<1.9	<1.9	<1.9	<1.8	<1.9	23
BC-GP13-GW1	05/22/19	13	6.0	3.2	6.8	3.0	6.7	5.3	4.6
BC-GP14-GW1	05/22/19	<2.0	<2.0	<1.8	<2.0	<2.0	<1.9	<2.0	<2.0
BC-FRB3	05/22/19	<2.0	<2.0	<1.7	<2.0	<2.0	<1.9	<2.0	<1.9

Notes:
All concentrations are reported in ng/L. NA = Not analyzed. Unlisted compounds below laboratory detection limits for all samples.

TABLE 13
Summary of Soil Gas Sampling Analytical Results (µg/m^3)
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

Sample ID	Screened Interval	Sample Date	Acetone	Benzene	Carbon disulfide	Chloroform	1,3-Dichlorobenzene	Dichlorodifluoromethane	Ethanol	Ethylbenzene	n-Heptane	n-Hexane	Methylene Chloride	4-Methyl-2-pentanone (MIBK)	2-Propanol	Propylene	Styrene	Tetrachloroethene	Tetrahydrofuran	Toluene	1,1,2-Trichloroethane	Trichlorofluoromethane	1,2,4-Trimethylbenzene	m&p-Xylene	o-Xylene
			SOIL GAS																						
BC-SG2	4-4.5	05/31/19	24.7	14.6	14.8	12.6	4.2	3.0	121	10.3	647	1,260	17.8	16.4	9.4	504	3.4	72.8	<1.1	33.5	<3.0	2.5	5.6	20.0	7.3
BC-SG-FD1			27.8	14.4	14.5	12.9	3.8	2.7	118	9.9	629	1,230	29.3	15.2	9.3	498	3.3	70.1	23.0	41.3	2.1	<1.0	5.5	19.2	7.3
Calculated RCG Commercial/Industrial Soil Gas Vapor Exposure Screening Levels (ug/m^3)			1,400,000	160	31,000	53	NE	4,400	NE	490	18,000	31,000	26,000	130,000	8,800	130,000	44,000	1,800	88,000	220,000	9	NE	2,600	4,400	4,400

Notes:

All concentrations are reported in ug/m^3. Screened interval reported in feet below grade. NA = Not analyzed. NE = No IDEM RCG Screening Level established for this constituent.

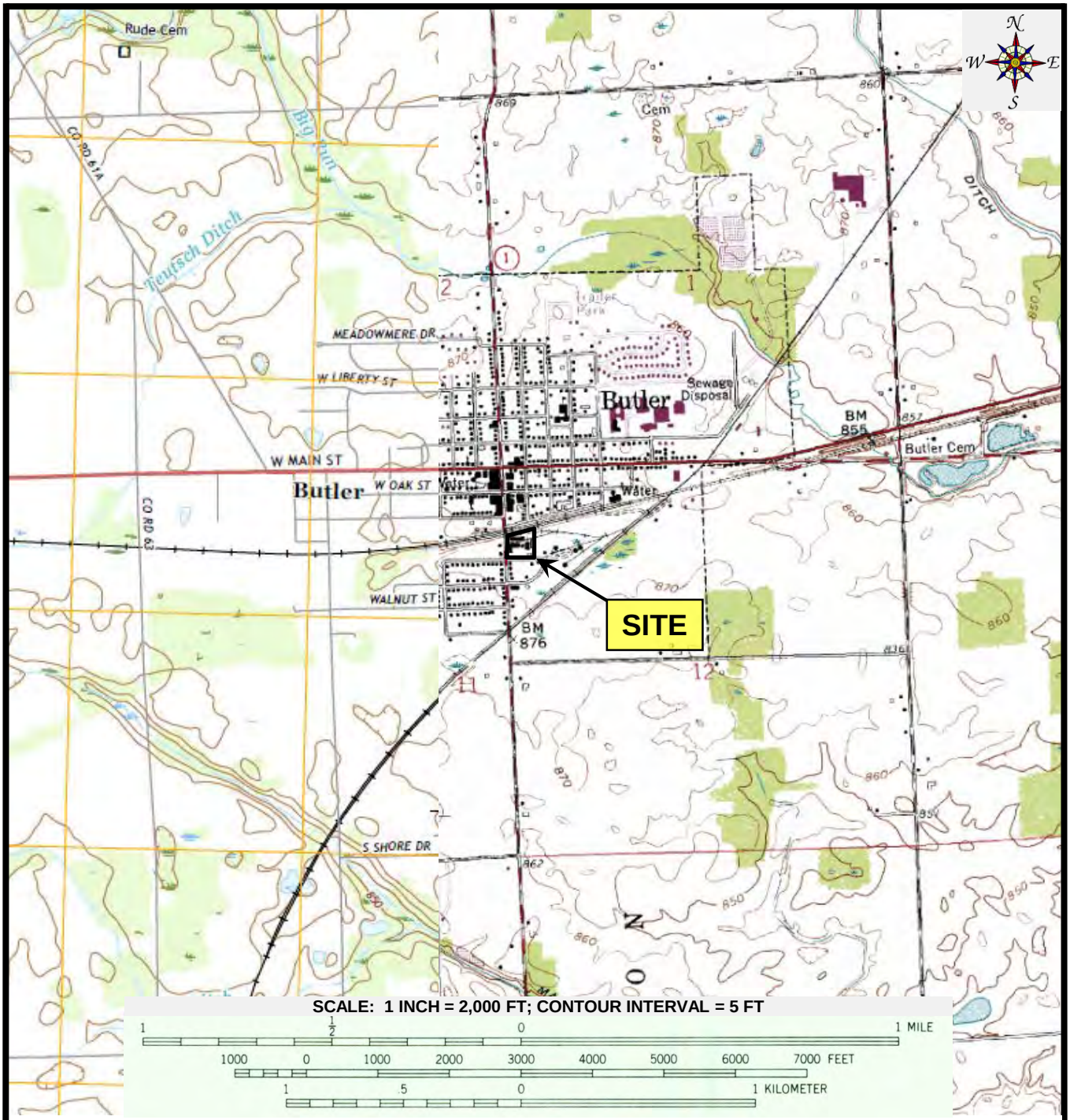
Bold values indicate concentrations above the RCG Commercial/Industrial Soil Gas Vapor Exposure (Indus SGe VESL).

IDEM Remediation Closure Guide (RCG), Appendix A: Screening Levels, Table A-6: Screening Level Summary Table - March 2019 Screening Levels.

Soil Gas Vapor Exposure Screening Levels were calculated by dividing the corresponding Indoor Air Screening Levels (RCG, updated March 2019) by 0.1 (exterior soil gas points shallower than 5 feet), (assumed attenuation factor) as outlined in IDEM's technical guidance document *Attenuation Factors* (September 2016).

SUMMA CANISTER VACUUM MEASUREMENTS		
	BC-G2	**BC-SG-FD1**
Initial Summa Canister Vacuum Measurement (inches Hg)	-29	-29
Final Summa Canister Vacuum Measurement (inches Hg)	-2	-2
Summa Canister Vacuum Measurement Upon Arrival at Laboratory (inches Hg)	-3	-3

FIGURES



SOURCE: BUTLER WEST, INDIANA, USGS TOPOGRAPHIC QUADRANGLE MAP, 2016 and BUTLER EAST, INDIANA, USGS TOPOGRAPHIC QUADRANGLE MAP, 1958 (REVISED 1994)

iWM CONSULTING GROUP
1015 Production Road, Fort Wayne, IN 46808
(260) 497-9620 Fax: (260) 470-7071

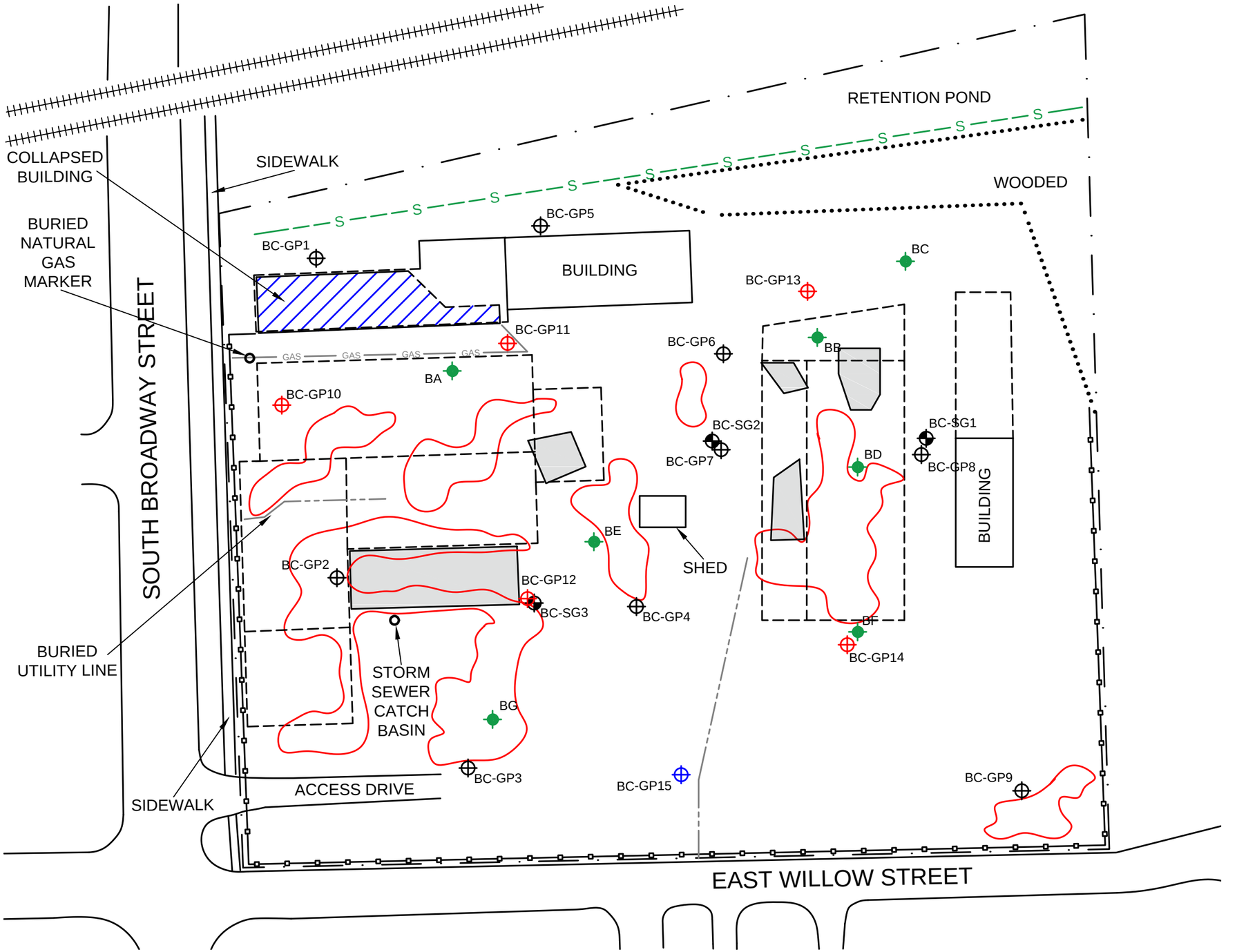
Project	Task	Size	Date
19-716	10	A	4/11/2019

FIGURE 1

Site Location Map
The Butler Company
IBP Site No. 4170705
325 South Broadway Street
Butler, DeKalb County, Indiana

CLIENT

INDIANA BROWNFIELDS PROGRAM
INDIANAPOLIS, INDIANA



LEGEND

- PROPERTY BOUNDARY
- BC-GP1 — FILL SAMPLING LOCATION BORING, BC-GP1 THROUGH BC-GP9 (NINE (9) LOCATIONS)
- BC-GP11 — BORING/TEMPORARY WELL LOCATION WITH PFAS SAMPLING, BC-GP10 THROUGH BC-GP14 (FIVE (5) LOCATIONS)
- BC-GP15 — BORING/TEMPORARY WELL LOCATION, BC-GP15 (ONE (1) LOCATION)
- BC-SG1 — ATTEMPTED SOIL GAS LOCATION, BC-SG1, BC-SG2, AND BC-SG3
- BE — SOIL BORING/TEMPORARY WELL LOCATION. SAMPLED BY SES IN JUNE 2018.
- FORMER BUILDING FOOTPRINT
- APPARENT BUILDING DEBRIS PILE
- FENCE LINE
- EXPOSED CONCRETE BUILDING PAD/FOUNDATION
- S — SEWER
- BURIED UTILITY LINE
- GAS — RELIC BURIED NATURAL GAS LINE

SITE FEATURES SHOWN ARE BASED ON DEKALB COUNTY GIS 2012 AND 2017 AERIAL PHOTOGRAPHS.

N

0 25' 50' 75'

SCALE: 1" = 50'

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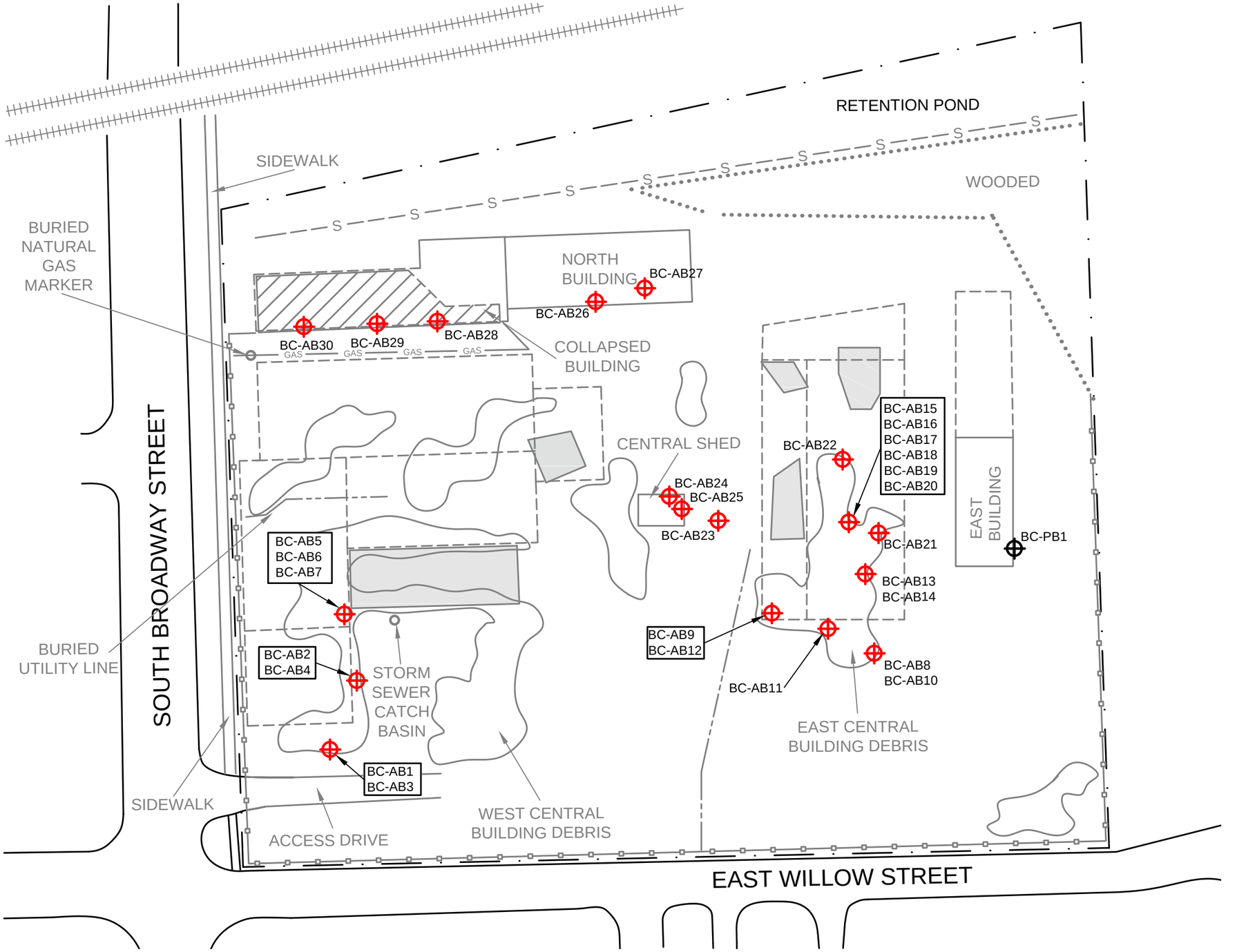
(260)497-9620 fax: (260)471-7071 www.iwmconsult.com

TITLE:
SITE PLAN AND SAMPLE LOCATION MAP
THE BUTLER COMPANY - IBP SITE No. 4170705
325 SOUTH BROADWAY STREET
BUTLER, DEKALB COUNTY, INDIANA

CLIENT:
INDIANA BROWNFIELDS PROGRAM
INDIANAPOLIS, INDIANA

DRAWN BY:	CGP	DATE:	7/10/19	DRAWING NUMBER			
REVISED:	CGP	DATE:	7/10/19	PROJECT NUMBER	TASK	SIZE	FIG. NO.
APPROVED BY:	MRA	DATE:	7/10/19	19-716	10	B	2



LEGEND

- PROPERTY BOUNDARY
- FORMER BUILDING FOOTPRINT
- APPARENT BUILDING DEBRIS PILE
- FENCE LINE
- EXPOSED CONCRETE BUILDING PAD/FOUNDATION
- SEWER (S)
- BURIED UTILITY LINE
- RELIC BURIED NATURAL GAS LINE (GAS)
- BC-AB1 — ASBESTOS SAMPLE LOCATION
- BC-PB1 — LEAD-BASED PAINT SAMPLE LOCATION

SITE FEATURES SHOWN ARE BASED ON DEKALB COUNTY GIS 2012 AND 2017 AERIAL PHOTOGRAPHS.

0 25' 50' 75'

SCALE: 1" = 50'

N

IWM CONSULTING GROUP

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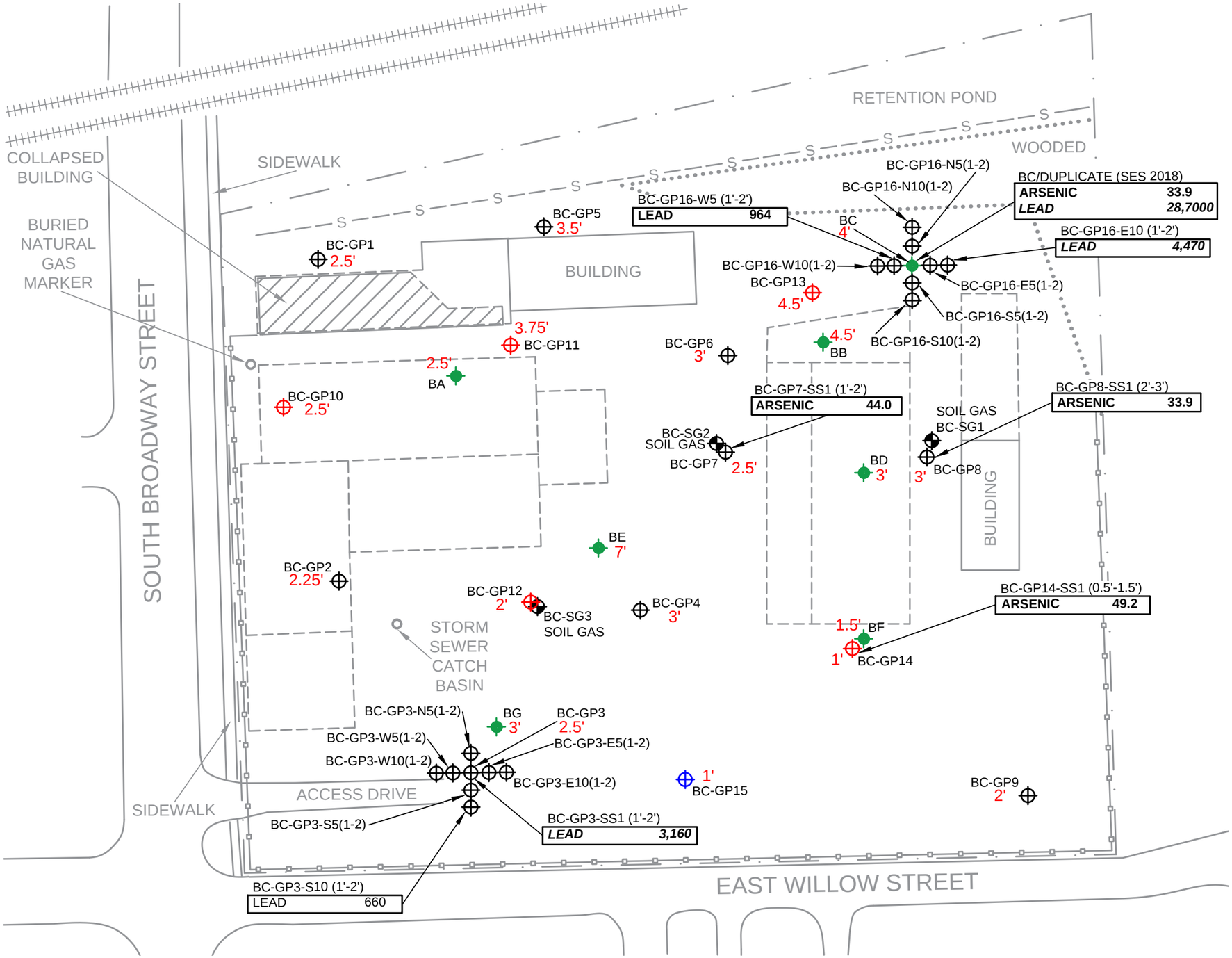
TITLE:
BULK ASBESTOS AND LEAD PAINT SAMPLE LOCATION MAP
THE BUTLER COMPANY - IBP SITE No. 4170705
325 SOUTH BROADWAY STREET
BUTLER, DEKALB COUNTY, INDIANA

CLIENT:
INDIANA BROWNFIELDS PROGRAM
INDIANAPOLIS, INDIANA

DRAWN BY:	CGP	DATE:	7/11/19	DRAWING NUMBER		
REVISED:	CGP	DATE:	7/11/19	PROJECT NUMBER	TASK	SIZE / FIG. NO.
APPROVED BY:	MRA	DATE:	7/11/19	19-716	10	B / 3



LEGEND

- PROPERTY BOUNDARY
- BC-GP1 — FILL SAMPLING LOCATION BORING, BC-GP1 THROUGH BC-GP9 (NINE (9) LOCATIONS)
- BC-GP11 — BORING/TEMPORARY WELL LOCATION WITH PFAS SAMPLING, BC-GP10 THROUGH BC-GP14 (FIVE (5) LOCATIONS)
- BC-GP15 — BORING/TEMPORARY WELL LOCATION, BC-GP15 (ONE (1) LOCATION)
- BC-SG1 — ATTEMPTED SOIL GAS LOCATION, BC-SG1, BC-SG2, AND BC-SG3
- 3' — THICKNESS OF FILL AS IDENTIFIED IN SOIL BORING.
- BC — SES BORING LOCATION (2018)
- FORMER BUILDING FOOTPRINT
- FENCE LINE
- S — SEWER

SITE FEATURES SHOWN ARE BASED ON DEKALB COUNTY GIS 2012 AND 2017 AERIAL PHOTOGRAPHS.

ONLY SOIL ANALYTICAL RESULTS IN EXCESS OF THEIR RESPECTIVE MARCH 2019 IDEM RCG RDCSLs, **IDCSLs**, AND ***ExDCSLs*** ARE SHOWN ON THIS MAP.

N

0 25' 50' 75'

SCALE: 1" = 50'

iWM CONSULTING GROUP

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(260)497-9620 fax: (260)471-7071 www.iwmconsult.com

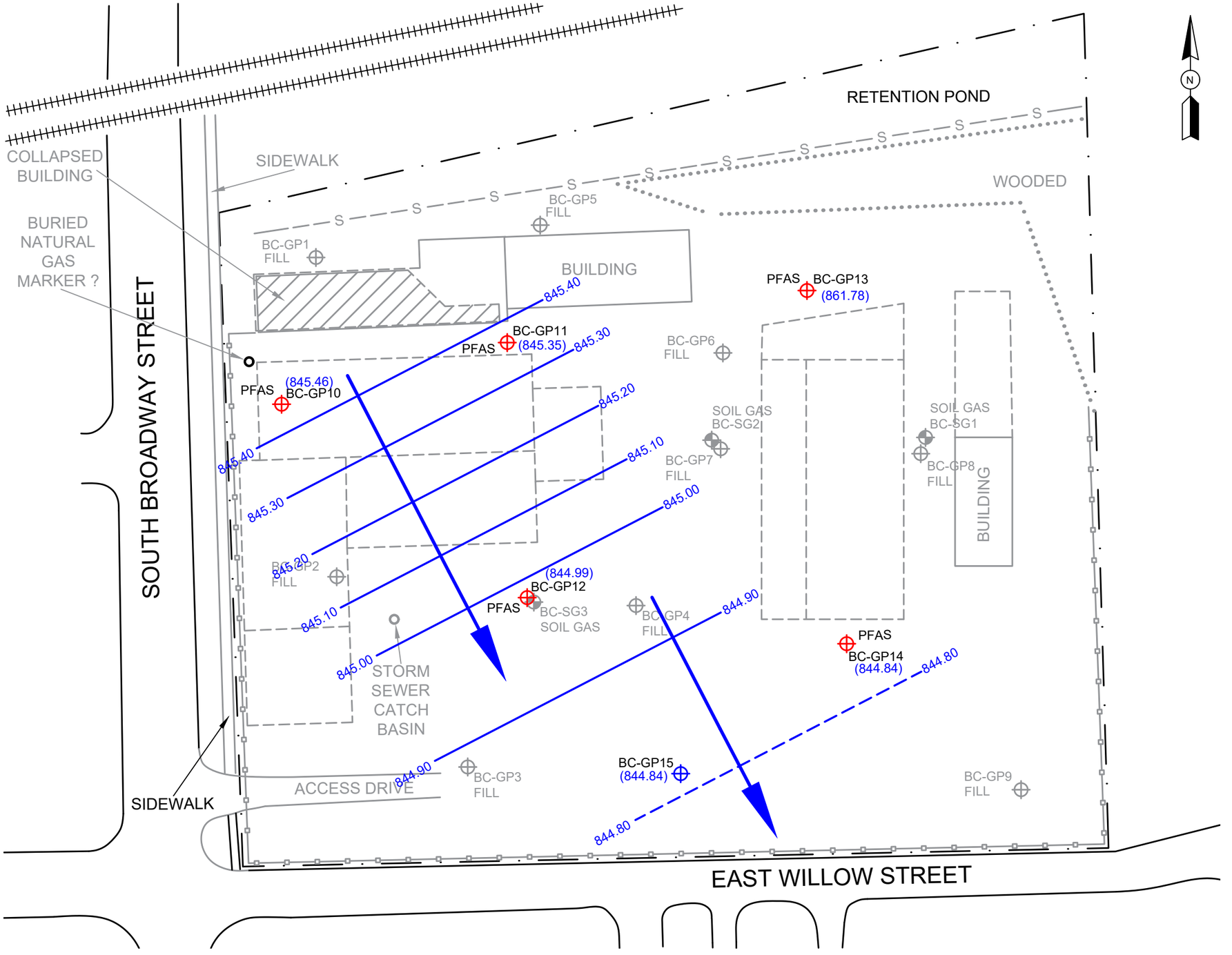
TITLE:

SOIL ANALYTICAL RESULTS MAP
THE BUTLER COMPANY - IBP SITE No. 4170705
325 SOUTH BROADWAY STREET
BUTLER, DEKALB COUNTY, INDIANA

CLIENT:

INDIANA BROWNFIELDS PROGRAM
INDIANAPOLIS, INDIANA

DRAWN BY: CGP	DATE: 7/11/19	DRAWING NUMBER	
REVISED: CGP	DATE: 7/11/19	PROJECT NUMBER 19-716	TASK 10
APPROVED BY: MRA	DATE: 7/11/19	SIZE B	FIG. NO. 4



LEGEND

- PROPERTY BOUNDARY
- FILL SAMPLING LOCATION BORING, BC-GP1 THROUGH BC-GP9 (NINE (9) LOCATIONS)
- PFAS — BORING/TEMPORARY WELL LOCATION WITH PFAS SAMPLING, BC-GP10 THROUGH BC-GP14 (FIVE (5) LOCATIONS)
- BORING/TEMPORARY WELL LOCATION, BC-GP15 (ONE (1) LOCATION)
- ATTEMPTED SOIL GAS LOCATION, BC-SG1, BC-SG2, AND BC-SG3
- FORMER BUILDING FOOTPRINT
- FENCE LINE
- S — SEWER
- POTENTIOMETRIC CONTOUR
- (946.64) GROUNDWATER ELEVATION MAY 22, 2019
- GROUNDWATER FLOW DIRECTION

NOTE: BC-GP13 WAS NOT INCLUDED IN THE GENERATION OF THE MAY 22, 2019 POTENTIOMETRIC MAP BECAUSE WELL WAS INSTALLED IN SHALLOW FILL.

WELL ELEVATIONS AND LOCATIONS SURVEYED BY MAXWELL SURVEYING AND ENGINEERING ON MAY 25, 2019.

0 25' 50' 75'

SCALE: 1" = 50'

IWM CONSULTING GROUP
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TITLE:
GROUNDWATER POTENTIOMETRIC MAP
THE BUTLER COMPANY - IBP SITE No. 4170705
325 SOUTH BROADWAY STREET
BUTLER, DEKALB COUNTY, INDIANA

CLIENT:
INDIANA BROWNFIELDS PROGRAM
INDIANAPOLIS, INDIANA

DRAWN BY: CGP	DATE: 7/11/19	DRAWING NUMBER	
REVISED: CGP	DATE: 7/11/19	PROJECT NUMBER 19-716	TASK 10
APPROVED BY: MRA	DATE: 7/11/19	SIZE B	FIG. NO. 5

REMEDIATION WORK PLAN

APPENDIX E. EXPOSURE ASSESSMENT DATA

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705

U.S. Fish and Wildlife Service
National Wetlands Inventory

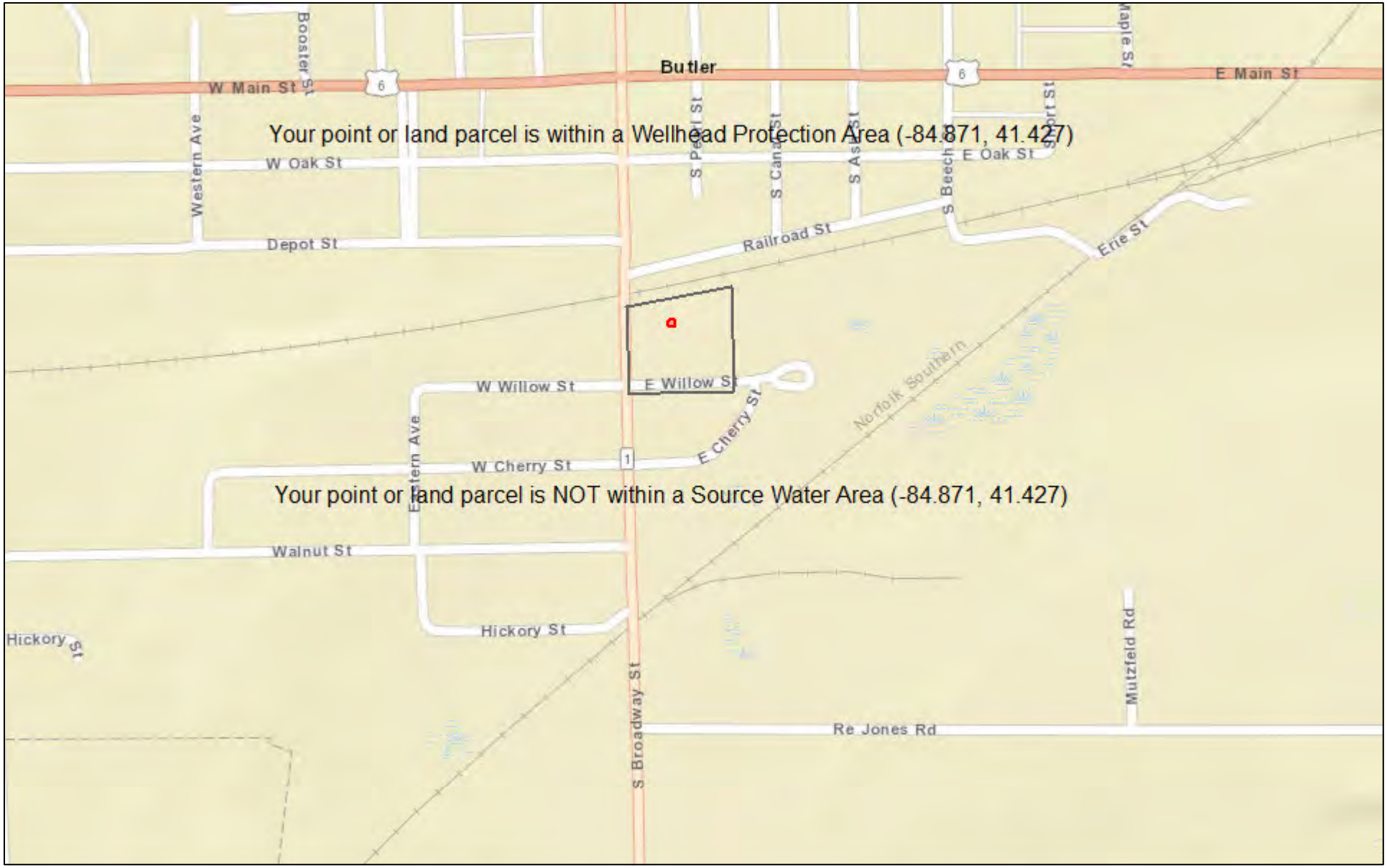
Wetland Mapper - Butler

July 27, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

IDEM Source Water Proximity



July 22, 2020

1:9,028

0 0.075 0.15 0.3 mi

0 0.1 0.2 0.4 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),

2016 Aerial Photograph

The Butler Company
325 South Butler Street, Butler, DeKalb County, Indiana 46721

Source: Google Earth™
SES Project Number: 2017-699

Indiana County Endangered, Threatened and Rare Species List

County: De Kalb

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Alasmidonta viridis	Slippershell Mussel		SSC	G4G5	S3
Epioblasma obliquata perobliqua	White catspaw	LE	SE	G1	SX
Epioblasma rangiana	Northern Riffleshell	LE	SE	G1	S1
Fusconaia subrotunda	Longsolid	C	SX	G3	SX
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Ligumia recta	Black Sandshell		SSC	G4G5	S2
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Simpsonaias ambigua	Salamander Mussel	C	SSC	G3	S2
Theliderma cylindrica	Rabbitsfoot	LT	SE	G3G4	S1
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Villosa fabalis	Rayed Bean	LE	SE	G2	S1
Insect: Lepidoptera (Butterflies & Moths)					
Catocala marmorata	Marbled Underwing Moth		SE	G3G4	S1
Fish					
Moxostoma valenciennesi	Greater Redhorse		SE	G4	S2
Amphibian					
Ambystoma laterale	Blue-spotted Salamander		SSC	G5	S2
Reptile					
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Thamnophis butleri	Butler's Garter Snake		SE	G4	S1
Bird					
Buteo platypterus	Broad-winged Hawk		SSC	G5	S3B
Circus hudsonius	Northern Harrier		SE	G5	S2
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Pandion haliaetus	Osprey		SSC	G5	S1B
Rallus limicola	Virginia Rail		SE	G5	S3B
Mammal					
Lasiurus borealis	Eastern Red Bat		SSC	G3G4	S4
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Andromeda glaucophylla	bog rosemary		ST	G5T5	S2
Botrychium simplex	least grape-fern		SE	G5	S1
Carex echinata	little prickly sedge		SE	G5	S1
Dactylorhiza viridis	long-bract green orchid		SE	G5	S1
Glyceria grandis	American manna-grass		SE	G5	S1

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long-term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long-term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: De Kalb

Species Name	Common Name	FED	STATE	GRANK	SRANK
Lathyrus ochroleucus	pale vetchling peavine		SE	G5	S1
Luzula acuminata var. acuminata	Hairy Woodrush		SE	G5T5	S1
Milium effusum	tall millet-grass		ST	G5	S1
Panax trifolius	dwarf ginseng		WL	G5	S3
Platanthera orbiculata	large roundleaf orchid		SX	G5	SX
Poa alsodes	grove meadow grass		ST	G4G5	S3
Poa paludigena	bog bluegrass		ST	G3G4	S3
Potamogeton friesii	Fries' pondweed		SE	G5	S1
Potamogeton richardsonii	redheadgrass		ST	G5	S3
Sida hermaphrodita	Virginia mallow		SE	G3	S1
Utricularia cornuta	horned bladderwort		SE	G5	S1
High Quality Natural Community					
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - upland dry-mesic Northern Lakes	Northern Lakes Dry-mesic Upland Forest		SG	GNR	S1
Forest - upland mesic Central Till Plain	Central Till Plain Mesic Upland Forest		SG	GNR	S3
Forest - upland mesic Northern Lakes	Northern Lakes Mesic Upland Forest		SG	GNR	S1
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

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Beacon™ DeKalb County, IN

Summary -Auditor's Office

Parcel ID	23-07-12-109-001
Tax Bill ID	23-07-12-109-001
State ID	17-07-12-109-001.000-027
Map Reference #	
Property Address	325 S Broadway St Butler, IN, 46721
Brief Legal Description	In Mid Pt W1/2 NW1/4 (Note: Not to be used on legal documents)
Class	COMMERCIAL WAREHOUSE
Tax District	Butler City 027
Tax Rate Code	23065 - Advertised
Property Type	67 - Commercial
Mortgage Co	N/A
Last Change Date	N/A
Acreage	3.55

Owners - Auditor's Office

FSPI 401K EMPL Profit Sharing Plan 401
5200 Dallas Hwy
Ste 200-280
Powder Springs, GA 30127

Taxing District - Assessor's Office

County:	Dekalb
Township:	Wilmington Township
State District	027 BUTLER CITY
Local District:	023
School Corp:	DEKALB COUNTY EASTERN COMMUNITY
Neighborhood:	234065-17027 VARIOUS C/I UNPLATTED AREAS 234065-17027

Site Description - Assessor's Office

Topography:	Flat
Public Utilities:	All
Street or Road:	Sidewalk , Paved
Area Quality	

Land - Assessor's Office

Land Type	Soil ID	Act Front.	Eff. Depth	Size	Rate	Adj. Rate	Ext. Value	Infl. %	Value
Primary Commercial/Indust Land		0	0	2.5500	$21,000.00	$21,000.00	$53,550.00	($75.00)	$13,390.00
Homesite		0	0	1.00	$9,964.00	$9,964.00	$9,964.00	$0.00	$9,960.00

Commercial Buildings

Description C/I Building C 05

	SB	B	1	U
Wall Type			1	
Heating				
A/C				
Sprinkler				

Use Area	2,652
Not in Use	0
Use	Light Utility Storage
Floor	1

Plumbing RES/CI	#	TF	#	TF
Total	0	0	0	0

ational Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1 " = 500 '

250 0 500 1000 FEET

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0186E

FIRM

FLOOD INSURANCE RATE MAP

DEKALB COUNTY, INDIANA

AND INCORPORATED AREAS

PANEL 186 OF 295

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUTLER, CITY OF	180047	0186	E
DEKALB COUNTY	180044	0186	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

EFFECTIVE DATE
SEPTEMBER 29, 2006

MAP NUMBER
18033C0186E

Maumee River Basin Commission
Federal Emergency Management Agency

DNR Oil and Gas Well Records

November 8, 2017

1:2,257

0 0.02 0.04 0.08 mi

0 0.02 0.04 0.08 km

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

IDNR GIS
IDNR 2015

REMEDIATION WORK PLAN

APPENDIX F. IBP'S BFF COMFORT LETTER AND ENVIRONMENTAL RESTRICTIVE COVENANT (ERC)

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov
Eric J. Holcomb, *Governor*
Bruno L. Pigott, *Commissioner*

January 18, 2019

Steve Bingham
City of Butler
215 South Broadway
Butler, IN 46721

Re: **BFPP Comfort Letter**
The Butler Company
325 South Broadway Street
Butler, DeKalb County
Brownfield #4170705

Dear Mr. Bingham:

In response to the request by SES Environmental (SES) on behalf of the City of Butler (Prospective Purchaser) to the Indiana Brownfields Program (Program) for assistance concerning the property located at 325 South Broadway Street (Site), the Indiana Department of Environmental Management (IDEM) has agreed to provide this Comfort Letter to outline applicable limitations on liability with respect to hazardous substances and petroleum products found on the Site. This letter does not provide a release from liability, but provides specific information with respect to some of the criteria the Prospective Purchaser must satisfy to qualify for relief from potential liability related to hazardous substances contamination under the bona fide prospective purchaser (BFPP) exemption under Indiana Code (IC) § 13-25-4-8(b) (incorporating section 101(40) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601 *et. seq.*, and 42 U.S.C. § 9607(r)) and potential liability for petroleum contamination under the BFPP exemption under IC § 13-23-13 and IC § 13-24-1. This letter will also address the reasonable steps IDEM recommends the Prospective Purchaser undertake to prevent or limit human, environmental, and/or natural resource exposure to previously released hazardous substances and/or petroleum found at the Site and help to establish whether environmental conditions might be a barrier to redevelopment or transfer.

Site Description and History

The 3.55-acre Site is one parcel identified by the State by parcel #17-07-12-109-001.000-027. In 1888, The Butler Manufacturing Company manufactured windmills. In 1894, the Site was sold and renamed The Butler Company. Throughout the 1890s, windmills, bicycles, buggies, and mail wagons were manufactured on-Site. In 1906 and 1918, an additional factory and foundry, respectively, were constructed. In the 1930s, the Site included a machine shop, foundry, paint shop, pipe shed, lumber shed, tin

shop, and storage building. In 1943, production of windmills ended as the production of World War II materials commenced. In 1958, a fire destroyed a three-story storage building on the southwest portion of the Site. The Site was then used as a distributor of plumbing, heating, and cooling parts. Carobola Chemical Company occupied the northern Site building in the late 1950s and the early 1960s. Until closing in 1997, sales of electrical, plumbing, heating, cooling, and well drilling supplies continued on the Site. FSPI 401K Employee Profit Sharing Plan acquired the Site by tax sale in 2012. In 2015, a fire destroyed the Site buildings. The City of Butler plans to redevelop the Site for mixed residential and commercial purposes.

Properties adjoining the Site are as follows: to the north, a railroad with laundry and carwash facilities beyond; to the east, a wooded area with a bulk petroleum storage facility beyond; to the south, East Willow Street with residential properties beyond; and, to the west, South Broadway Street with the Butler Public Library and Hathaway Park beyond.

Due Diligence

As part of this request, the Prospective Purchaser provided the Program with a *Phase I Environmental Site Assessment* dated October 2, 2018 (2018 Phase I ESA) prepared for the City of Butler by SES. This report may be viewed on IDEM's Virtual File Cabinet (VFC) on IDEM's website by searching for Document #82644941. The 2018 Phase I ESA was conducted utilizing the American Society for Testing and Materials (ASTM) Practice E1527-13, Standard Practice for Environmental Site Assessment, which satisfies the federal "All Appropriate Inquiries" (AAI) rule set forth in 40 CFR Part 312. In an effort for the Prospective Purchaser to qualify as a BFPP, Steve Bingham, City Planner with the City of Butler, provided answers to the user-specific questions to ensure its satisfaction of the federal AAI rule.

The October 2018 Phase I ESA identified the following recognized environmental conditions (RECs) associated with the Site:

- Documented metals contamination in on-Site soil associated with historic manufacturing operations conducted at the Site from at least 1898 until 1997 that included a machine shop, painting and varnishing shops, plating, a foundry, and a chemical company.
- Evidence of underground storage tanks (USTs) was not observed during the Site inspection; however, a 10-barrel buried oil tank is depicted on the central portion of the Site on a historical map from 1897, a gasoline tank is depicted on the northeast portion of the Site on a map from 1914, and a gasoline tank is depicted west of the Site beneath South Broadway Street on a map from 1923. Environmental investigation conducted in May 2018 found no evidence of petroleum contamination; however, the screening investigation did not rule out the possibility of localized petroleum contamination at historical buried tank areas.

To meet the requirements of ASTM Practice E1527-13, SES evaluated the presence or likely presence of vapor-phase chemicals of concern in soil at the Site that might result from contaminated soil and/or ground water either on or near the Site, specifically the Site itself, by reviewing historical records and analytical results from a subsurface investigation, which are discussed below. SES concluded that potential vapor encroachment conditions (VECs) do not currently exist at the Site.

Environmental Conditions

As part of the request for assistance in determining any existing environmental contamination and potential liability at the Site, Program staff reviewed the following additional documents. These documents may be viewed electronically by searching online by the noted document number in IDEM's VFC accessible through IDEM's website.

- *Phase I Environmental Site Assessment* (2017 Phase I ESA), dated November 10, 2017 prepared by SES (Document #82644941, pages 217-246)
- *Phase II Environmental Site Assessment* (Phase II ESA), dated June 13, 2018 prepared by SES (Document #82644941, pages 247-368)

For purposes of this letter, sample analytical results were compared to IDEM's *Remediation Closure Guide* (RCG) (March 22, 2012 and applicable revisions) screening levels as follows: soil samples collected at depths between 0 and 10 feet below ground surface (bgs) were compared to RCG residential and commercial/industrial direct contact screening levels (RDCSLs and IDCSLs, respectively); soil samples collected between 0 and 18 feet bgs were compared to the excavation worker direct contact screening levels (EX DCSLs); and, soil samples collected at depths greater than 18 feet bgs were not evaluated for purposes of closure because of the unlikely risk of exposure to soil at that depth. Ground water samples were compared to residential tap ground water screening levels (Res TAP GWSLs) and residential vapor exposure ground water screening levels (Res VE GWSLs), as well as commercial/industrial vapor exposure ground water screening levels (Indus VE GWSLs).

2017 Phase I ESA – November 2017

The 2017 Phase I ESA identified the following RECs associated with the Site:

- Historic manufacturing operations conducted at the Site from at least 1898 until 1997 included a machine shop, painting and varnishing shops, plating, a foundry, and a chemical company. Hazardous substances and petroleum products including but not limit to oil, petroleum fuels, solvents, and/or metals were likely stored and used at the Site. The potential exists of releases of hazardous substances or petroleum products to have occurred during the long history of manufacturing operations at the Site.
- During investigation of a petroleum release at the east adjacent bulk plant, chlorinated solvents including trichloroethylene (TCE) were detected in a

ground water sample obtained approximately 200 feet east of the Site. While IDEM issued "No Further Action" status to the petroleum release, the source and extent of chlorinated solvent impact in ground water was not determined.

- Evidence of USTs was not observed during the Site inspection; however, a 10-barrel buried oil tank is depicted on the central portion of the Site on a historical map from 1897, a gasoline tank is depicted on the northeast portion of the Site on a map from 1914, and a gasoline tank is depicted west of the Site beneath South Broadway Street on a map form 1923.

Phase II ESA – June 2018

In May 2018, seven soil borings (BA through BG) were advanced to a maximum depth of 20 feet bgs on the Site. BA through BC were advanced on the north-central portion of the Site by the historical foundry and manufacturing areas, BD and BE were advanced on the central portion of the Site near approximate locations of USTs, and BF and BG were advanced on the south-central portion of the Site near another historical manufacturing area. Ground water was not encountered at borings BA or BF. A total of nine soil and six ground water samples (including a duplicate BH) were collected and analyzed for VOCs, PAHs, and/or Resource Conservation and Recovery Act (RCRA) 8 metals (total and dissolved). Lead and chromium were detected in soil above their respective RDCSLs and IDCSLs. Lead was also detected above its EX DCSL at boring location BC and duplicate BH. Because the chromium was not speciated between trivalent chromium (chromium III) and the more toxic hexavalent chromium (chromium VI), IDEM, in the most conservative approach, compared the analytical results to hexavalent chromium. No other constituents analyzed in soil were detected at levels above applicable RCG screening levels. Refer to Table 1, below, for a summary of soil analytical data above applicable RCG screening levels.

TABLE 1
May 2018 Soil Concentrations Exceeding
Applicable IDEM RCG Screening Levels

Contaminant Detected	Sample Location (Depth in feet bgs) & Results (parts per million (ppm))								RDCSL	IDCSL	EX DCSL
	BA	BB	BC	BD	BE	BF	BG	BH			
	0-2	2-4	2-4	0-2	6-8	2-4	6-8	6-8			
Lead	299	35	***7,160***	8.6	9.4	7.3	6.0	***28,700***	400	800	1,000
Chromium*	**7.8**	**8.9**	**56**	**63**	**14**	**8.5**	**6.0**	***247***	4.2	63	2,700

Notes: **bold** = above RCG Residential Direct Contact Screening Level
italics = above RCG Commercial/Industrial Direct Contact Screening Level
underline = above RCG Excavation Worker Direct Contact Screening Level
bgs = below ground surface
BH = field duplicate of BC
* = because chromium was not speciated, for comparison purposes the chromium levels detected were compared to hexavalent chromium screening levels.

Total concentrations of cadmium, copper, lead, selenium, and zinc were all detected in ground water above their respective Res TAP GWSLs at boring location BC and duplicate BH. However, the dissolved concentration of each metal did not exceed their respective Res TAP GWSLs. No other constituents analyzed in ground water were detected at levels above applicable RCG screening levels. Refer to Table 2, below, for a summary of ground water analytical data above applicable RCG screening levels.

TABLE 2
May 2018 Ground Water Concentrations Exceeding Applicable IDEM RCG Screening Levels

Contaminant Detected	Sample Location & Results (parts per billion (ppb))		Res TAP GWSL
	BC	BH	
Total Cadmium	**50**	**60**	5
Dissolved Cadmium	<5	<5	
Total Copper	**2,100**	**2,300**	1,300
Dissolved Copper	<20	<20	
Total Lead	**57,000**	**64,000**	15
Dissolved Lead	<10	<10	
Total Selenium	**50**	**100**	50
Dissolved Selenium	<10	<10	
Total Zinc	**17,000**	**19,000**	6,000
Dissolved Zinc	2,200	2,200	

Notes: **bold** = above RCG Residential Tap Ground Water Screening Level
NE = not established
BH = field duplicate of BC

Ground water analytical results detected total levels of cadmium, copper, lead, selenium, and zinc that exceeded their respective RCG Screening Levels. This contamination may be attributable to the method used to collect the ground water samples which was through temporary monitoring wells. Samples collected in this manner are typically used for screening purposes only, in part because they do not follow IDEM protocols for complete site characterization, including the installation of monitoring wells to facilitate ground water sample collection. Ground water samples collected from borings and temporary monitoring wells can be highly turbid without the safeguards provided by a monitoring well screen and surrounding filter pack, therefore increasing the potential for false positive and elevated laboratory results, particularly with constituents that bind tightly with soil particles. This is further evidenced by the fact that the dissolved concentrations of the RCRA 8 metals are all below their respective Res TAP GWSLs. Notwithstanding the fact that these ground water sample results are likely biased high for this reason, ground water in the area is not used for potable purposes and, therefore, the contamination detected on-Site does not currently pose a risk to human health or the environment.

Liability Clarification

IDEM's "*Brownfields Program Comfort and Site Status Letters*" Non-rule Policy Document, W-0051 (April 18, 2003) (Comfort and Site Status Letter Policy), provides that IDEM may issue a letter to a stakeholder involved in redevelopment of a brownfield if the stakeholder satisfies certain eligibility criteria outlined below. IDEM concludes, based in part on information provided by the Prospective Purchaser, that:

(1) no state or federal enforcement action at the Site is pending;
(2) no federal grant requires an enforcement action at the Site;
(3) no condition on the Site constitutes an imminent and substantial threat to human health or the environment;
(4) neither the Prospective Purchaser nor an agent or employee of the Prospective Purchaser caused, contributed to, or knowingly exacerbated the release or threat of release of any hazardous substance or petroleum at the Site, and;
(5) the Prospective Purchaser is eligible for an applicable exemption to liability, specifically the bona fide prospective purchaser (BFPP) exception to liability for hazardous substance contamination found in IC §13-25-4-8(b) and/or for petroleum contamination under IC §§ 13-23-13 and 13-24-1, provided the applicable statutory criteria are met.

As discussed below, the Prospective Purchaser has demonstrated to IDEM's satisfaction that it is eligible for the State BFPP exemption from liability for hazardous substance and/or petroleum contamination provided it takes the "reasonable steps" required by statute, recommendations for which are also discussed below.

Bona Fide Prospective Purchaser

Under IC § 13-25-4-8(a), except as provided in IC § 13-25-4-8(b), (c), or (d), a person that is liable under § 107(a) of CERCLA is liable to the state in the same manner and to the same extent. IC § 13-25-4-8(b) references certain exceptions to liability imposed by IC § 13-25-4-8(a), including the exception in Section 107(r) of CERCLA, 42 U.S.C. § 9607(r), which states that a BFPP whose potential liability for a release or threatened release is based solely on the purchaser's being considered to be an owner or operator of a facility shall not be liable as long as the BFPP does not impede the performance of a response action or natural resource restoration. 42 U.S.C. § 9607(r). Thus a prospective purchaser that qualifies as a bona fide prospective purchaser and does not impede the performance of a response action or natural resource restoration would not be liable under IC § 13-25-4-8(a). Similarly, such a bona fide prospective purchaser would not be liable under IC §§ 13-23-13 and 13-24-1 for petroleum contamination existing on the Site.

Under Indiana law, if the Prospective Purchaser qualifies as a bona fide prospective purchaser and does not impede the performance of a response action or natural resource restoration, IDEM is prohibited from pursuing the Prospective Purchaser even if cleanup requirements change or if IDEM determines that a response

action related to existing known hazardous substances or petroleum contamination from prior releases at the Site is necessary. Furthermore, IDEM is prohibited from pursuing such a prospective purchaser for response costs relating to the past release of hazardous substances or petroleum contamination at the Site. Therefore, IDEM will not require the Prospective Purchaser to respond to the past release of hazardous substances or petroleum contamination found at the Site beyond the scope of the statutorily-required reasonable steps outlined below, even if cleanup requirements change or if IDEM determines that a response action is necessary in the future. This decision, however, does not apply to past or present hazardous substance or petroleum contamination that is not described in this letter, future releases, or applicable federal requirements under CERCLA or the Resource Conservation and Recovery Act, 42 U.S.C. § 6901.

To meet the statutory criteria for liability protection as a BFPP under Indiana law, a landowner must meet certain threshold criteria and satisfy certain continuing obligations. IDEM notes that the Prospective Purchaser will acquire the Site after January 11, 2002 (and after June 30, 2009), and the disposal of hazardous substances and petroleum at the Site will have occurred prior to that date. See 42 U.S.C. § 9601(40)(A); § IC 13-11-2-148(h); IC § 13-11-2-151(g); IC § 13-11-2-150(f). Based on information reviewed by IDEM, IDEM concludes that the Prospective Purchaser has conducted all appropriate inquiries into the previous ownership and uses of the Site. See 42 U.S.C. § 9601(40)(B)(i). Furthermore, the Prospective Purchaser has represented that it is not potentially liable or affiliated with any person that is potentially liable for contamination at the Site, and IDEM has no information to the contrary. See 42 U.S.C. § 9601(40)(H). Therefore, the Prospective Purchaser meets the threshold requirements of CERCLA §§ 9601(40) (A), (B) and (H) to qualify for the status of BFPP under 42 U.S.C. § 9601(40).

The continuing obligations the Prospective Purchaser must undertake to qualify as a BFPP under Indiana law and maintain such status are outlined in 42 U.S.C. §§ 9601(40)(C)-(G) and include exercising "appropriate care with respect to hazardous substances found at the facility by taking reasonable steps to – (i) stop any continuing release; (ii) prevent any threatened future release; and, (iii) prevent or limit human, environmental, or natural resource exposure to any previously released hazardous substance." 42 U.S.C. § 9601(40)(D). By extension, under IC §§ 13-11-2-148(h), 13-11-2-150(f), and 13-11-2-151(g), the continuing obligations the Prospective Purchaser must undertake to maintain BFPP status are outlined in 42 U.S.C. §§ 9601(40) (C)-(G) and include exercising appropriate care with respect to petroleum products found at the facility by taking reasonable steps to – (i) stop any continuing release; (ii) prevent any threatened future release; and, (iii) prevent or limit human, environmental, or natural resource exposure to any previously released petroleum product. Furthermore, the Prospective Purchaser recognizes that in order to maintain the status of BFPP, it will have to continue to provide the cooperation, assistance and access required by 42 U.S.C. § 9601(40) (E). In addition, the Prospective Purchaser will have to maintain compliance with land use restrictions established for the Site, and not impede the implementation or the effectiveness of any institutional control as required by 42 U.S.C. § 9601(40) (F). To maintain BFPP status, the Prospective Purchaser must also supply

required notices and respond to requests for information or administrative subpoenas in accordance with 42 U.S.C. § 9601(40)(C) and 42 U.S.C. § 9601(40) (G), respectively.

Reasonable Steps

As of the date of issuance of this Comfort Letter, IDEM believes the following are appropriate reasonable steps for the Prospective Purchaser to undertake with respect to the hazardous substances and/or petroleum contamination found at the Site in order to qualify as a BFPP, as well as to satisfy the eligibility requirements for issuance of this letter under the Comfort and Site Status Letter Policy:

- Implement and maintain the land use restrictions required by this letter.

- Upon becoming aware of such information, communicate to IDEM any newly-obtained information about existing hazardous substance and/or petroleum contamination or any information about new (or previously unidentified) contamination.

Implementation of the above-mentioned reasonable steps in addition to ongoing satisfaction of the additional statutory conditions will, with respect to IDEM, satisfy the statutory conditions for State BFPP protection. Please be advised that any work performed at the subject property must be done in accordance with all applicable environmental laws in order to ensure no inadvertent exacerbation of existing contamination found on the Site which could give rise to liability.

Institutional Control

Since levels of chromium and lead detected in soil on-Site were above applicable RCG residential screening levels, IDEM is requiring an environmental restrictive covenant (ERC) to be recorded on the deed for the Site to ensure no exposure to on-Site contamination. As a condition of the issuance and effectiveness of this letter under the Comfort and Site Status Letter Policy, the Prospective Purchaser must abide by the land use restriction in the enclosed ERC, which is summarized below:

- Neither engage in nor allow drilling or excavation of soil on the Site during any construction without first submitting a work plan for approval by the Department at least 60 days prior to beginning work. Any removal, excavation or disturbance of soil from the Site during any construction must be conducted in accordance with a Department-approved work plan, including all applicable requirements of IOSHA/OSHA.

    a. Soil in any area on the Site on which standalone single-family or duplex residential housing will be constructed must be sampled down to 10 feet bgs. Any soil determined through such sampling to be contaminated above applicable RCG residential screening levels must be excavated, leaving only soil that meets RCG RDCSLs in place.

b. Shall restore soil disturbed as a result of any excavation and construction activities on the Site in such a manner that any remaining contaminant concentrations do not present a threat to human health or the environment (as determined under the RCG using residential screening levels).

c. Any soil that is removed, excavated or disturbed on the Site must be managed and disposed of in accordance with all applicable federal and state laws and regulations.

- Install a protective cover of two feet of clean (constituents not exceeding RCG residential direct contact screening levels) soil or other engineered barrier (i.e. concrete, asphalt, etc.) over the "Affected Area" identified in the ERC if the chromium-contaminated soil above the IDCSL and lead-contaminated soils exceeding the EX DCSL are not removed from the Site in order to eliminate direct contact exposure to contaminated soil or fill materials. The protective cover/engineered barriers must not be excavated, removed, disturbed, demolished, or allowed to fall into disrepair without replacement by barriers that will provide equal or better protection, unless it can be demonstrated to IDEM that the underlying contaminated soil has been remediated to RCG RDCSLs.

Conclusion

IDEM encourages the mixed residential and commercial redevelopment of the Site. Should additional information gathered in conjunction with future Site investigations and/or remediation demonstrate that a particular restriction is no longer necessary to protect human health and the environment or that Site conditions are appropriate for unrestricted use, IDEM will, upon request, consider modification or termination of the ERC recorded on the deed for the Site pursuant to its terms and conditions. Conversely, it is also possible that new land use restrictions may be necessary in the future due to new information or changed circumstances at the Site.

Pursuant to the Comfort and Site Status Letter Policy, the determinations in this letter are based on the nature and extent of contamination known to IDEM as of the date of this letter, as a result of review of information submitted to or otherwise reviewed by IDEM. If additional information regarding the nature and extent of contamination at the Site later becomes available, additional measures may be necessary to satisfy the reasonable steps requirements of BFPP status. In particular, if new areas of contamination or new contaminants are identified, the Prospective Purchaser must communicate this information to IDEM upon becoming aware of it and should ensure that reasonable steps are undertaken with respect to such contamination in order to qualify as and maintain BFPP status. This requirement does not apply to information developed by a third party that should be separately communicated to IDEM by the third party.

This letter shall not be construed as limiting the Prospective Purchaser's ability to rely upon any other defenses and/or exemptions available to it under any common or environmental law, nor shall it limit any ongoing obligations of the Prospective Purchaser that are required to maintain the status of BFPP. Furthermore, the terms and

conditions of this letter shall be limited in application to this letter recipient and this Site, and shall not be binding on IDEM at any other Site.

If at any time IDEM discovers that the above-mentioned reports, any representations made to IDEM, or any other information submitted to or reviewed by IDEM was inaccurate, which inaccuracy can be attributed to the Prospective Purchaser, then IDEM reserves the right to revoke this letter and pursue any responsible parties. Furthermore, if any activities undertaken by the Prospective Purchaser result in a new release or if Site conditions are later determined by IDEM to constitute an imminent and substantial threat to human health or the environment, IDEM reserves the right to revoke this decision and pursue any responsible parties. Additionally, this decision does not apply to past or present contamination that is not described in this Comfort Letter, future releases, or applicable requirements under the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 or CERCLA. In addition, if any acts or omission by the Prospective Purchaser exacerbates the contamination at the Site, or if the Prospective Purchaser does not implement and maintain the reasonable steps and other statutory requirements outlined in this letter, then the Prospective Purchaser would not be considered a BFPP and may be potentially liable under IC §§ 13-25-4-8(a), 13-23-13 and/or 13-24-1. Furthermore, activities conducted at the Site subsequent to purchase that result in a new release can give rise to full liability.

In order for IDEM to consider this letter effective, upon acquisition, the enclosed ERC, which includes a copy of the Comfort Letter, must be recorded on the deed for the Site in the DeKalb County Recorder's Office. Please return a certified copy of the filed document to the address listed below:

Indiana Brownfields Program
100 North Senate Avenue, Room 1275
Indianapolis, Indiana 46204
ATTN: Mitchell Smith

IDEM is pleased to assist the City of Butler with this mixed use redevelopment project. Should you have any questions or comments, please contact Mitchell Smith at 317-234-8833. He can also be reached via email at: mismith@ifa.in.gov.

Sincerely,

Peggy Dorsey
Assistant Commissioner
Office of Land Quality

Enclosure ERC

cc: Patricia Polston, U.S. EPA Region 5 (*electronic copy*)
Meredith Gramelspacher, Indiana Brownfields Program (*electronic copy*)
Mitchell Smith, Indiana Brownfields Program (*electronic copy*)
Glen Howard, SES Environmental (*electronic copy*)
Cedric Hollabaugh, Hollabaugh Law (*electronic copy*)

Environmental Restrictive Covenant

THIS ENVIRONMENTAL RESTRICTIVE COVENANT is made this ____ day of _____, 201__, by the City of Butler ("Owner").

WHEREAS: Owner is the fee owner of certain real estate in the County of DeKalb, Indiana, which is located at 325 South Broadway Street in Butler and more particularly described in the attached **Exhibit "A"** ("Real Estate"), which is hereby incorporated and made a part hereof. The Real Estate was acquired by deed on _____, and recorded on _____, as Deed Record _____, in the Office of the Recorder of DeKalb County, Indiana. The Real Estate, consists of approximately 3.55 acres and is identified by the State by parcel identification number 17-07-12-109-001.000-027. The Real Estate to which this Covenant applies is depicted on a map attached hereto as **Exhibit "B"**.

WHEREAS: A Comfort Letter, a copy of which is attached hereto as **Exhibit "C"**, was prepared and issued by the Indiana Department of Environmental Management ("the Department" or "IDEM") pursuant to the Indiana Brownfields Program's ("Program") recommendation at the request of the Owner to address the redevelopment potential of the Real Estate which is a brownfield site resulting from a release of hazardous substances and/or petroleum products relating to historical operations on the Real Estate, Program site number BFD #4170705.

WHEREAS: The Comfort Letter, as approved by the Department, provides that certain contaminants of concern ("COCs") were detected in soil on the Real Estate but will not pose an unacceptable risk to human health at the detected concentrations provided that the land use restrictions contained herein are implemented and maintained to ensure the protection of public health, safety, or welfare, and the environment. The COCs are chromium and lead.

WHEREAS: Soil and ground water on the Real Estate were sampled for volatile organic compounds ("VOCs"), polynuclear aromatic hydrocarbons ("PAHs"), and/or total and dissolved Resource Conservation and Recovery Act ("RCRA") 8 metals. Investigations detected levels of lead above applicable screening levels established by IDEM in the *Remediation Closure Guide* (March 22, 2012 and applicable revisions). Lead was detected in soil above its residential direct contact screening level ("RDCSL") and commercial/industrial direct contact screening level ("IDCSL"). Lead was also detected above its excavation worker direct contact screening level ("EX DCSL") at boring location BC (and its duplicate, BH). Because the chromium was not speciated between trivalent chromium ("chromium III") and the more toxic hexavalent chromium ("chromium VI"), IDEM, in the most conservative approach, compared the analytical results to hexavalent chromium. Soil analytical results detected chromium above the chromium VI RDCSL at multiple locations on the Real Estate and above the chromium IV IDCSL in the duplicate sample BH from boring location BC. Soil analytical results above applicable RCG

screening levels are summarized on Table 1, attached hereto as **Exhibit "D"**. A site map, attached hereto as **"Exhibit E"**, depicts sample locations on the Real Estate at which the COCs were detected in soil above applicable RCG screening levels.

WHEREAS: The Department has not approved closure of environmental conditions on the Real Estate under the *Remediation Closure Guide*. However, the Department has determined that the land use restrictions contained in this Covenant will enable the Real Estate to be used safely for conditional residential and/or commercial/industrial use.

WHEREAS: Environmental reports and other documents related to the Real Estate are hereby incorporated by reference and may be examined at the Public File Room of the Department, which is located in the Indiana Government Center North at 100 N. Senate Avenue, 12th Floor East, Indianapolis, Indiana. The documents may also be viewed electronically by searching the Department's Virtual File Cabinet on the Web at: http://www.in.gov/idem/4101.htm.

NOW THEREFORE, The City of Butler subjects the Real Estate to the following restrictions and provisions, which shall be binding on the Owner and all future owners:

I. RESTRICTIONS

1. Restrictions. The Owner and all future owners:

(a) Shall neither engage in nor allow drilling or excavation of soil on the Real Estate during any construction on the Real Estate without first submitting a work plan for approval by the Department at least sixty (60) days prior to beginning work. Any removal, excavation or disturbance of soil from the Real Estate during any construction must be conducted in accordance with a Department-approved work plan, including all applicable requirements of IOSHA/OSHA.

i. Soil in any area on the Real Estate on which standalone single-family or duplex residential housing will be constructed must be sampled down to 10 feet below ground surface ("bgs"). Any soil determined through such sampling to be contaminated above applicable RCG residential screening levels must be excavated, leaving only soil that meets RCG RDCSLs in place.

ii. Shall restore soil disturbed as a result of any excavation and construction activities on the Real Estate in such a manner that any remaining contaminant concentrations do not present a threat to human health or the environment (as determined under the RCG using residential screening levels).

iii. Any soil that is removed, excavated or disturbed on the Real Estate must be managed and disposed of in accordance with all applicable federal and state laws and regulations.

(b) Shall install a protective cover of two feet of clean (constituents not exceeding RCG residential direct contact screening levels) soil or other engineered barrier (i.e. concrete, asphalt, etc.) over the "Affected Area" surrounding boring C identified via GPS coordinates and depicted on **Exhibit "F"**, attached hereto, if the chromium and lead-contaminated soils exceeding their respective IDCSLs and/or EX DCSLs are not removed from the Real Estate, in order to eliminate direct contact exposure to contaminated soil or fill materials. The protective cover/engineered barriers must not be excavated, removed, disturbed, demolished, or allowed to fall into disrepair without replacement by barriers that will provide equal or better protection, unless it can be demonstrated to IDEM that the underlying contaminated soil has been remediated to RCG RDCSLs.

II. GENERAL PROVISIONS

2. Restrictions to Run with the Land. The restrictions and other requirements described in this Covenant shall run with the land and be binding upon, and inure to the benefit of the Owner of the Real Estate and the Owner's successors, assignees, heirs and lessees or their authorized agents, employees, contractors, representatives, agents, lessees, licensees, invitees, guests, or persons acting under their direction or control ("Related Parties") and shall continue as a servitude running in perpetuity with the Real Estate. No transfer, mortgage, lease, license, easement, or other conveyance of any interest in all or any part of the Real Estate by any person shall limit the restrictions set forth herein. This Covenant is imposed upon the entire Real Estate unless expressly stated as applicable only to a specific portion thereof.

3. Binding upon Future Owners. By taking title to an interest in or occupancy of the Real Estate, any subsequent owner or Related Party agrees to comply with all of the restrictions set forth in paragraph 1 above and with all other terms of this Covenant.

4. Access for Department. The Owner shall grant to the Department and its designated representatives the right to enter upon the Real Estate at reasonable times for the purpose of determining whether the land use restrictions set forth in paragraph 1 above are being properly maintained (and operated, if applicable) in a manner that ensures the protection of public health, safety, or welfare and the environment. This right of entry includes the right to take samples, monitor compliance with the remediation work plan (if applicable), and inspect records.

5. Written Notice of the Presence of Contamination. Owner agrees to include in any instrument conveying any interest in any portion of the Real Estate, including but not limited to deeds, leases and subleases (excluding mortgages, liens, similar

financing interests, and other non-possessory encumbrances) the following notice provision (with blanks to be filled in):

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL RESTRICTIVE COVENANT, DATED_____ 20__, RECORDED IN THE OFFICE OF THE RECORDER OF DEKALB COUNTY ON _____, 20__, INSTRUMENT NUMBER (or other identifying reference) _____ IN FAVOR OF AND ENFORCEABLE BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.

6. Notice to Department of the Conveyance of Property. Owner agrees to provide notice to the Department of any conveyance (voluntary or involuntary) of any ownership interest in the Real Estate (excluding mortgages, liens, similar financing interests, and other non-possessory encumbrances). Owner must provide the Department with the notice within thirty (30) days of the conveyance and include (a) a certified copy of the instrument conveying any interest in any portion of the Real Estate, and (b) if the instrument has been recorded, its recording reference(s), and (c) the name and business address of the transferee.

7. Indiana Law. This Covenant shall be governed by, and shall be construed and enforced according to, the laws of the State of Indiana.

III. ENFORCEMENT

8. Enforcement. Pursuant to IC 13-14-2-6 and other applicable law, the Department may proceed in court by appropriate action to enforce this Covenant. Damages alone are insufficient to compensate the Department if any owner of the Real Estate or its Related Parties breach this Covenant or otherwise default hereunder. As a result, if any owner of the Real Estate, or any owner's Related Parties, breach this Covenant or otherwise default hereunder, the Department shall have the right to request specific performance and/or immediate injunctive relief to enforce this Covenant in addition to any other remedies it may have at law or at equity. Owner agrees that the provisions of this Covenant are enforceable and agrees not to challenge the provisions or the appropriate court's jurisdiction.

IV. TERM, MODIFICATION AND TERMINATION

9. Term. The restrictions shall apply until the Department determines that contaminants of concern on the Real Estate no longer present an unacceptable risk to the public health, safety, or welfare, or to the environment.

10. Modification and Termination. This Covenant shall not be amended, modified, or terminated without the Department's prior written approval. Within thirty (30) days of executing an amendment, modification, or termination of the Covenant, Owner shall record such amendment, modification, or termination with the Office of the Recorder of DeKalb County and within thirty (30) days after recording, provide a

true copy of the recorded amendment, modification, or termination to the Department.

V. MISCELLANEOUS

11. Waiver. No failure on the part of the Department at any time to require performance by any person of any term of this Covenant shall be taken or held to be a waiver of such term or in any way affect the Department's right to enforce such term, and no waiver on the part of the Department of any term hereof shall be taken or held to be a waiver of any other term hereof or the breach thereof.

12. Conflict of and Compliance with Laws. If any provision of this Covenant is also the subject of any law or regulation established by any federal, state, or local government, the strictest standard or requirement shall apply. Compliance with this Covenant does not relieve the Owner from complying with any other applicable laws.

13. Change in Law, Policy or Regulation. In no event shall this Covenant be rendered unenforceable if Indiana's laws, regulations, guidelines, or remediation policies (including those concerning environmental restrictive covenants, or institutional or engineering controls) change as to form or content. All statutory references include any successor provisions.

14. Notices. Any notice, demand, request, consent, approval or communication that either party desires or is required to give to the other pursuant to this Covenant shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Owner:
The City of Butler
215 South Broadway
Butler, Indiana 46721
ATTN: Steve Bingham

To Department:
Indiana Brownfields Program
100 N. Senate Avenue, Rm. 1275
Indianapolis, Indiana 46204
ATTN: Mitchell Smith

Any party may change its address or the individual to whose attention a notice is to be sent by giving written notice in compliance with this paragraph.

15. Severability. If any portion of this Covenant or other term set forth herein is

determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions or terms of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.

16. Authority to Execute and Record. The undersigned person executing this Covenant represents that he or she is the current fee Owner of the Real Estate or is the authorized representative of the Owner, and further represents and certifies that he or she is duly authorized and fully empowered to execute and record, or have recorded, this Covenant.

Owner hereby attests to the accuracy of the statements in this document and all attachments.

IN WITNESS WHEREOF, the City of Butler, the said Owner of the Real Estate described above has caused this Environmental Restrictive Covenant to be executed on this _____ day of _____, 20____.

_____
The City of Butler

STATE OF _____)
) SS:
COUNTY OF _____)

Before me, the undersigned, a Notary Public in and for said County and State, personally appeared _____, the _____ of the Owner, _____, who acknowledged the execution of the foregoing instrument for and on behalf of said entity.

Witness my hand and Notarial Seal this ___ day of _____, 20___.

_____

_____, Notary Public

Residing in _____ County, _____

My Commission Expires:

This instrument prepared by:

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law.

_____(Printed Name of Declarant)

EXHIBIT A

Deed for the Real Estate

8018773
Tx:4013743
201206771
11/09/2012 AT 11:54 AM
RECORDER OF DEKALB CO, IN
JACQUELINE ROWAN
Fee Amount: 18.00
Pages: 2

Prescribed by the State Board of Accounts

TAX DEED

WHEREAS FSPI 401K EMPL PROFIT SHARING PLAN 401 (k) did the 23rd day of August, 2012 produce to the undersigned, JOHN W. FETTERS Auditor of the County of Dekalb in the State of Indiana, a certificate of sale dated the 27th day of February, 2012, signed by John Fetters who, at the date of sale, was Auditor of the County, from which it appears that FSPI 401K EMPL PROFIT SHARING PLAN 401 (k) on the 27th day of February, 2012, purchased at public auction, held pursuant to law, the real property described in this indenture for the sum of $2001 TWO THOUSAND, ONE AND 0/100 DOLLARS, being the amount due on the following tracts of land returned delinquent in the name **Strock, Neil A.** for 2010 and prior years, namely:

SEE ATTACHED EXHIBIT A

Property ID#: 23-07-12-109-001

Such real property has been recorded in the Office of the Dekalb County Auditor as delinquent for the nonpayment of taxes and proper notice of the sale has been given. It appearing that FSPI 401K EMPL PROFIT SHARING PLAN 401 (k) yy the owner of the certificate of sale, that the time for redeeming such real property has expired, that the property has not been redeemed, that the undersigned has received a court order for the issuance of a deed for the real property described in the certificate of sale, that the records of the Dekalb County Auditor's Office state that the real property was legally liable for taxation, and the real property has been duly assessed and properly charged on the duplicate with the taxes and special assessments for 2010 and prior years.

THEREFORE, this indenture, made this 8th day of November 2012 between the State of Indiana by JOHN W. FETTERS Auditor of Dekalb County, of the first part, and FSPI 401K EMPL PROFIT SHARING PLAN 401 (k) of the second part, witnesseth; That the party of the first part, for and in consideration of the premises, has granted and bargained and sold to the party of the second part, their heirs and assigns, the real property described in the certificate of sale, situated in the County of Dekalb, and State of Indiana, namely and more particularly described as follows:

SEE ATTACHED EXHIBIT A

Property ID#: 23-07-12-109-001

to have and to hold such real property, with the appurtenances belonging thereto, in as full and ample a manner as the Auditor of said County is empowered by law to convey the same.

In testimony whereof, JOHN W. FETTERS, Auditor of Dekalb County, has hereunto set his/her hand, and affixed the seal of the Board of County Commissioners, the day and year last above mentioned.

Witness: John W. Fetters (L.S.)
JOHN W. FETTERS, Auditor of Dekalb County

Holly Albright
Attest: HOLLY ALBRIGHT
Treasurer: Dekalb County

State of Indiana }
} SS.
County of Dekalb }

Before me, the undersigned, MARTHA GRIMM, in and for said County, this day, personally came the above named JOHN W. FETTERS, Auditor of said County, and acknowledged that he/she signed and sealed the foregoing deed for the uses and purposes therein mentioned.

In witness whereof, I have hereunto set my hand and seal this 9th day of November, 2012

Martha Grimm
MARTHA GRIMM, Clerk of Dekalb County

This instrument prepared by JOHN W. FETTERS, Auditor
I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law. JOHN W. FETTERS, Auditor

Post Office address of grantee: FSPI 401K EMPL PROFIT SHARING PLAN 401 (k)
5200 Dallas Hwy; Ste 200-280
Powder Springs, GA 30127

DULY ENTERED
FOR TAXATION

NOV 09 2012

John W. Fetters
AUDITOR DeKALB COUNTY

EXHIBIT A – LEGAL DESCRIPTION

Property ID#: 23-07-12-109-001

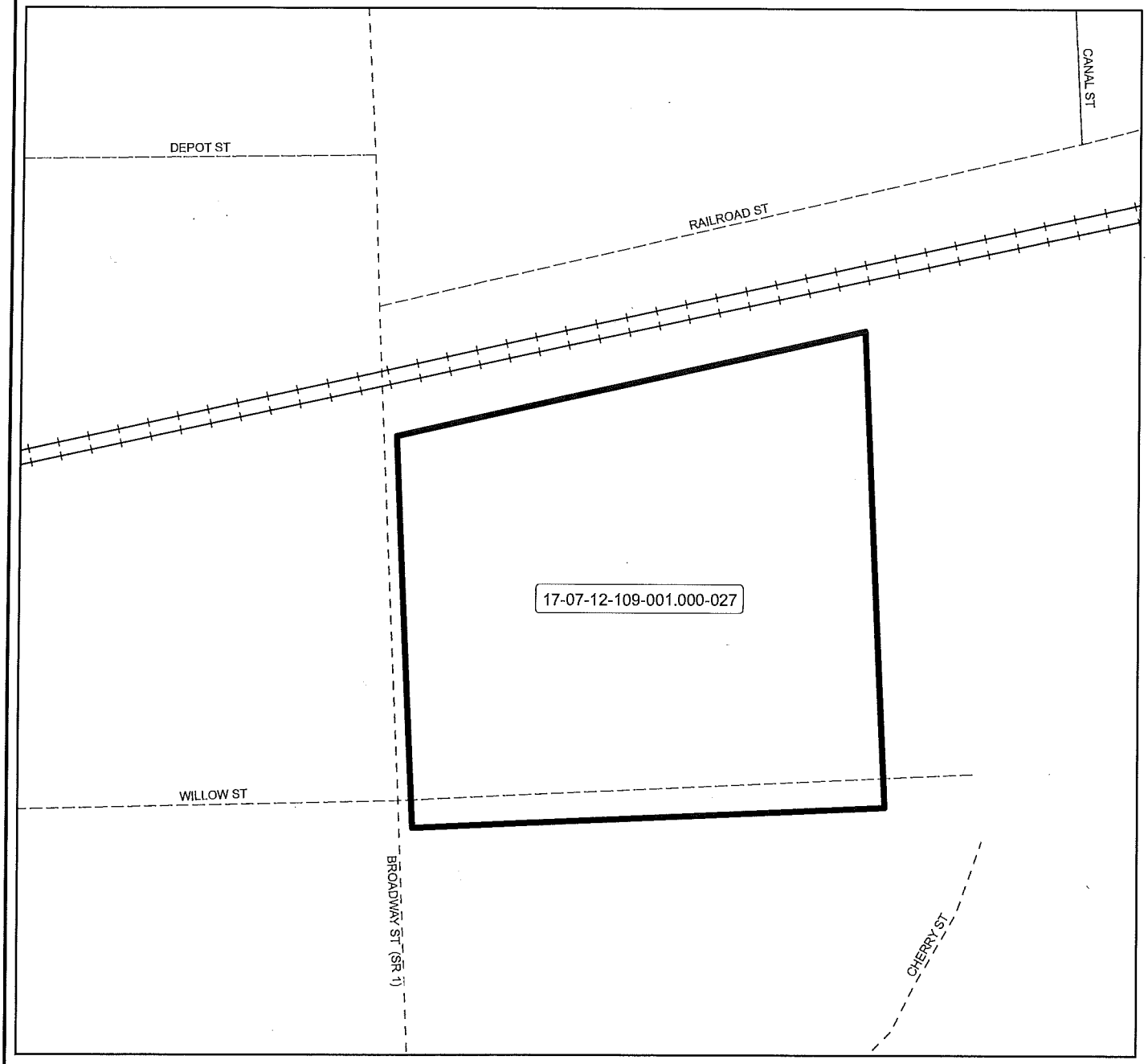
Part of the West Half of the Northwest Quarter of Section 12, Township 34 North, Range 14 East in DeKalb County, Indiana, bounded by a line commencing at a point on the west line of said Section at the south boundary line of the right-of-way of the Wabash Railroad Company and running thence South 4 chains; thence East 6 chains and 50 links; thence North to the south boundary of said Railroad right-of-way and thence Southwesterly along said boundary of said Railroad to the point of beginning.

More commonly known as: 325 S Broadway St.

EXHIBIT B

Map of the Real Estate

Indiana Brownfields Program # 4170705 - Real Estate



Mapped By:	Mike Hill, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services, November 7, 2018
Deed Info:	Instrument # 201206771 Recorded 11/09/2012 Tax Deed
Parcel ID:	17-07-12-109-001.000-027
PLSS Info:	Section 12, T34N, R14E Wilmington Township, DeKalb County, IN
Property Info:	325 South Broadway Street, Butler, IN
Disclaimer:	This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

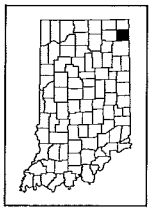
Real Estate
Street
Railroad

IDEM

N
W E
S

0 75 150 Feet
0 25 50 Meters

DeKalb County



Project Area

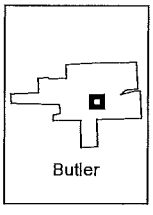


EXHIBIT C

Copy of Comfort Letter

EXHIBIT D

TABLE 1
The Butler Company, Butler – BFD #4170705
May 2018 Soil Concentrations Exceeding
Applicable IDEM RCG Screening Levels

TABLE 1
The Butler Company, Butler – BFD #4170705
May 2018 Soil Concentrations Exceeding
Applicable IDEM RCG Screening Levels

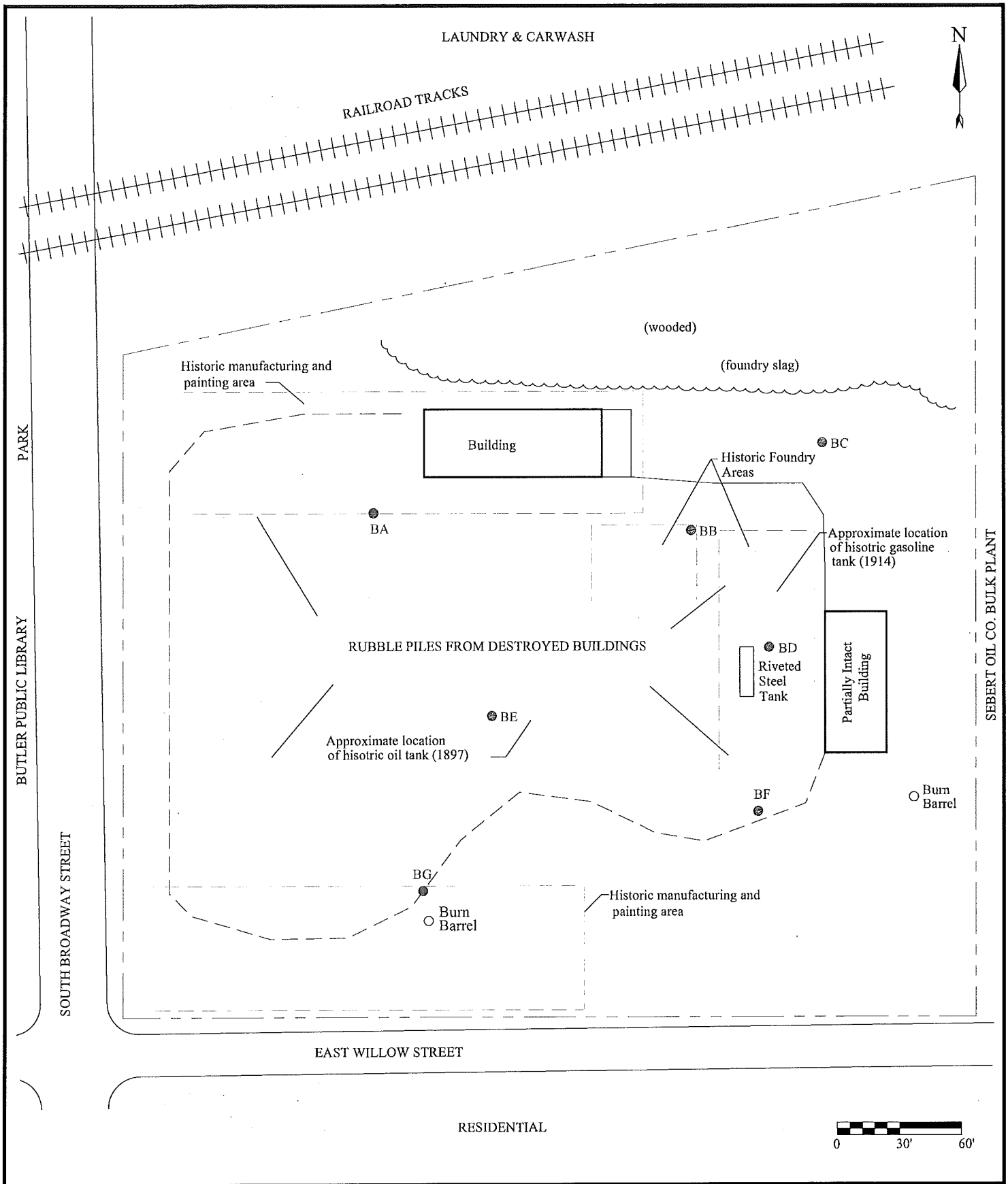
Contaminant Detected	Sample Location (Depth bgs) & Results (parts per million (ppm))								RDCSL	IDCSL	EX DCSL
	BA	BB	BC	BD	BE	BF	BG	BH			
Lead	299	35	***7,160***	8.6	9.4	7.3	6.0	***28,700***	400	800	1,000
Chromium*	**7.8**	**8.9**	**56**	**63**	**14**	**8.5**	**6.0**	***247***	4.2	63	2,700

Notes: **bold** = above RCG Residential Direct Contact Screening Level
italics = above RCG Commercial/Industrial Direct Contact Screening Level
underline = above RCG Excavation Worker Direct Contact Screening Level
bgs = below ground surface
BH = field duplicate of BC
* = because chromium was not speciated, for comparison purposes the chromium levels detected were compared to hexavalent chromium screening levels.

EXHIBIT E

The Butler Company, Butler – BFD #4170705
Site Map Depicting Sampling Locations At Which
COCs Were Detected Above Applicable IDEM RCG Screening Levels

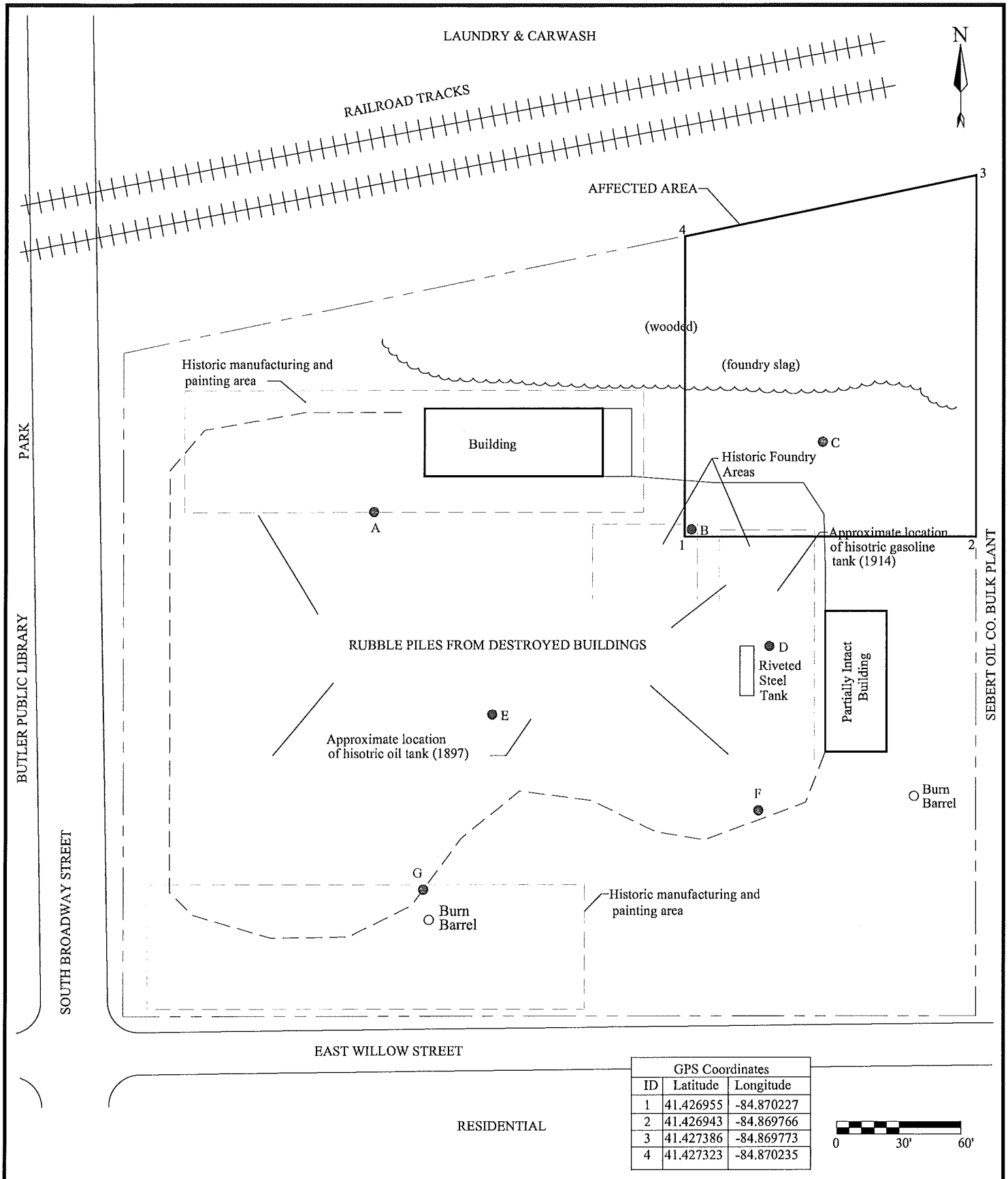
DISCLAIMER: Information on this map is being provided to depict environmental conditions on the Real Estate that are the subject of the land use restrictions contained in the Covenant to which this map is attached and incorporated. The land use restrictions contained in the Covenant were deemed appropriate by the Department based on information provided to the Department by the Owner or another party investigating and/or remediating the environmental conditions on the Real Estate. This map cannot be relied upon as a depiction of all current environmental conditions on the Real Estate, nor can it be relied upon in the future as depicting environmental conditions on the Real Estate.



TITLE: SITE MAP	LEGEND: Approximate site boundary; Soil Boring	PROJECT: 2018-364	
		SCALE: 1" = 60'	FILE: 2018364map
LOCATION: The Butler Company, 325 South Broadway Street, Butler, DeKalb County, Indiana		DRAWN: dn	CHECKED: wg
		DATE: 1/2/19	FIGURE: 1

EXHIBIT F

The Butler Company, Butler – BFD #4170705
Site Map Depicting "Affected Area" or "Excavation Restriction Area"



GPS Coordinates		
ID	Latitude	Longitude
1	41.426955	-84.870227
2	41.426943	-84.869766
3	41.427386	-84.869773
4	41.427323	-84.870235

TITLE
AFFECTED AREA

LOCATION
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana

LEGEND
Approximate site boundary
Soil Boring

PROJECT	
2018-364	
SCALE	FILE
1" = 60'	2018364map
DRAWN	CHECKED
dn	wg
DATE	FIGURE
1/2/19	

SES