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-GP8-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-GP16-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**
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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/wpha2/) 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>
<thead>
<tr>
<th>Facility Type</th>
<th>Address</th>
<th>Distance from Site (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residences</td>
<td>401 South Broadway Street, Butler, Indiana</td>
<td>Adjacent - south</td>
</tr>
<tr>
<td></td>
<td>108 East Willow Street, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>116 East Willow Street</td>
<td></td>
</tr>
<tr>
<td>Church – Butler Church of Christ</td>
<td>173 West Oak Street, Butler</td>
<td>1000 feet northwest</td>
</tr>
<tr>
<td>Retirement – Laurels of Dekalb</td>
<td>520 West Liberty Street, Butler</td>
<td>1-mile northwest</td>
</tr>
<tr>
<td>Park/Recreation – library and ball</td>
<td>340 South Broadway Street, Butler</td>
<td>Adjacent - west</td>
</tr>
<tr>
<td>diamonds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day Care – Butler Day Care Inc.</td>
<td>408 East Washington Street, Butler</td>
<td>0.6 mile - northeast</td>
</tr>
<tr>
<td>School – Eastside Jr-Sr High School</td>
<td>603 East Green Street, Butler</td>
<td>0.7 mile – northeast</td>
</tr>
<tr>
<td>School – Butler Elementary</td>
<td>1025 South Broadway Street, Butler</td>
<td>0.7 mile - south</td>
</tr>
<tr>
<td>Hospital – Dekalb Memorial</td>
<td>1316 East 7th Street, Auburn</td>
<td>6 miles - southwest</td>
</tr>
</tbody>
</table>

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 IDCRLs 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 TAP GWSLs. 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 perfluorooalkyl 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 bgs 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 Biokinetic 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.

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

Source: RISC Guidance

**Asbestos** According to ATSDR ([https://www.atsdr.cdc.gov/asbestos/health_effects_asbestos.html](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-cancerous 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>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Depth (feet)</th>
<th>Arsenic (mg/kg)</th>
<th>Lead (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCG Migration to Groundwater (2020)</td>
<td>5.9</td>
<td>270</td>
<td></td>
</tr>
<tr>
<td>RCG Residential Direct Contact (2020)</td>
<td>9.5</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>RCG Commercial/Industrial Direct Contact (2020)</td>
<td>30</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>RCG Excavation Direct Contact (2020)</td>
<td>920</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>BA</td>
<td>0-2</td>
<td>&lt;3</td>
<td>299</td>
</tr>
<tr>
<td>BB</td>
<td>2-4</td>
<td>&lt;2</td>
<td>35</td>
</tr>
<tr>
<td>BC</td>
<td>2-4</td>
<td>&lt;2</td>
<td>7160</td>
</tr>
<tr>
<td>Duplicate = BH</td>
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<td>&lt;3</td>
<td>28700</td>
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<td>BD</td>
<td>0-2</td>
<td>&lt;2</td>
<td>8.6</td>
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<tr>
<td>BE</td>
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<td>9.4</td>
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<td>&lt;2</td>
<td>7.3</td>
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<td>11.3</td>
</tr>
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<td>10.7</td>
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<td>BC-GP9-SB1</td>
<td>3-4</td>
<td>13.8</td>
<td>12.6</td>
</tr>
</tbody>
</table>

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
32S South Broadway Street, Butler, Dekalb County, Indiana

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Depth (feet)</th>
<th>Arsenic (mg/kg)</th>
<th>Lead (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCG Migration to Groundwater (2020)</td>
<td>5.9</td>
<td>270</td>
<td></td>
</tr>
<tr>
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<td>400</td>
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</tr>
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<td>RCG Commercial/Industrial Direct Contact (2020)</td>
<td>30</td>
<td>800</td>
<td></td>
</tr>
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<td>RCG Excavation Direct Contact (2020)</td>
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<td>1000</td>
<td></td>
</tr>
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<td>NA (XRF = 12)</td>
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<td>NA</td>
<td>NA (XRF = 380)</td>
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<td>NA (XRF = 87)</td>
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<td>NA</td>
<td>964</td>
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<tr>
<td>BC-GP16-W10</td>
<td>1-2</td>
<td>NA</td>
<td>NA (XRF = 94)</td>
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<td>1-2</td>
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<td>NA (XRF = 141)</td>
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<tr>
<td>BC-GP16-S10</td>
<td>1-2</td>
<td>NA</td>
<td>135</td>
</tr>
</tbody>
</table>

**RCG** – remediation closure guide

**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-GP16-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 commercial/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-GP8-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 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-GP16-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 receptacle 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.

<table>
<thead>
<tr>
<th>Task</th>
<th>Duration of Task (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remediation Work Plan Development</td>
<td>3 to 5 months</td>
</tr>
<tr>
<td>Demolition (abatement and disposal)</td>
<td>2 to 3 months</td>
</tr>
<tr>
<td>Soil Barrier Construction</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Groundwater Monitoring</td>
<td>6 to 7 months (install and quarterly sampling)</td>
</tr>
<tr>
<td>Remediation Completion Report</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Agency Review and Site Closure</td>
<td>1 to 2 months</td>
</tr>
</tbody>
</table>

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.
REFERENCES

DeKalb County GIS Property Records


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Google Earth™, Aerial Photograph from 2016

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IWM Consulting Group, July 31, 2019, Phase II Environmental Site Assessment Report

Risk Assessment Information System (RAIS), Toxicity Profiles http://rais.ornl.gov/tox/profiles

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

United States Department of Agriculture, Custom Soil Resource Report for DeKalb County, Indiana, Version 22, October 2, 2017

USGS Topographic Map, 7.5 Minute Series, Butler East, Indiana Quadrangle Map, Published 2016

U.S. Fish and Wildlife Service, Wetlands Map
REMEDIATION WORK PLAN

FIGURES

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705
Impact Extent and Utilities

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

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

Impact Area 1
Impact Area 2
Impact Area 3

RESIDENTIAL

LAUNDRY & CARWASH

SOUTH BROADWAY STREET

RAILROAD TRACKS

PARK

BUTLER PUBLIC LIBRARY

SEBERT OIL CO.
BULK PLANT

RESIDENTIAL

EAST WILLOW STREET

LIBRARY

Fill sample location boring BC-GP1 through BC-GP9 (9 locations)
Boring/temporary well location with PFAS Sampling, BC-GP10 through BC-GP14 (5 locations)
Attempted soil gas location BC-GP15 (1 location)
SES boring location (2018)

Title: Impact Extent and Utilities

Legend:
- Approximate site boundary
- Approximate former building foundations
- PP Power pole
- mh Manhole
- Approximate locations of debris piles

Project: 2020-295

Scale: 1" = 80' 2020295map

Drawn by: dn

Figure: 4

Date: 5/22/20

File: gh

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
SOIL BARRIER AREAS

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

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

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

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

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

LEGEND

Approximate site boundary
Approximate former building foundations
Power pole
Proposed monitor well location
Groundwater elevation (ft) 22-May-19

PROJECT
2020-295

SCALE
1" = 80'

FILE
2020295map

DRAWN
dn

CHECKED
gh

DATE
5/22/20

FIGURES
6
REMEDIATION WORK PLAN

APPENDIX A. USDA SOIL REPORT

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705
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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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.
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: Web Mercator (EPSG:3857)
Coordinate System: Web Mercator

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

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BaB2</td>
<td>Blount silt loam, 1 to 4 percent slopes, eroded</td>
<td>3.0</td>
<td>92.7%</td>
</tr>
<tr>
<td>Pe</td>
<td>Pewamo silty clay</td>
<td>0.2</td>
<td>7.3%</td>
</tr>
<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td><strong>3.3</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

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 mmmhos/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 map unit.

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
References


REMEDICATION WORK PLAN

APPENDIX B. WATER WELL LOGS

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

Appendix B
Your point or land parcel is within a Wellhead Protection Area (-84.871, 41.427)

Your point or land parcel is NOT within a Source Water Area (-84.871, 41.427)

July 22, 2020
# Record of Water Well

**Indiana Department of Natural Resources**

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Driving directions to well</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>107471</td>
<td>300’ N OF PENN CENTRAL RR ON BROADWAY 1ST BLDG ON E SIDE OF BROADWAY N OF CONRAIL TRACKS</td>
<td>May 28, 1970</td>
</tr>
</tbody>
</table>

**Owner-Contractor**

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Address</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>LAVON COLLINS</td>
<td>248 S BROADWAY BUTLER</td>
<td>null</td>
</tr>
<tr>
<td>Driller</td>
<td>G &amp; L WELL DRILLING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operator</td>
<td>MARVIN GILBERT/S LALOUDE</td>
<td></td>
<td>License: null</td>
</tr>
</tbody>
</table>

**Construction Details**

- **Well**
  - Use: Industry
  - Depth: 142.0
- **Casing**
  - Length: 116.0
- **Screen**
  - Length: 15.0

**Well Capacity Test**

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

**Grouting Information**

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

**Well Abandonment**

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

**Administrative**

- **County:** DEKALB
- **Section:** SW of the NW of the NW of Section 12
- **Township:** 34N Range: 14E
  - Topo map: BUTLER EAST, IN-OH
- **Field located by:** BEB
- **Courthouse location by:**
- **Location accepted w/o verification by:** HCK
- **Subdivision name:**
- **Ft W of EL:**
- **Ft N of SL:**
- **Ground elevation:** 870.0
- **Depth to bedrock:**
- **UTM Easting:** 677895.0

**Well Log**

<table>
<thead>
<tr>
<th>Top</th>
<th>Bottom</th>
<th>Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.5</td>
<td>BLACK TOP</td>
</tr>
<tr>
<td>0.5</td>
<td>5.0</td>
<td>FILL SAND</td>
</tr>
<tr>
<td>5.0</td>
<td>57.0</td>
<td>GRAY CLAY</td>
</tr>
<tr>
<td>57.0</td>
<td>95.0</td>
<td>SANDY HARD PAN</td>
</tr>
<tr>
<td>95.0</td>
<td>104.0</td>
<td>DIRTY SAND &amp; GRAV</td>
</tr>
<tr>
<td>104.0</td>
<td>120.0</td>
<td>GRAY CLAY &amp; FINE GRAV</td>
</tr>
<tr>
<td>120.0</td>
<td>126.0</td>
<td>FINE SAND</td>
</tr>
<tr>
<td>126.0</td>
<td>142.0</td>
<td>CRS SAND &amp; GRAV</td>
</tr>
</tbody>
</table>

**Comments**

MC CONTACT MADE WITH OWNER WELL USED FOR LAUNDROMAT AND CAR WASH WELL LOCATED ON N SIDE OF LAUNDRY
## Record of Water Well

### Indiana Department of Natural Resources

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Driving directions to well</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>107441</td>
<td>450' W OF BROADWAY 200' N OF W WILLOW</td>
<td>Sep 18, 1970</td>
</tr>
</tbody>
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### Owner-Contractor

<table>
<thead>
<tr>
<th>Owner</th>
<th>Name</th>
<th>Address</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>CITY WATER DEPT</td>
<td>BUTLER, IN</td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>LAYNE NORTHERN CO</td>
<td>MISHAWAKA, IN</td>
<td></td>
</tr>
</tbody>
</table>

### Construction Details

<table>
<thead>
<tr>
<th>Well Use</th>
<th>Drilling method</th>
<th>Pump type</th>
<th>Water quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Supply</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Pump setting depth</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>147.0</td>
<td></td>
<td>38.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing Length</th>
<th>Material</th>
<th>Diameter</th>
<th>Slot size</th>
</tr>
</thead>
<tbody>
<tr>
<td>88.0</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Screen Length</th>
<th>Material</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
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<td>30.0</td>
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<td>18.0</td>
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### Well Capacity Test

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Test rate: 1002.0 gpm for 28.0 hrs.</th>
<th>Bail Test rate: gpm for hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawdown: 20.0 ft</td>
<td>Static water level: 24.0 ft.</td>
<td>Bailer Drawdown ft.</td>
</tr>
</tbody>
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### Grouting Information

<table>
<thead>
<tr>
<th>Material</th>
<th>Installation Method</th>
<th>Depth: from to Number of bags used:</th>
</tr>
</thead>
</table>

### Well Abandonment

<table>
<thead>
<tr>
<th>Sealing material</th>
<th>Installation Method</th>
<th>Depth: from to Number of bags used:</th>
</tr>
</thead>
</table>

### Administrative

<table>
<thead>
<tr>
<th>County: DEKALB</th>
<th>Township: 34N</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEKALB</td>
<td>Range: 14E</td>
</tr>
<tr>
<td>Section: SE of the NE of the NE of Section 11</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grant Number:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Field located by:</th>
<th>Courthouse location by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMB</td>
<td>on: Aug 01, 1973</td>
</tr>
<tr>
<td></td>
<td>on:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location accepted w/o verification by:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Subdivision name:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ft W of EL:</th>
<th>Ft N of SL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>450.0</td>
<td>1100.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Ground elevation</th>
<th>Depth to bedrock</th>
<th>Depth to bedrock:</th>
</tr>
</thead>
<tbody>
<tr>
<td>870.0</td>
<td></td>
<td>723.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>UTM Easting: UTM Northing:</th>
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</thead>
<tbody>
<tr>
<td>677801.0</td>
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</tbody>
</table>

### Well Log

<table>
<thead>
<tr>
<th>Top (Ft W of EL)</th>
<th>Bottom (Ft N of SL)</th>
<th>Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>2.0</td>
<td>FILL</td>
</tr>
<tr>
<td>2.0</td>
<td>28.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>28.0</td>
<td>31.0</td>
<td>COARSE SAND &amp; GRAVEL</td>
</tr>
<tr>
<td>31.0</td>
<td>57.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>57.0</td>
<td>62.0</td>
<td>COARSE SAND &amp; GRAVEL</td>
</tr>
<tr>
<td>62.0</td>
<td>89.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>89.0</td>
<td>106.0</td>
<td>COARSE SAND &amp; GRAVEL</td>
</tr>
<tr>
<td>106.0</td>
<td>129.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>129.0</td>
<td>147.0</td>
<td>COARSE SAND &amp; GRAVEL</td>
</tr>
<tr>
<td>147.0</td>
<td>148.0</td>
<td>CLAY</td>
</tr>
</tbody>
</table>

### Comments

WELL IN PUMPHOUSE W OF WATER TOWER PUMPING TEST DATA ENCLOSED
# Record of Water Well

## Indiana Department of Natural Resources

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Driving directions to well</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>107430</td>
<td></td>
<td>Dec 22, 1959</td>
</tr>
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## Owner-Contractor

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Address</th>
<th>Telephone</th>
<th>License</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driller</td>
<td>WATSON WELL DRILLING INC</td>
<td>BRYAN, OH</td>
<td>null</td>
<td></td>
</tr>
<tr>
<td>Operator</td>
<td>C KIMBLE</td>
<td></td>
<td>null</td>
<td></td>
</tr>
</tbody>
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## Construction Details

<table>
<thead>
<tr>
<th>Well Use</th>
<th>Drilling method:</th>
<th>Pump type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Supply</td>
<td>Other</td>
<td>Water quality:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Pump setting depth:</th>
</tr>
</thead>
<tbody>
<tr>
<td>144.0</td>
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</tbody>
</table>

## Well Capacity Test

<table>
<thead>
<tr>
<th>Type of test:</th>
<th>Drawdown:</th>
<th>static water level:</th>
<th>Test rate:</th>
<th>Bail test rate:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17.0 ft.</td>
<td>21.6 ft.</td>
<td>1000.0 gpm</td>
<td>gpm for hrs.</td>
</tr>
</tbody>
</table>

## Grouting Information

<table>
<thead>
<tr>
<th>Material:</th>
<th>Installation Method:</th>
<th>Depth: from to</th>
</tr>
</thead>
</table>

## Well Abandonment

<table>
<thead>
<tr>
<th>Sealing material:</th>
<th>Installation Method:</th>
<th>Depth: from to</th>
</tr>
</thead>
</table>

## Administrative

<table>
<thead>
<tr>
<th>County:</th>
<th>Township:</th>
<th>Range:</th>
<th>Topo map:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEKALB</td>
<td>34N</td>
<td>14E</td>
<td>BUTLER EAST, IN-OH</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field located by:</th>
<th>Courthouse location by:</th>
<th>Location accepted w/o verification by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subdivision name:</th>
<th>Lot number:</th>
<th>Ft W of WL:</th>
<th>Ft S of NL:</th>
<th>Bedrock elevation:</th>
<th>Aquifer elevation:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>726.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Ground elevation:</th>
<th>Depth to bedrock:</th>
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</thead>
<tbody>
<tr>
<td>870.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UTM Easting:</th>
<th>UTM Northing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>677758.0</td>
<td>4588106.0</td>
</tr>
</tbody>
</table>

## Well Log

<table>
<thead>
<tr>
<th>Top</th>
<th>Bottom</th>
<th>Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>18.0</td>
<td>HARD YELLOW CLAY</td>
</tr>
<tr>
<td>18.0</td>
<td>38.0</td>
<td>SAND &amp; GRAVEL</td>
</tr>
<tr>
<td>38.0</td>
<td>58.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>58.0</td>
<td>64.0</td>
<td>GRAVEL</td>
</tr>
<tr>
<td>64.0</td>
<td>88.0</td>
<td>BLUE CLAY</td>
</tr>
<tr>
<td>88.0</td>
<td>105.0</td>
<td>GRAVEL</td>
</tr>
<tr>
<td>105.0</td>
<td>129.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>129.0</td>
<td>144.0</td>
<td>GRAVEL &amp; SAND</td>
</tr>
</tbody>
</table>

## Comments

MC WELL #3 & TEST 59A
## Record of Water Well

### Indiana Department of Natural Resources

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Driving directions to well</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>107415</td>
<td>AT UTILITY BLDG S SIDE JUST W OF SR 1</td>
<td></td>
</tr>
</tbody>
</table>

### Owner-Contractor

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Address</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>BUTLER WATER WORKS</td>
<td>BUTLER</td>
<td></td>
</tr>
</tbody>
</table>

### Construction Details

#### Well
- **Use:** Public Supply
- **Depth:** 147.0
- **Drilling method:**
- **Pump setting depth:**
- **Pump type:**
- **Water quality:**
- **Diameter:** 10.0
- **Slot size:**

#### Casing
- **Length:**
- **Material:**

#### Screen
- **Length:**
- **Material:**
- **Diameter:**
- **Slot size:**

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

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

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

### Administrative
- **County:** DEKALB
- **Section:** NE of the NE of the NE of Section 11
- **Grant Number:**
- **Location accepted w/o verification by:**
- **Subdivision name:**
- **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
- **Township:** 34N Range: 14E
- **Topo map:** BUTLER EAST, IN-OH

### Well Log

<table>
<thead>
<tr>
<th>Top</th>
<th>Bottom</th>
<th>Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTLER 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Comments
- BUTLER 1
# Record of Water Well

## Indiana Department of Natural Resources

<table>
<thead>
<tr>
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<th>Driving directions to well</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>107360</td>
<td>W OF BUTLER ON SR 6 3RD HSE ON R SIDE NEW LOCATION MOVED OLD HSE ON LOT</td>
<td>Sep 03, 1962</td>
</tr>
</tbody>
</table>

### Owner-Contractor

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Address</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>MR LARROWE</td>
<td>RRT BUTLER</td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>WILFRED SCHIFFLI</td>
<td>RRT 1 BOX 34 WATERLOO</td>
<td></td>
</tr>
<tr>
<td>Operator</td>
<td>WILFRED SCHIFFLI</td>
<td>License: null</td>
<td></td>
</tr>
</tbody>
</table>

### Construction Details

- **Well Use**: Home
- **Drilling method**: Jet
- **Pump type**: Water
- **Pump setting depth**: Diameter: 2.0
- **Diameter**: 1.0 Slot size: 40

### Well Capacity Test

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

### Grouting Information

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

### Well Abandonment

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

### Administrative

- **County**: DEKALB
- **Section**: SE of the SE of the SE of Section 2
- **Township**: 34N Range: 14E
- **Topo map**: BUTLER EAST, IN-OH

### Well Log

<table>
<thead>
<tr>
<th>Top</th>
<th>Bottom</th>
<th>Formation</th>
</tr>
</thead>
<tbody>
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<td>0.0</td>
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<tr>
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<td>GRAY CLAY</td>
</tr>
<tr>
<td>48.0</td>
<td>52.0</td>
<td>SAND &amp; GRAV &amp; WATER</td>
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### Comments
# Record of Water Well

## Indiana Department of Natural Resources

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Driving directions to well</th>
<th>Date completed</th>
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<tr>
<td>232269</td>
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<td>Nov 24, 1959</td>
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### Owner-Contractor

<table>
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<tr>
<th>Role</th>
<th>Name</th>
<th>Address</th>
<th>Telephone</th>
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<tbody>
<tr>
<td>Owner</td>
<td>CITY OF BUTLER</td>
<td>BUTLER, IN</td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>GRO P REID &amp; SON</td>
<td>HOWE, IN</td>
<td></td>
</tr>
<tr>
<td>Operator</td>
<td>WM REID</td>
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### Construction Details

#### Well

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<th>Pump type:</th>
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<td>Jet</td>
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<table>
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<th>Depth:</th>
<th>Pump setting depth:</th>
<th>Diameter:</th>
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<td>2.0</td>
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#### Casing

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#### Screen

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### Well Capacity Test

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<th>Test rate: gpm for hrs.</th>
<th>Bail Test rate: gpm for hrs.</th>
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<tbody>
<tr>
<td></td>
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<td></td>
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</table>

<table>
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### Grouting Information

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<th>Depth: from to</th>
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<td>Number of bags used:</td>
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### Well Abandonment

<table>
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<tr>
<th>Sealing material:</th>
<th>Depth: from to</th>
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<td>Number of bags used:</td>
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### Administrative

<table>
<thead>
<tr>
<th>County:</th>
<th>Township:</th>
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</thead>
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<td>DEKALB</td>
<td>34N Range: 14E</td>
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</table>

<table>
<thead>
<tr>
<th>Topo map:</th>
<th>BUTLER EAST, IN-OH</th>
</tr>
</thead>
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| Section: | |
|----------| SE of the NE of the NE of Section 11 |

| Grant Number: | |
|---------------| |

<table>
<thead>
<tr>
<th>Field located by:</th>
<th>Courthouse location by:</th>
<th>Location accepted w/o verification by:</th>
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<tr>
<td>BEB</td>
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<table>
<thead>
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<th>Subdivision name:</th>
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<th>Ft S of NL:</th>
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<tbody>
<tr>
<td></td>
<td>Bedrock elevation:</td>
<td>Aquifer elevation:</td>
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</table>

<table>
<thead>
<tr>
<th>Ground elevation:</th>
<th>Depth to bedrock:</th>
<th>UTM Northing:</th>
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<tr>
<td>875.0</td>
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### Well Log

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<th>Formation</th>
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<td>18.0</td>
<td>CLAY BLUE</td>
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<tr>
<td>18.0</td>
<td>32.0</td>
<td>SAND &amp; GRAVEL LT GRAY</td>
</tr>
<tr>
<td>32.0</td>
<td>60.0</td>
<td>CLAY BLUE</td>
</tr>
<tr>
<td>60.0</td>
<td>65.0</td>
<td>GRAV &amp; LT GRAY</td>
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<td>144.0</td>
<td>GRAV LT GRAY</td>
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<td>CLAY BLUE</td>
</tr>
</tbody>
</table>

### Comments

MC USE OF WELL TEST
APPENDIX C. SOIL BORING LOGS

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

- **Top soil**: 0.25
- **Black, moist-wet, debris: sinder, gravel and SAND.**
- **Brown-grey, moist, med-stiff, mottled CLAY.**
- **Debris: wood.**
- **Brown-grey, moist, med-stiff, mottled, CLAY with organics.**
- **Grey-brown, moist, stiff, CLAY, trace organics and fine-med gravel.**
- **As above, no organics.**
- **Brown, moist, stiff, CLAY, trace medium gravel.**
- **Brown, saturated, rounded, medium gravel.**
- **Brown, moist, stiff, CLAY with trace medium gravel.**

---

### Notes:

- **End of Boring**
<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Sample Type and Number</th>
<th>Lab Tests</th>
<th>Recovery (inch)</th>
<th>Blow Count</th>
<th>Soil Description</th>
<th>PID (ppmv)</th>
<th>Profile</th>
<th>USCS Classification</th>
<th>Well Construction BB</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT 0-2</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td>Concrete surface</td>
<td>2.3</td>
<td>-0.5</td>
<td>FILL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Top soil and gravel.</td>
<td>1000</td>
<td></td>
<td>-0.83</td>
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<tr>
<td>DT 2-4</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td>Debris: bricks Black, moist, SAND and debris: sinder and bricks.</td>
<td>56.2</td>
<td>36.5</td>
<td>SW</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tan, wet, SAND.</td>
<td>-2.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT 4-6</td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td>Brown-black, wet, sinder and debris. Coarse gravel, sinder and debris.</td>
<td>3.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT 6-8</td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td>Dark brown, moist, med-soft, peat-like soil with organic debris.</td>
<td>4.29</td>
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</tr>
<tr>
<td>DT 8-10</td>
<td></td>
<td>18</td>
<td></td>
<td></td>
<td>Grey, moist, soft, SILTY SANDY CLAY.</td>
<td>-8.44</td>
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<td>VC</td>
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</tr>
<tr>
<td>DT 10-12</td>
<td></td>
<td>18</td>
<td></td>
<td></td>
<td>Grey, moist, med-stiff, CLAY with trace medium gravel.</td>
<td>-8.55</td>
<td></td>
<td>CL</td>
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</table>

End of Boring
<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Sample Type and Number</th>
<th>Lab Tests</th>
<th>Recovery (inches)</th>
<th>Blow Count</th>
<th>Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>DT</td>
<td></td>
<td>10</td>
<td></td>
<td>Black slag</td>
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<tr>
<td>2-4</td>
<td>DT</td>
<td></td>
<td>10</td>
<td></td>
<td>Wet debris: bricks, paint chips, slag, sinder.</td>
</tr>
<tr>
<td>4-6</td>
<td>DT</td>
<td></td>
<td>14</td>
<td></td>
<td>Black, moist, peat-like soil with organics.</td>
</tr>
<tr>
<td>6-8</td>
<td>DT</td>
<td></td>
<td>14</td>
<td></td>
<td>Grey, moist, med-soft, CLAY</td>
</tr>
<tr>
<td>8-10</td>
<td>DT</td>
<td></td>
<td>23</td>
<td></td>
<td>Grey-brown, moist, med-stiff, CLAY with trace mottling and fine gravel.</td>
</tr>
<tr>
<td>10-12</td>
<td>DT</td>
<td></td>
<td>23</td>
<td></td>
<td>Grey, moist, stiff, CLAY with trace medium gravel.</td>
</tr>
<tr>
<td>12-14</td>
<td>DT</td>
<td></td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-16</td>
<td>DT</td>
<td></td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-18</td>
<td>DT</td>
<td></td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- Black, moist, peat-like soil with organics.
- Grey, moist, med-soft, CLAY.
- Grey-brown, moist, med-stiff, CLAY with trace mottling and fine gravel.
- Grey, moist, stiff, CLAY with trace medium gravel.

**Well Construction BC**

- FILL
- CL
### Soil Description

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Sample Type and Number</th>
<th>Lab Tests</th>
<th>Recovery (inches)</th>
<th>Blow Count</th>
<th>Soil Description</th>
<th>PID (ppmv)</th>
<th>Profile</th>
<th>Graphic</th>
<th>USCS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>DT 0-2</td>
<td>9</td>
<td></td>
<td></td>
<td>Limestone gravel, brown-black, wet, debris: slag, sinder.</td>
<td>0.42</td>
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<tr>
<td>2-4</td>
<td>DT 2-4</td>
<td>9</td>
<td></td>
<td></td>
<td>Grey, moist, med-stiff, CLAY, trace fine gravel.</td>
<td>3.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-6</td>
<td>DT 4-6</td>
<td>17</td>
<td></td>
<td></td>
<td>Brown-grey, moist, med-stiff, mottled, CLAY, trace gravel.</td>
<td>0.5</td>
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</tr>
<tr>
<td>6-8</td>
<td>DT 6-8</td>
<td>17</td>
<td></td>
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<td>Brown, moist, stiff, CLAY, trace fine gravel.</td>
<td>0.4</td>
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<tr>
<td>8-10</td>
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<td>24</td>
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<td>As above, grey, swelling.</td>
<td>0.3</td>
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<td>DT 10-12</td>
<td>24</td>
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<td>Grey, wet, SAND.</td>
<td>17.75</td>
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<td>End of Boring</td>
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</tbody>
</table>

Notes:

- Limestone gravel.
- Brown-black, wet, debris: slag, sinder.
- Grey, moist, med-stiff, CLAY, trace fine gravel.
- Brown, moist, stiff, CLAY, trace fine gravel.
- As above, grey, swelling.
- Grey, wet, SAND.
- Grey, saturated, SAND.
### Soil Description

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Sample Type and Number</th>
<th>Lab Tests</th>
<th>Recovery (inches)</th>
<th>Blow Count</th>
<th>Soil Description</th>
<th>PID (ppmv)</th>
<th>Graphic</th>
<th>USCS Classification</th>
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<tbody>
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<td>0-2</td>
<td>DT</td>
<td>7</td>
<td></td>
<td></td>
<td>Black, moist, debris: sinder, bricks. Poor recovery due to debris.</td>
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<td>FILL</td>
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<td>DT</td>
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<td></td>
<td></td>
<td>5.3</td>
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<td>GP-SP</td>
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<tr>
<td>4-6</td>
<td>DT</td>
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<td></td>
<td></td>
<td>1.5</td>
<td></td>
<td>CL</td>
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<tr>
<td>6-8</td>
<td>DT</td>
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<td></td>
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<td>Brown-grey, moist, stiff, mottled, CLAY.</td>
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<td>DT</td>
<td>21</td>
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<td>Brown, moist, med-stiff, CLAY, trace fine-medium gravel.</td>
<td>0.3</td>
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<tr>
<td>12-14</td>
<td>DT</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td>0.2</td>
<td></td>
<td>GP-SP</td>
</tr>
<tr>
<td>14-16</td>
<td>DT</td>
<td>24</td>
<td></td>
<td></td>
<td>Brown, moist, SAND and coarse gravel.</td>
<td>0.3</td>
<td></td>
<td>CL</td>
</tr>
</tbody>
</table>

**Notes:**

- Black, moist, debris: sinder, bricks. Poor recovery due to debris.
- Brown-grey, moist, stiff, mottled, CLAY.
- End of Boring
<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Sample Type and Number</th>
<th>Lab Tests</th>
<th>Recovery (inch)</th>
<th>Blow Count</th>
<th>Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>DT</td>
<td>12</td>
<td></td>
<td></td>
<td>Gravel, debris and sinder.</td>
</tr>
<tr>
<td>2-4</td>
<td>DT</td>
<td>12</td>
<td></td>
<td></td>
<td>Brown, moist, stiff, mottled-grey, CLAY, trace fine gravel.</td>
</tr>
<tr>
<td>4-6</td>
<td>DT</td>
<td>24</td>
<td></td>
<td></td>
<td>Grey, moist, stiff, swelling, CLAY.</td>
</tr>
<tr>
<td>6-8</td>
<td>DT</td>
<td>24</td>
<td></td>
<td></td>
<td>Grey, moist, SAND. Refusal at 19'.</td>
</tr>
<tr>
<td>8-10</td>
<td>DT</td>
<td>24</td>
<td></td>
<td></td>
<td>End of Boring</td>
</tr>
</tbody>
</table>

**Notes:**
- Grey, moist, SAND. Refusal at 19'.
- End of Boring

**PID (ppmv):**
- 0 1000

**USCS Classification:**
- FILL
- CL
- SP
### Soil Description

<table>
<thead>
<tr>
<th>Sample Type and Number</th>
<th>Depth (feet)</th>
<th>Recovery (inches)</th>
<th>Blow Count</th>
<th>Soil Description</th>
<th>PID (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT 0-2</td>
<td>0</td>
<td>15</td>
<td></td>
<td>Brown, moist, top soil and mixed gravel. Gravel and concrete.</td>
<td>0.93</td>
</tr>
<tr>
<td>DT 2-4</td>
<td>2</td>
<td>15</td>
<td></td>
<td>Brown-grey, moist, soft, mottled, CLAY. As above, med-stiff.</td>
<td>3.2</td>
</tr>
<tr>
<td>DT 4-6</td>
<td>4</td>
<td>17</td>
<td></td>
<td>Grey, wet, coarse, SAND.</td>
<td>0.1</td>
</tr>
<tr>
<td>DT 6-8</td>
<td>6</td>
<td>17</td>
<td></td>
<td>Brown-grey, moist, med-stiff, mottled, CLAY, trace fine gravel. Brown, moist, stiff, CLAY with trace fine-medium gravel.</td>
<td>6.11</td>
</tr>
<tr>
<td>DT 8-10</td>
<td>8</td>
<td>24</td>
<td></td>
<td></td>
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<tr>
<td>DT 12-14</td>
<td>12</td>
<td>24</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>DT 14-16</td>
<td>14</td>
<td>24</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>DT 16-18</td>
<td>16</td>
<td>24</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>DT 18-20</td>
<td>18</td>
<td>24</td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

**Notes:**

- End of Boring

**Graphical Representation:**

- GP
- CL
- SP
## Soil Boring: BC-GP1

Logged By: CGP  
Date Drilled: 5/21/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -4'  
Sample Tool: Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>% Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>FILL: gravel, cinders, slag, wood debris.</td>
<td>CL</td>
<td>Tan, gray mottling, SILTY CLAY: dense, slightly moist.</td>
<td>1.1</td>
<td>0.3</td>
<td>Analyzed soil sample -3 to -4 feet.</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Analyzed soil sample -1 to -2 feet.</td>
</tr>
</tbody>
</table>

Sample Name: 19-716-10

Project Name: Butler  
Project Number: 19-716-10
### Soil Boring: BC-GP2

**Logged By:** CGP  
**Date Drilled:** 5/21/19

**Initial Water Level (ft):**  
**Drilled By:** SCS

**Total Depth of Boring (ft):** -4'  
**Sample Tool:** Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>Dark brown, FILL: brick, wood and cinders present, moist.</td>
<td>0.2</td>
<td>100%</td>
<td>Analyzed soil sample -0.5 to -1.5 feet.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Gray, FILL: sandy gravel, slightly moist, no odor.</td>
<td>0.2</td>
<td></td>
<td>Analyzed soil sample -3 to -4 feet.</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>Gray, orange mottling, SILTY CLAY: trace gravel, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Project Name:** Butler  
**Project Number:** 19-716-10
### Soil Boring: BC-GP3

**Logged By:** CGP  
**Date Drilled:** 5/21/19  
**Initial Water Level (ft):**  
**Drilled By:** SCS  
**Total Depth of Boring (ft):** -4'  
**Sample Tool:** Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>% Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Lithology Details:

- **GW Fill:** TOPSOIL: fill.
- **SP Fill:** Tan, FILL: sand and gravel, poorly sorted, slightly moist.
- **CL:** Dark brown, SAND: fill, with some gravel and cinders.
- **Gray, orange mottling, SILTY CLAY:** trace gravel, slightly moist, no odor.

- **Analyzed soil sample -3 to -4 feet.**
- **Analyzed soil sample -1 to -2 feet.**
# Soil Boring: BC GP3-N5

Logged By: CGP  
Date Drilled: 6/18/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -2'  
Sample Tool: Hand Auger

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

Project Name: Butler  
Project Number: 19-716-10
**Soil Boring: BC GP3-E5**

Logged By: CGP  Date Drilled: 6/18/19  Drilled By: SCS

Initial Water Level (ft):  Total Depth of Boring (ft): -2'  Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>0</th>
<th>OL</th>
<th></th>
<th></th>
<th>TOPSOIL: organics present, moist, no odor.</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SP</td>
<td></td>
<td></td>
<td>Brown, GRAVELLY, CLAYEY SAND: medium to large grained, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand and slag, clay at -2 feet.</td>
<td></td>
<td></td>
<td>Soil sample analyzed between -1 and -2 feet.</td>
</tr>
</tbody>
</table>
**Soil Boring: BC GP3-S5**

Logged By: CGP  
Date Drilled: 6/18/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -1.25  
Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>TOPSOIL: organics present, moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td>SP</td>
<td></td>
<td></td>
<td>Brown, GRAVELLY, CLAYEY SAND: medium to large grained, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand and slag.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-14</td>
<td></td>
<td></td>
<td></td>
<td>Refusal at -14 inches.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Soil sample analyzed between -1 and -1.25 feet.
**Soil Boring: BC GP3-W5**

Logged By: CGP  
Date Drilled: 6/18/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -1.5  
Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>Brown, GRAVELLY, CLAYEY SAND: organics present between 0 to -0.5 feet, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>Dark brown, GRAVELLY, CLAYEY SAND: slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Brown, GRAVELLY SAND: slightly moist, no odor.</td>
<td></td>
<td></td>
<td>Soil sample analyzed between -1 and -1.75 feet.</td>
</tr>
</tbody>
</table>
**Soil Boring: BC GP3-E10**

Logged By: CGP  Date Drilled: 6/18/19
Initial Water Level (ft):  Drilled By: SCS
Total Depth of Boring (ft): -2'  Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log USC</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>Brown, GRAVELLY SAND: medium to large grained, with cobbles, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand, some slag, clay at -2 feet, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Soil sample analyzed between -1 and -2 feet.
### Soil Boring: BC GP3-S10

**Logged By:** CGP  
**Date Drilled:** 6/18/19  
**Initial Water Level (ft):**  
**Drilled By:** SCS  
**Total Depth of Boring (ft):** -2'  
**Sample Tool:** Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>Brown, GRAVELLY SAND: medium to large grained, with cobbles, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand and slag.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td></td>
<td></td>
<td></td>
<td>Soil sample analyzed between -1 and -2 feet.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Soil Boring: BC GP3-W10

Logged By: CGP  Date Drilled: 6/18/19
Initial Water Level (ft):  Drilled By: SCS
Total Depth of Boring (ft): -1.75  Sample Tool: Hand Auger

Brown, GRAVELLY, CLAYEY SAND: organics present between 0 to -0.5 feet, slightly moist, no odor.

Dark brown, GRAVELLY, CLAYEY SAND: slightly moist, no odor.

Brown, GRAVELLY SAND: slightly moist, no odor.

Soil sample analyzed between -1 and -1.75 feet.
### Soil Boring: BC-GP4

**Logged By:** CGP  
**Date Drilled:** 5/21/19  
**Initial Water Level (ft):**  
**Drilled By:** SCS  
**Total Depth of Boring (ft):** -4'  
**Sample Tool:** Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>FILL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td>TOPSOIL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td></td>
<td></td>
<td>organics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td>present.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td>Dark brown,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td>SANDY FILL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td></td>
<td>slag, cinders,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td></td>
<td></td>
<td>wood debris</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td></td>
<td></td>
<td>present.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>22</td>
<td></td>
<td></td>
<td>CL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24</td>
<td></td>
<td></td>
<td>Gray, orange</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26</td>
<td></td>
<td></td>
<td>mottling,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28</td>
<td></td>
<td></td>
<td>SILTY CLAY:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td>trace gravel,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>slightly moist,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Analyzed soil sample -1 to -2 feet.
- Analyzed soil sample -3 to -4 feet.

**Project Name:** Butler  
**Project Number:** 19-716-10
# Soil Boring: BC-GP5

Logged By: CGP  Date Drilled: 5/21/19
Initial Water Level (ft):  Drilled By: SCS
Total Depth of Boring (ft): -4'  Sample Tool: Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td>FILL</td>
<td>CL</td>
<td>Tan, FILL: silty clay, brick and some gravel present, slag present at -3 feet.</td>
<td>0.3</td>
<td>100%</td>
<td>Analyzed soil sample -3 to -3 feet.</td>
</tr>
<tr>
<td>-2</td>
<td>-4</td>
<td>CL</td>
<td>CL</td>
<td>Gray, orange mottling, SILTY CLAY: plastic, moist, no odor.</td>
<td>0.3</td>
<td></td>
<td>Analyzed soil sample -3.5 to -4 feet.</td>
</tr>
</tbody>
</table>

Analyzed soil sample -3 to -3 feet.
Analyzed soil sample -3.5 to -4 feet.
### Soil Boring: BC-GP6

**Logged By:** CGP  
**Date Drilled:** 5/21/19

**Initial Water Level (ft):**  
**Drilled By:** SCS

**Total Depth of Boring (ft):** -4'  
**Sample Tool:** Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TOPSOIL: organics present.</td>
<td>0.3</td>
<td>60%</td>
<td>Analyzed soil sample -1 to -2 feet.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dark brown, FILL: some sand and some gravel present, slag, cinders, wood debris, brick, one inch of black, fine, foundry sand at -2 feet bsg present, slightly moist, no odor.</td>
<td>0.3</td>
<td>60%</td>
<td>Analyzed soil sample -3 to -4 feet.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gray, SILTY CLAY: plastic, moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Project Name: Butler  
- Project Number: 19-716-10
Sample Scale Graphic Log USCS Lithology

TOPSOIL: organics present.
Dark brown, FILL: wood, slag, cinder present, some gravel, no odor.
Gray, orange/brown mottling, SILTY CLAY: dense, slightly moist, no odor.

Initial Water Level (ft): -6'
Total Depth of Boring (ft): 30'

Notes

Analyzed soil sample -1 to -2 feet.
Analyzed soil sample -3 to -4 feet.
### Soil Boring: BC-GP8

Logged By: CGP  Date Drilled: 5/21/19
Initial Water Level (ft):  
Total Depth of Boring (ft): -4'
Drilled By: SCS  Sample Tool: Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale Graphic Log USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>TOPSOIL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>organics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>present.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Dark brown,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FILL: slag,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>wood, slag,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>cinder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>present some gravel, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>CL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Gray, orange mottling,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SILTY CLAY: dense,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>slightly moist, no odor.</td>
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</tr>
</tbody>
</table>

Analyzed soil sample -2 to -3 feet.

Analyzed soil sample -3 to -4 feet.
# Soil Boring: BC-GP9

Logged By: CGP  
Date Drilled: 5/21/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -4'  
Sample Tool: Dual Tube

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
</table>

- **FILL**: TOPSOIL: organics present.
- **CL**: Dark brown, SANDY FILL: cinders, slag, wood debris present, slightly moist.
- **CL**: Gray, orange mottling, SILTY CLAY: trace gravel, slightly moist, no odor.

- Analyzed soil sample -1 to -2 feet.
- Analyzed soil sample -3 to -4 feet.
## Temporary Well: BC-GP10

**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):**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>%Recovery</th>
<th>PID/FID</th>
<th>Scale</th>
<th>Well Construction</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

### Lithology

- **Tan, SANDY FILL:** brick, cinders and slag present.
- **Orange, gray mottling, SILTY CLAY:** trace gravel, dense, moist, no odor.
- **Tan, gray mottling, SILTY CLAY:** trace gravel, dense, moist, no odor.
- **Gray, tan-brown mottling, SILTY CLAY:** dense, slightly moist, no odor.
- **Gray, SAND:** fine to medium grained, two inch sand seam at -19 feet, very moist, no odor.
- **Gray, GRAVELLY SAND:** coarse grained, very moist, no odor.
- **Tan, SANDY SILT:** tight, plastic, very moist, no odor.
- **Gray, SAND:** medium grained, trace gravel, wet at -24 feet, no odor.

### Well Construction

- **Borehole Diameter:** 3.25 inches  
- **Well Diameter:** 2 inch  
- **Analyzed soil sample:** -1 to -2 feet.

- **Bentonite**
- **10' 10-Slot PVC Screen**
- **Sand**
- **Wet at -24 feet.**
## Temporary Well: BC-GP11

**Logged By:** CGP  | **Initial Water Level (ft):** -24'
**Date Drilled:** 5/21/19  | **Final Water Level (ft):**
**Drilled By:** SCS  | **Total Depth of Boring (ft):** -28'
**Sample Tool:** Dual Tube  | **Top of Casing Elevation (ft):**

### Project Information
- **Project Name:** Butler
- **Project Number:** 19-716-10

### Well Construction
- **Borehole Diameter:** 3.25 inches
- **Well Diameter:** 2 inch
- **10' 10-Slot PVC Screen**
- **Analyzed soil sample:** -0.5 to -1.5 feet.
- **Bentonite**
- **Sand**
- **Wet at -24 feet.**

### Lithology

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>% Recovery</th>
<th>PID/FID</th>
</tr>
</thead>
<tbody>
<tr>
<td>OL</td>
<td></td>
<td></td>
<td></td>
<td>TOPSOIL: organics present.</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>FILL</td>
<td></td>
<td></td>
<td></td>
<td>Dark brown, SANDY FILL: brick, glass and burn debris present, slightly moist, no odor.</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>FILL/CL</td>
<td></td>
<td></td>
<td></td>
<td>Gray, FILL: silty clay, dense, slightly moist, no odor.</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>CL</td>
<td></td>
<td></td>
<td></td>
<td>Wood debris.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gray, SILTY CLAY: plastic, moist, no odor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tan, SILTY CLAY: trace gravel, dense, moist, no odor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gray, SILTY CLAY: trace gravel, dense, moist, no odor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gray, SAND: fine to medium grained, slightly dense, very moist, no odor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gray, GRAVELLY SAND: coarse grained, very moist, no odor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tan, CLAYEY SILT: dense, very moist, no odor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gray, GRAVELLY SAND: medium grained, very moist to wet at -24 feet, no odor.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Notes
- **TOPSOIL:** organics present.
- **CL:** dense, very moist, no odor.
- **SP:** dense, very moist, no odor.
- **ML:** dense, very moist, no odor.
- **FILL:** brick, glass and burn debris present, slightly moist, no odor.
Temporary Well: BC-GP12

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):

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>%Recovery</th>
<th>PID/FID</th>
<th>Scale</th>
<th>Well Construction</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>OL FILL</td>
<td>200</td>
<td>-2</td>
<td>OL FILL/CL</td>
<td>TOPSOIL: organics present, moist.</td>
<td>60%</td>
<td></td>
<td></td>
<td>Borehole Diameter: 3.25 inches</td>
<td></td>
</tr>
<tr>
<td>FILL/CL</td>
<td>200</td>
<td>-2</td>
<td>CL</td>
<td>Brown, FILL: pea gravel, medium grained, moist, no odor.</td>
<td>60%</td>
<td></td>
<td></td>
<td>Well Diameter: 2 inch</td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td></td>
<td>CL</td>
<td>Gray, SILTY CLAY: dense, brick debris present at -2 feet, moist, no odor.</td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
<td>Analyzed soil sample -1 to -2 feet.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CL</td>
<td>Gray, SILTY CLAY: dense, orange mottling begins at -8 feet bsg, moist, no odor.</td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>CL</td>
<td>Gray, SAND: fine grained, some silt, very moist, no odor.</td>
<td>90%</td>
<td></td>
<td></td>
<td>Bentonite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SP</td>
<td>Gray, SAND CLAY: dense, very moist, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
<td>10' 10-Slot PVC Screen</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SP</td>
<td>Gray, SILTY SAND: fine, some gravel present, moist, no odor.</td>
<td>60%</td>
<td></td>
<td></td>
<td>Wet at -22 feet.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CL</td>
<td>Gray, SILTY CLAY: dense, very moist, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
<td>Sand</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CL</td>
<td>Gray, SANDY CLAY: some gravel present, dense, moist, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ML</td>
<td>Tan, gray, CLAYEY SILT: sand, trace gravel, moist to wet from -22 to -23 feet, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>CL</td>
<td>Gray, SAND: medium grained, moderately sorted, very moist, no odor.</td>
<td>70%</td>
<td></td>
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</tr>
<tr>
<td>Sample</td>
<td>Scale</td>
<td>Graphic Log</td>
<td>USCS</td>
<td>Lithology</td>
<td>% Recovery</td>
<td>PID/FID</td>
<td>Scale</td>
<td>Well Construction</td>
<td>Notes</td>
</tr>
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</tr>
<tr>
<td>OL</td>
<td>0.2</td>
<td></td>
<td></td>
<td>TOPSOIL: organics present.</td>
<td>30%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILL</td>
<td>0.2</td>
<td></td>
<td></td>
<td>Brown-black, SANDY FILL: glass, brick and burn debris present, moist to wet at -4 feet, no odor.</td>
<td>50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL</td>
<td>0.2</td>
<td></td>
<td></td>
<td>Dark brown, SILTY CLAY: soft peat, very moist, slight organic odor.</td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>0.2</td>
<td></td>
<td></td>
<td>Gray, SILTY CLAY: very plastic to dense at -7 feet, very moist, no odor.</td>
<td>60%</td>
<td></td>
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</tr>
</tbody>
</table>

Borehole Diameter: 3.25 inches
Well Diameter: 2 inch Bentonite
Analyzed soil sample -1 to -2 feet.
Wet at -4 feet.
Sand
5' 10-Slot PVC Screen
## Temporary Well: BC-GP14

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):**

### Well Construction

- **Borehole Diameter:** 3.25 inches  
- **Well Diameter:** 2 inch  
- **Analyzed soil sample:** -0.5 to -1.5 feet.

### Lithology

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>%Recovery</th>
<th>PID/FID</th>
<th>Scale</th>
<th>Well Construction</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>OL</td>
<td></td>
<td></td>
<td>CL</td>
<td>TOPSOIL: organics present, moist.</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>Brown, SILTY CLAY: trace gravel, dense, brick and burn debris present at -1 foot bsg, slightly moist, no odor.</td>
<td>50%</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>-2</td>
<td></td>
<td></td>
<td>Brown, SILTY CLAY: trace gravel, dense, slightly moist, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>-4</td>
<td></td>
<td></td>
<td>Brown, gray mottling, SILTY CLAY: trace gravel, dense, slightly moist, no odor.</td>
<td>100%</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>-6</td>
<td></td>
<td></td>
<td>Gray, brown mottling, SILTY CLAY: trace gravel, dense, slightly moist, no odor.</td>
<td>100%</td>
<td></td>
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<tr>
<td></td>
<td>-8</td>
<td></td>
<td></td>
<td>Brown, SILTY CLAY: trace gravel, dense, slightly moist, no odor.</td>
<td>100%</td>
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<tr>
<td></td>
<td>-10</td>
<td></td>
<td></td>
<td>Gray, Silt Clay: trace gravel, very dense, moist, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>-12</td>
<td></td>
<td></td>
<td>Gray, SAND: fine to medium grained, moderately sorted, moist to slightly moist, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>-14</td>
<td></td>
<td></td>
<td>Gray, GRAVELLY SAND: poorly sorted, very moist, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>-16</td>
<td></td>
<td></td>
<td>Gray, Silt Clay: trace gravel and some sand present, very moist at -25 to -26 feet, slightly moist from -26 to -28 feet, no odor.</td>
<td>100%</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>-18</td>
<td></td>
<td></td>
<td>Gray, SAND: medium to coarse grained, some gravel, wet, no odor.</td>
<td>100%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>-20</td>
<td></td>
<td></td>
<td>10' 10-Slot PVC Screen</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-22</td>
<td></td>
<td></td>
<td>Sand</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-24</td>
<td></td>
<td></td>
<td>Wet at -28 feet</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-26</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>-28</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-30</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
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</table>
Temporary Well: BC-GP15

Logged By: CGP
Date Drilled: 5/21/19
Initial Water Level (ft): -27'
Drilled By: SCS
Final Water Level (ft):
Total Depth of Boring (ft): -30'
Sample Tool: Dual Tube
Top of Casing Elevation (ft):

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>%Recovery</th>
<th>PID/FID</th>
<th>Scale</th>
<th>Well Construction</th>
<th>Notes</th>
</tr>
</thead>
</table>

- **OL FILL**: TOPOSOIL: organics present. Dark brown, SANDY FILL: gravel and cinders present. Gray, orange motting, SILTY CLAY: trace gravel, dense, slightly moist to moist, no odor.
- **CL**: Gray, SILTY CLAY: trace gravel, dense, brown motting from -14 to -16 feet, slightly moist.
- **SP**: Gray, SAND: fine to medium grained, moderately sorted, very moist, no odor. Gray, SANDY, CLAYEY SILT: dense, very moist, no odor. Gray, SAND: medium to coarse grained, some gravel, wet at -27 feet, no odor.

Borehole Diameter: 3.25 inches
Well Diameter: 2 inch
Analyzed soil sample -0.5 to -1 feet.

10' 10-Slot PVC Screen
Bentonite
Sand
Wet at -27 feet.

TOMSOIL: organics present. Dark brown, SANDY FILL: gravel and cinders present. Gray, orange motting, SILTY CLAY: trace gravel, dense, slightly moist to moist, no odor.

Wet at -27 feet.
**Soil Boring: BC GP16-N5**

Logged By: CGP  
Date Drilled: 6/18/19

Initial Water Level (ft):  
Drilled By: SCS

Total Depth of Boring (ft): -2'  
Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Black, SAND: foundry sand and slag present, slightly moist, no odor.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Brown, SAND: fine to medium grained, brick present, moist, no odor.</td>
<td></td>
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</tr>
</tbody>
</table>

Soil sample analyzed between -1 and -2 feet.
<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td></td>
<td></td>
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<td></td>
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<td>1</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Black, SAND: foundry sand and slag present, slightly moist, no odor.

Brown, SAND: fine to medium grained, brick present, moist, no odor.

Soil sample analyzed between -1 and -1.75 feet.
**Soil Boring: BC GP16-S5**

Logged By: CGP  
Date Drilled: 6/18/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -1.5'  
Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>% Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand, some slag, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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</tr>
</tbody>
</table>

Soil sample analyzed between -1 and -1.5 feet.
Sample
Scale
Graphic Log
USCS
Lithology
PID/FID (ppmv)
% Recovery
Notes

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>% Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand, some slag, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>SP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Soil sample analyzed between -1 and -1.5 feet.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample</td>
<td>Scale</td>
<td>Graphic Log</td>
<td>USCS</td>
<td>Lithology</td>
<td>PID/FID (ppmv)</td>
<td>%Recovery</td>
<td>Notes</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
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<td>-----------</td>
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<td>-----------</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand and slag present, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td>SP</td>
<td></td>
<td></td>
<td>Brown, SAND: fine to medium grained, brick present, moist, no odor.</td>
<td></td>
<td></td>
<td>Soil sample analyzed between -1 and -2 feet.</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
# Soil Boring: BC GP16-E10

Logged By: CGP
Date Drilled: 6/18/19
Initial Water Level (ft):
Total Depth of Boring (ft): -1.5'
Drilled By: SCS
Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
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<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand, some slag and brick, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Project Name: Butler
Project Number: 19-716-10
**Soil Boring: BC GP16-S10**

Logged By: CGP  
Date Drilled: 6/18/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -2'  
Sample Tool: Hand Auger

<table>
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<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand, some slag, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Soil sample analyzed between -1 and -2 feet.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Soil Boring: BC GP16-W10**

Logged By: CGP  
Date Drilled: 6/18/19  
Initial Water Level (ft):  
Drilled By: SCS  
Total Depth of Boring (ft): -2'  
Sample Tool: Hand Auger

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>Lithology</th>
<th>PID/FID (ppmv)</th>
<th>%Recovery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
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<td>0</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td>Black, SAND: foundry sand, some slag, slightly moist, no odor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td>SP</td>
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<td></td>
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<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Soil sample analyzed between -1 and -2 feet.
Soil Vapor Probe: BC-SG1

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

Initial Water Level (ft): 0
Final Water Level (ft): -7
Total Depth of Boring (ft): -7
Top of Casing Elevation (ft):

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

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>%Recovery</th>
<th>PID/FID</th>
<th>Scale</th>
<th>Well Construction</th>
<th>Notes</th>
</tr>
</thead>
</table>

**Sample Tool:** Dual Tube

**Date Drilled:** 5/21/19

**Logged By:** CGP

**Drilled By:** SCS

**Notes:**

- **Borehole Diameter:** 2.25 inches
- **Bentonite Grout**
- **Bentonite Chips**
- **6’ 1/4” Teflon Tubing**
- **Sand**
- **6” Stainless Steel Screen**

**Lithology:**

- **TOPSOIL:** organics present.
- Dark brown, FILL: wood, slag, cinder present, some gravel, no odor.
- Gray, orange/brown mottling, Silty Clay: dense, slightly moist, no odor.
## Soil Vapor Probe: BC-SG2

**Logged By:** CGP  
**Date Drilled:** 5/21/19  
**Drilled By:** SCS  
**Sample Tool:** Dual Tube  
**Project Name:** Butler  
**Project Number:** 19-716-10  
**Initial Water Level (ft):**  
**Final Water Level (ft):**  
**Total Depth of Boring (ft):** -5  
**Top of Casing Elevation (ft):**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>% Recovery</th>
<th>PID/FID</th>
<th>Scale</th>
<th>Well Construction</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Borehole Diameter: 2.25 inches</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bentonite Chips</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4’ 1/4” Teflon Tubing to grade</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Bentonite Grout</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sand</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6” Stainless Steel Screen</td>
<td></td>
</tr>
</tbody>
</table>

**Sample Details:**

- **OL:** TOPSOIL: organics present. Dark brown, FILL: wood, slag, cinder present, some gravel, no odor.
- **CL:** Gray, orange/brown mottling, SILTY CLAY: dense, slightly moist, no odor.
**Soil Vapor Probe: BC-SG3**

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

<table>
<thead>
<tr>
<th>Sample</th>
<th>Scale</th>
<th>Graphic Log</th>
<th>USCS</th>
<th>Lithology</th>
<th>% Recovery</th>
<th>PID/FID</th>
<th>Scale</th>
<th>Well Construction</th>
<th>Notes</th>
</tr>
</thead>
</table>

- **Sample Scale**: Graphic Log
- **USCS**: USCS
- **Lithology**: Sample Tool
- **% Recovery**: Soil Vapor Probe
- **PID/FID**: Soil Vapor Probe
- **Scale**: Soil Vapor Probe
- **Well Construction**: Soil Vapor Probe
- **Notes**: Soil Vapor Probe

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

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

---

**TOPSOIL:** organics present, moist.

**Brown, FILL:** pea gravel, medium grained, moist, no odor.

**Gray, SILTY CLAY:** dense, brick debris present at -2 feet, orange mottling begins at -8 feet bsg, no odor.

**Borehole Diameter:** 2.25 inches

**Bentonite Chips**

**3’ 1/4” Teflon Tubing to grade**

**Bentonite Grout**

**Sand**

**6” Stainless Steel Screen**
APENDIX 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 (248) 459-7263
Grand Rapids, Michigan (616) 531-0503
Lansing, Michigan (517) 999-5800
Fort Wayne, Indiana (260) 497-7645
Indianapolis, Indiana (317) 841-8280
Louisville, Kentucky (502) 526-5179
Phase II Environmental Screening
The Butler Company
325 South Broadway Street, Butler, Indiana

- 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, except 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>
<thead>
<tr>
<th>Soil Boring ID (depth interval)</th>
<th>Sample Collection Date</th>
<th>Detected Parameter</th>
<th>Concentration (mg/kg)</th>
<th>Indiana Remediation Closure Guide Remediation Screening Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Residential Direct Contact Screening Level (mg/kg)</td>
</tr>
<tr>
<td>BA (0-2')</td>
<td>5/22/2018</td>
<td>Debris, Gravel, Sand and Cinders</td>
<td>No VOCs Detected No PAHs Detected</td>
<td>0.094</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Arsenic</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Barium</td>
<td>549</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cadmium</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Copper</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lead</td>
<td>58</td>
</tr>
<tr>
<td>BB (2-4')</td>
<td>5/22/2018</td>
<td>Bricks, Debris, Sand and Cinders</td>
<td>No VOCs Detected No PAHs Detected</td>
<td>7.160</td>
</tr>
<tr>
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<td></td>
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<td>Arsenic</td>
<td>2</td>
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<tr>
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<td></td>
<td></td>
<td>Barium</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cadmium</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Copper</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lead</td>
<td>45</td>
</tr>
<tr>
<td>BD (0-2')</td>
<td>5/22/2018</td>
<td>Cinders and Debris</td>
<td>No VOCs Detected No PAHs Detected</td>
<td>1.23</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Arsenic</td>
<td>2</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>Barium</td>
<td>45</td>
</tr>
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<td></td>
<td></td>
<td>Cadmium</td>
<td>45</td>
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<td></td>
<td></td>
<td>Copper</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lead</td>
<td>45</td>
</tr>
<tr>
<td>BE (6-8')</td>
<td>5/22/2018</td>
<td>Clay</td>
<td>No VOCs Detected No PAHs Detected</td>
<td>1.23</td>
</tr>
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<td>Arsenic</td>
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<td>Barium</td>
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<td>Cadmium</td>
<td>45</td>
</tr>
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<td></td>
<td></td>
<td>Copper</td>
<td>45</td>
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<tr>
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<td></td>
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<td>Lead</td>
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Continued next page
### Table 1 Continued. Soil Testing Results
325 South Broadway Street, Butler, Indiana

<table>
<thead>
<tr>
<th>Soil Boring ID (depth interval)</th>
<th>Sample Collection Date</th>
<th>Detected Parameter</th>
<th>Concentration (mg/kg)</th>
<th>Indiana Remediation Closure Guide Remediation Screening Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Residential Direct Contact Screening Level (mg/kg)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Commercial/ Industrial Direct Contact Screening Level (mg/kg)</td>
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<td></td>
<td>Excavation Direct Contact Screening Level (mg/kg)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Residential Migration to Groundwater Screening Level (mg/kg)</td>
</tr>
<tr>
<td>BF (2-4’) Clay</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>&lt;2</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detected PAHs Detected</td>
<td>21000</td>
<td>100000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detected RCRA Metals</td>
<td>8.5</td>
<td>4300</td>
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<td></td>
<td>Arsenic</td>
<td>61</td>
<td>400</td>
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<td></td>
<td>Barium</td>
<td>9.1</td>
<td>24</td>
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<td></td>
<td></td>
<td>Chromium</td>
<td>3.7</td>
<td>18</td>
</tr>
<tr>
<td>BG (6-8’) Clay</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>&lt;2</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detected PAHs Detected</td>
<td>21000</td>
<td>100000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detected RCRA Metals</td>
<td>8.5</td>
<td>4300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arsenic</td>
<td>61</td>
<td>6.0</td>
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<td></td>
<td></td>
<td>Barium</td>
<td>9.1</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chromium</td>
<td>7.1</td>
<td>18</td>
</tr>
<tr>
<td>BH (6-8’) Dup BC (2-4’)</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>&lt;3</td>
<td>9.5</td>
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<tr>
<td></td>
<td></td>
<td>No PAHs Detected</td>
<td>2,220</td>
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<td>Detected RCRA Metals</td>
<td>247</td>
<td>4300</td>
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<td>Arsenic</td>
<td>2.6</td>
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<td></td>
<td>Barium</td>
<td>9.5</td>
<td>247</td>
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<td>Chromium</td>
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<td>28,700</td>
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<td>Copper</td>
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<td>Zinc</td>
<td>2,980</td>
<td>1.78</td>
</tr>
</tbody>
</table>

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

**Grey Shading** – indicates concentration exceeds the industrial direct contact screening level

The tabulated soil testing results reveal the following:

- **Volatile organic compounds (VOCs)** were not detected in soil samples or fill samples.
- **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...
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>
<thead>
<tr>
<th>Sampling Location</th>
<th>Date</th>
<th>Detected Parameter</th>
<th>Concentration (ug/l)</th>
<th>Indiana Remediation Closure Guide Water Screening Level (ug/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>5/22/2018</td>
<td>Dry Sampling Point (screened 6-16 feet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>No PAHs Detected</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RCRA 8 Metals Detected, Totals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barium, Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lead, Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zinc, Total</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>490</td>
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<td></td>
<td>70</td>
<td>15</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>980</td>
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<tr>
<td></td>
<td></td>
<td>No Dissolved RCRA 8 Metals Detected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BC</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>No PAHs Detected</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RCRA 8 Metals Detected, Totals</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Barium, Total</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Cadmium, Total</td>
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<td></td>
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<td>Chromium, Total</td>
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<td>Lead, Total</td>
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<td>RCRA 8 Metals Detected, Dissolved</td>
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<td>Zinc, Dissolved</td>
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<td></td>
<td></td>
<td>2,200</td>
<td>6,000</td>
</tr>
<tr>
<td>BD</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>No PAHs Detected</td>
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<tr>
<td></td>
<td></td>
<td>RCRA 8 Metals Detected, Totals</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Barium, Total</td>
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</tr>
<tr>
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<td></td>
<td>Chromium, Total</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lead, Total</td>
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</tr>
<tr>
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<td></td>
<td>Zinc, Total</td>
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<td></td>
<td>No Dissolved RCRA 8 Metals Detected</td>
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</tr>
<tr>
<td>BE</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>No PAHs Detected</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>RCRA 8 Metals Detected, Totals</td>
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<td>Lead, Total</td>
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<td></td>
<td>Copper, Total</td>
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<td></td>
<td>Zinc, Total</td>
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<td></td>
<td>No Dissolved RCRA 8 Metals Detected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BF</td>
<td>5/22/2018</td>
<td>Clay extends from near surface to 19 feet, no groundwater observed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BG</td>
<td>5/22/2018</td>
<td>No VOCs Detected</td>
<td>No PAHs Detected</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RCRA 8 Metals Detected, Totals</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barium, Total</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>490</td>
<td>2,000</td>
</tr>
</tbody>
</table>
Table 2 Continued. Groundwater Testing Results
325 South Broadway Street, Butler, Indiana

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

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
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

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Sample ID</th>
<th>HA</th>
<th>Sample Location</th>
<th>ACM Class.</th>
<th>Results (% Asbestos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofing (a) Felt (b)</td>
<td>BC-AB1a</td>
<td>1</td>
<td>West Central Building Debris</td>
<td>I</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>BC-AB1b</td>
<td></td>
<td></td>
<td>I</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>BC-AB2a</td>
<td></td>
<td></td>
<td>I</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>BC-AB2b</td>
<td></td>
<td></td>
<td>I</td>
<td>ND</td>
</tr>
<tr>
<td>Mortar</td>
<td>BC-AB3</td>
<td>2</td>
<td>West Central Building Debris</td>
<td>II</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>BC-AB4</td>
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<td>II</td>
<td>ND</td>
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<td></td>
<td>BC-AB5</td>
<td></td>
<td></td>
<td>II</td>
<td>ND</td>
</tr>
<tr>
<td>Electrical Wire Insulation</td>
<td>BC-AB6</td>
<td>3</td>
<td>West Central Building Debris</td>
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<td>ND</td>
</tr>
<tr>
<td></td>
<td>BC-AB7a</td>
<td></td>
<td></td>
<td>I</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>BC-AB7b</td>
<td></td>
<td></td>
<td>I</td>
<td>ND</td>
</tr>
<tr>
<td>Roofing (a) Shingle (b)</td>
<td>BC-AB8a</td>
<td>4</td>
<td>East Central Building Debris</td>
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<tr>
<td></td>
<td>BC-AB8b</td>
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<td>BC-AB9a</td>
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<td>BC-AB9b</td>
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<td>I</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Mortar</td>
<td>BC-AB10</td>
<td>5</td>
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<td>II</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>BC-AB11</td>
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<td></td>
<td>II</td>
<td>ND</td>
</tr>
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<td></td>
<td>BC-AB12</td>
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<td>II</td>
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<td>Transite Panels</td>
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<td>BC-AB14</td>
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<td>Fire Brick Mortar</td>
<td>BC-AB15</td>
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<td>ND</td>
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<td>BC-AB16</td>
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<td>ND</td>
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<td>Fire Brick</td>
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<td>ND</td>
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<td></td>
<td>BC-AB18</td>
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<td>II</td>
<td>ND</td>
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<td>Fire Brick Glazing</td>
<td>BC-AB19</td>
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<tr>
<td></td>
<td>BC-AB20</td>
<td></td>
<td></td>
<td>II</td>
<td>ND</td>
</tr>
</tbody>
</table>

1 Asbestos Containing Material Classification: Friable (F), Category I (I), Category II (II).

HA – Homogeneous Area; ND – None Detected
# TABLE 1
Summary of Bulk Asbestos Sample Laboratory Results
The Butler Company
325 South Broadway Street
Butler, DeKalb County, Indiana
IBP Site No. 4170705

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

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

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

Negative = Instrument displayed "negative" for the detection of lead
<table>
<thead>
<tr>
<th>Building/Area</th>
<th>Chemical Name</th>
<th>No. of Containers</th>
<th>Container Volume</th>
<th>Container Type</th>
<th>Volume of Material</th>
<th>Liquid/Solid</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside - east side of site</td>
<td>no labels</td>
<td>2</td>
<td>200-gallon tote</td>
<td>solid</td>
<td>unknown</td>
<td></td>
<td>200-gallon totes with residue/solid material in bottom</td>
</tr>
<tr>
<td>Outside various locations</td>
<td>no labels and Ferric Chloride</td>
<td>5</td>
<td>55-gal drum</td>
<td>NA</td>
<td>unknown</td>
<td></td>
<td>steel drums used for burn barrels and plastic drums used for trash cans, one (1) plastic drum labeled Ferric Chloride</td>
</tr>
<tr>
<td>Inside North Building</td>
<td>PCBs</td>
<td>4</td>
<td>ounces light ballast</td>
<td>unknown</td>
<td>NA</td>
<td></td>
<td>there are four (4) old transformers in fluorescent light ballasts with possible PCBs</td>
</tr>
<tr>
<td>Inside North Building</td>
<td>mercury vapor</td>
<td>8</td>
<td>unknown fluorescent bulbs</td>
<td>unknown</td>
<td>NA</td>
<td></td>
<td>fluorescent light bulbs, four (4) 4-foot and four (4) 8-foot</td>
</tr>
<tr>
<td>Inside North Building</td>
<td>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</td>
<td>60+</td>
<td>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</td>
<td>both</td>
<td>varies from empty containers, solidified contents, less than 10-gallons total</td>
<td>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 solidified. Most small containers are located on plastic shelving in North Building. See photograph log in Appendix F.</td>
<td></td>
</tr>
</tbody>
</table>
# 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

<table>
<thead>
<tr>
<th>Well</th>
<th>Groundwater Observations</th>
<th>TOC Elevation&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Depth to Groundwater</th>
<th>Groundwater Elevation&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP10</td>
<td>brn, mod turb, no odor, no sheen</td>
<td>868.22</td>
<td>22.76</td>
<td>845.46</td>
</tr>
<tr>
<td>BC-GP11</td>
<td>brn, v sl turb, no odor, no sheen</td>
<td>867.16</td>
<td>21.81</td>
<td>845.35</td>
</tr>
<tr>
<td>BC-GP12</td>
<td>lt brn, v sl turb, no odor, no sheen</td>
<td>866.67</td>
<td>21.68</td>
<td>844.99</td>
</tr>
<tr>
<td>BC-GP13</td>
<td>cl, v sl turb, no odor, no sheen</td>
<td>866.66</td>
<td>4.88</td>
<td>861.78</td>
</tr>
<tr>
<td>BC-GP14</td>
<td>lt brn, sl turb, no odor, no sheen</td>
<td>866.36</td>
<td>21.52</td>
<td>844.84</td>
</tr>
<tr>
<td>BC-GP15</td>
<td>brn, sl turb, no odor, no sheen</td>
<td>865.78</td>
<td>20.94</td>
<td>844.84</td>
</tr>
</tbody>
</table>

Notes:

<sup>1</sup>Elevation in feet based on survey data prepared by Maxwell Surveying & Engineering, May 24, 2019.


Groundwater Observations were made at the time the well was purged.
### Table 5
Summary of Soil Metals Analytical Results (mg/kg)

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Depth in Feet</th>
<th>Sample Date</th>
<th>Arsenic</th>
<th>Barium</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Hexavalent Chromium</th>
<th>Copper</th>
<th>Lead</th>
<th>Mercury</th>
<th>Selenium</th>
<th>Zinc</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP1-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>14.0</td>
<td>80.2</td>
<td>&lt;0.54</td>
<td>19.1</td>
<td>NA</td>
<td>55.6</td>
<td>61.6</td>
<td>&lt;0.24</td>
<td>&lt;1.1</td>
<td>101</td>
</tr>
<tr>
<td>BC-GP1-B1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>2.6</td>
<td>127</td>
<td>&lt;0.54</td>
<td>24.1</td>
<td>NA</td>
<td>15.2</td>
<td>11.3</td>
<td>&lt;0.24</td>
<td>&lt;1.1</td>
<td>58.8</td>
</tr>
<tr>
<td>BC-GP2-B1</td>
<td>0.5-1.5</td>
<td>05/21/19</td>
<td>8.6</td>
<td>81.1</td>
<td>4.3</td>
<td>13.3</td>
<td>NA</td>
<td>127</td>
<td>97.7</td>
<td>0.58</td>
<td>&lt;1.0</td>
<td>290</td>
</tr>
<tr>
<td>BC-GP2-B1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>9.3</td>
<td>87.5</td>
<td>&lt;0.60</td>
<td>22.8</td>
<td>NA</td>
<td>21.7</td>
<td>9.4</td>
<td>&lt;0.24</td>
<td>&lt;1.2</td>
<td>57.7</td>
</tr>
<tr>
<td>BC-GP3-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>6.7</td>
<td>85.6</td>
<td>&lt;0.56</td>
<td>15.3</td>
<td>NA</td>
<td>190.0</td>
<td>3160</td>
<td>&lt;1.1</td>
<td>446.0</td>
<td>116</td>
</tr>
<tr>
<td>BC-GP3-B1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>5.5</td>
<td>136</td>
<td>&lt;0.59</td>
<td>27.3</td>
<td>NA</td>
<td>17.0</td>
<td>11.5</td>
<td>&lt;0.34</td>
<td>&lt;1.2</td>
<td>72.5</td>
</tr>
<tr>
<td>BC-GP4-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>12.0</td>
<td>269</td>
<td>1.9</td>
<td>16.6</td>
<td>NA</td>
<td>88.1</td>
<td>395</td>
<td>&lt;0.24</td>
<td>1.4</td>
<td>837</td>
</tr>
<tr>
<td>BC-SB-FD2</td>
<td>11.5</td>
<td>05/21/19</td>
<td>11.5</td>
<td>416</td>
<td>1.5</td>
<td>15.2</td>
<td>NA</td>
<td>59.2</td>
<td>691</td>
<td>&lt;0.26</td>
<td>1.4</td>
<td>684</td>
</tr>
<tr>
<td>BC-GP4-B1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>3.0</td>
<td>76.4</td>
<td>&lt;0.57</td>
<td>22.0</td>
<td>NA</td>
<td>15.4</td>
<td>11.3</td>
<td>&lt;0.26</td>
<td>&lt;1.1</td>
<td>71.6</td>
</tr>
<tr>
<td>BC-GP5-SS1</td>
<td>2-3</td>
<td>05/21/19</td>
<td>10.4</td>
<td>57.7</td>
<td>&lt;0.58</td>
<td>10.9</td>
<td>NA</td>
<td>62.5</td>
<td>63.1</td>
<td>&lt;0.24</td>
<td>&lt;1.2</td>
<td>73.1</td>
</tr>
<tr>
<td>BC-GP5-B1</td>
<td>3.5-4</td>
<td>05/21/19</td>
<td>5.9</td>
<td>81.8</td>
<td>1.2</td>
<td>12.6</td>
<td>NA</td>
<td>29.1</td>
<td>13.6</td>
<td>&lt;0.23</td>
<td>&lt;1.1</td>
<td>57.8</td>
</tr>
<tr>
<td>BC-GP6-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>13.2</td>
<td>55.8</td>
<td>0.77</td>
<td>19.7</td>
<td>NA</td>
<td>90.1</td>
<td>62.5</td>
<td>&lt;0.22</td>
<td>&lt;1.0</td>
<td>241</td>
</tr>
<tr>
<td>BC-GP6-B1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>5.5</td>
<td>250</td>
<td>2.8</td>
<td>32.7</td>
<td>&lt;0.423</td>
<td>128</td>
<td>15.6</td>
<td>&lt;0.32</td>
<td>2.3</td>
<td>77.6</td>
</tr>
<tr>
<td>BC-GP7-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>44.0</td>
<td>694</td>
<td>1.2</td>
<td>24.2</td>
<td>NA</td>
<td>222</td>
<td>159</td>
<td>&lt;0.26</td>
<td>&lt;1.3</td>
<td>273</td>
</tr>
<tr>
<td>BC-GP7-B1</td>
<td>2-3</td>
<td>05/21/19</td>
<td>28.2</td>
<td>116</td>
<td>1.2</td>
<td>17.3</td>
<td>NA</td>
<td>52.9</td>
<td>198</td>
<td>&lt;0.25</td>
<td>1.3</td>
<td>203</td>
</tr>
<tr>
<td>BC-GP8-SS1</td>
<td>3.3-4</td>
<td>05/21/19</td>
<td>33.9</td>
<td>46.2</td>
<td>&lt;0.54</td>
<td>38.4</td>
<td>&lt;0.263</td>
<td>39.7</td>
<td>25.4</td>
<td>&lt;0.22</td>
<td>&lt;1.1</td>
<td>91.5</td>
</tr>
<tr>
<td>BC-GP8-B1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>2.8</td>
<td>116</td>
<td>&lt;0.55</td>
<td>25.6</td>
<td>NA</td>
<td>15.8</td>
<td>10.7</td>
<td>&lt;0.26</td>
<td>&lt;1.1</td>
<td>66.3</td>
</tr>
<tr>
<td>BC-SB-FD3</td>
<td>27.7</td>
<td>05/21/19</td>
<td>35.9</td>
<td>150</td>
<td>2.4</td>
<td>25.0</td>
<td>&lt;0.250</td>
<td>32.3</td>
<td>27.0</td>
<td>&lt;0.23</td>
<td>&lt;1.0</td>
<td>63.0</td>
</tr>
<tr>
<td>BC-GP9-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>25.5</td>
<td>169</td>
<td>2.4</td>
<td>44.0</td>
<td>0.000</td>
<td>688</td>
<td>448</td>
<td>&lt;0.26</td>
<td>&lt;1.1</td>
<td>745</td>
</tr>
<tr>
<td>BC-GP9-B1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>13.8</td>
<td>85.2</td>
<td>&lt;0.58</td>
<td>23.5</td>
<td>NA</td>
<td>25.9</td>
<td>12.6</td>
<td>&lt;0.23</td>
<td>&lt;1.2</td>
<td>77.6</td>
</tr>
<tr>
<td>BC-GP10-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>11.6</td>
<td>228</td>
<td>0.60</td>
<td>32.2</td>
<td>NA</td>
<td>212</td>
<td>158</td>
<td>0.54</td>
<td>&lt;1.2</td>
<td>159</td>
</tr>
<tr>
<td>BC-GP11-SS1</td>
<td>0.5-1.5</td>
<td>05/21/19</td>
<td>15.0</td>
<td>323</td>
<td>3.3</td>
<td>16.7</td>
<td>NA</td>
<td>385</td>
<td>282</td>
<td>&lt;0.25</td>
<td>1.8</td>
<td>1230</td>
</tr>
<tr>
<td>BC-GP12-SS1</td>
<td>1-2</td>
<td>05/20/19</td>
<td>3.1</td>
<td>131</td>
<td>&lt;0.54</td>
<td>21.2</td>
<td>NA</td>
<td>13.7</td>
<td>84.7</td>
<td>&lt;0.22</td>
<td>&lt;1.1</td>
<td>102</td>
</tr>
<tr>
<td>BC-GP13-SS1</td>
<td>1-2</td>
<td>05/20/19</td>
<td>13.5</td>
<td>93.7</td>
<td>1.2</td>
<td>13.1</td>
<td>NA</td>
<td>124</td>
<td>137</td>
<td>0.32</td>
<td>&lt;1.1</td>
<td>355</td>
</tr>
<tr>
<td>BC-SB-FD1</td>
<td>17.1</td>
<td>05/20/19</td>
<td>17.1</td>
<td>197</td>
<td>1.1</td>
<td>19.1</td>
<td>NA</td>
<td>68.3</td>
<td>150</td>
<td>&lt;0.24</td>
<td>&lt;1.1</td>
<td>339</td>
</tr>
<tr>
<td>BC-GP14-SS1</td>
<td>0.5-1.5</td>
<td>05/20/19</td>
<td>49.2</td>
<td>192</td>
<td>0.80</td>
<td>19.2</td>
<td>NA</td>
<td>98.1</td>
<td>156</td>
<td>&lt;0.22</td>
<td>1.7</td>
<td>211</td>
</tr>
<tr>
<td>BC-GP15-SS1</td>
<td>0.5-1.5</td>
<td>05/21/19</td>
<td>12.8</td>
<td>292</td>
<td>&lt;0.46</td>
<td>14.7</td>
<td>NA</td>
<td>27.1</td>
<td>20.8</td>
<td>&lt;0.22</td>
<td>&lt;0.93</td>
<td>116</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>Sample Depth in Feet</th>
<th>Anthracene</th>
<th>Benzo(a)anthracene</th>
<th>Benzo(a)pyrene</th>
<th>Benzo(b)fluoranthene</th>
<th>Benzo(g,h,i)perylene</th>
<th>Benzo(k)fluoranthene</th>
<th>Chrysene</th>
<th>Fluoranthene</th>
<th>Indeno(1,2,3-cd)pyrene</th>
<th>1-Methylnaphthalene</th>
<th>2-Methylnaphthalene</th>
<th>Naphthalene</th>
<th>Phanthrene</th>
<th>Pyrene</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP7-SB1</td>
<td>05/21/19</td>
<td>3-4</td>
<td>0.0081</td>
<td>0.015</td>
<td>0.011</td>
<td>0.017</td>
<td>0.017</td>
<td>0.017</td>
<td>0.024</td>
<td>0.012</td>
<td>0.079</td>
<td>0.11</td>
<td>0.10</td>
<td>0.043</td>
<td>0.027</td>
<td></td>
</tr>
<tr>
<td>BC-GP8-SB1</td>
<td>05/21/19</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td>&lt;0.0063</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BC-SB-FD3</td>
<td>05/21/19</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>&lt;0.0056</td>
<td>0.0071</td>
<td>0.019</td>
<td>0.0085</td>
<td>&lt;0.0056</td>
<td></td>
</tr>
</tbody>
</table>

**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).

**RDCSLS**  
- 25,000  15  15  15  NE  150  1,500  3,400  15  250  340  53  NE  2,500

**Res MTGSL**  
- 100,000  210  21  210  NE  2,100  21,000  30,000  210  390  3,000  170  NE  23,000

**EX DCGL**  
- 100,000  1200  500  1200  NE  100,000  100,000  60,000  12,000  390  6,800  3,100  NE  51,000
**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

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Depth in Feet</th>
<th>Sample Date</th>
<th>n-Hexane</th>
<th>PCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP7-SB1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>0.049</td>
<td>&lt;0.13</td>
</tr>
<tr>
<td>BC-GP8-SB1</td>
<td>3-4</td>
<td>05/21/19</td>
<td>0.071</td>
<td>&lt;0.13</td>
</tr>
<tr>
<td>BC-SB-FD3</td>
<td>3-4</td>
<td>05/21/19</td>
<td>0.30</td>
<td>&lt;0.11</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>XRF (ppm)</th>
<th>Lead (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP3-N5 (1-2)</td>
<td>06/18/19</td>
<td>151</td>
<td>51.7</td>
</tr>
<tr>
<td>BC-SB-FD4</td>
<td>06/18/19</td>
<td>151</td>
<td>228</td>
</tr>
<tr>
<td>BC-GP3-E5 (1-2)</td>
<td>06/18/19</td>
<td>101</td>
<td>NA</td>
</tr>
<tr>
<td>BC-GP3-E10 (1-2)</td>
<td>06/18/19</td>
<td>2,240</td>
<td>75.6</td>
</tr>
<tr>
<td>BC-GP3-W5 (1-2)</td>
<td>06/18/19</td>
<td>345</td>
<td>307</td>
</tr>
<tr>
<td>BC-GP3-W10 (1-2)</td>
<td>06/18/19</td>
<td>12</td>
<td>NA</td>
</tr>
<tr>
<td>BC-GP3-S5 (1-2)</td>
<td>06/18/19</td>
<td>380</td>
<td>NA</td>
</tr>
<tr>
<td>BC-GP3-S10 (1-2)</td>
<td>06/18/19</td>
<td>999</td>
<td>660</td>
</tr>
<tr>
<td>BC-GP16-N5 (1-2)</td>
<td>06/18/19</td>
<td>7,771</td>
<td>49.2</td>
</tr>
<tr>
<td>BC-GP16-N10 (1-2)</td>
<td>06/18/19</td>
<td>87</td>
<td>NA</td>
</tr>
<tr>
<td>BC-GP16-E5 (1-2)</td>
<td>06/18/19</td>
<td>448</td>
<td>NA</td>
</tr>
<tr>
<td>BC-GP16-E10 (1-2)</td>
<td>06/18/19</td>
<td>3,087</td>
<td><strong>4,470</strong></td>
</tr>
<tr>
<td>BC-GP16-W5 (1-2)</td>
<td>06/18/19</td>
<td>672</td>
<td><strong>964</strong></td>
</tr>
<tr>
<td>BC-GP16-W10 (1-2)</td>
<td>06/18/19</td>
<td>94</td>
<td>NA</td>
</tr>
<tr>
<td>BC-GP16-S5 (1-2)</td>
<td>06/18/19</td>
<td>141</td>
<td>NA</td>
</tr>
<tr>
<td>BC-GP16-S10 (1-2)</td>
<td>06/18/19</td>
<td>425</td>
<td>135</td>
</tr>
</tbody>
</table>

| 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 (ExDSCSl).
<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Depth in Feet</th>
<th>Sample Date</th>
<th>Perfluorooctanoic Acid (PFOA)</th>
<th>Perfluorooctanesulfonic Acid (PFOS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP10-SS1</td>
<td>1-2</td>
<td>05/21/19</td>
<td>0.61</td>
<td>&lt;0.24</td>
</tr>
<tr>
<td>BC-GP10-SS1(DUP)</td>
<td>1-2</td>
<td>05/21/19</td>
<td>0.58</td>
<td>&lt;0.22</td>
</tr>
<tr>
<td>BC-GP11-SS1</td>
<td>0.5-1.5</td>
<td>05/21/19</td>
<td>&lt;0.23</td>
<td>0.54</td>
</tr>
<tr>
<td>BC-GP12-SS1</td>
<td>1-2</td>
<td>05/20/19</td>
<td>&lt;0.23</td>
<td>&lt;0.23</td>
</tr>
<tr>
<td>BC-GP13-SS1</td>
<td>1-2</td>
<td>05/20/19</td>
<td>&lt;0.24</td>
<td>0.46</td>
</tr>
<tr>
<td>BC-SB-FD1</td>
<td></td>
<td></td>
<td>&lt;0.23</td>
<td>&lt;0.22</td>
</tr>
<tr>
<td>BC-GP14-SS1</td>
<td>0.5-1.5</td>
<td>05/20/19</td>
<td>&lt;0.24</td>
<td>&lt;0.23</td>
</tr>
<tr>
<td>BC-FRB1</td>
<td></td>
<td>05/20/19</td>
<td>&lt;1.8</td>
<td>&lt;1.8</td>
</tr>
<tr>
<td>BC-FRB2</td>
<td></td>
<td>05/21/19</td>
<td>&lt;1.9</td>
<td>&lt;1.8</td>
</tr>
</tbody>
</table>

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

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

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>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>PAH</th>
<th>VOC</th>
<th>PCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP10-GW1</td>
<td>05/22/19</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>BC-GP11-GW1</td>
<td>05/22/19</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>BC-GPGW-FD1</td>
<td>05/22/19</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>BC-GP12-GW1</td>
<td>05/22/19</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>BC-GP13-GW1</td>
<td>05/22/19</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>BC-GP14-GW1</td>
<td>05/22/19</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>BC-GP15-GW1</td>
<td>05/22/19</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>Perfluorobutanoic Acid (PFBA)</th>
<th>Perfluoropentanoic Acid (PFPeA)</th>
<th>Perfluorobutanesulfonic Acid (PFBS)</th>
<th>Perfluorohexanoic Acid (PFHxA)</th>
<th>Perfluorohexanesulfonic Acid (PFHxS)</th>
<th>Perfluorooctanoic Acid (PFOA)</th>
<th>Perfluorooctanesulfonic Acid (PFOS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-GP10-GW1</td>
<td>05/22/19</td>
<td>&lt;2.1</td>
<td>&lt;2.1</td>
<td>&lt;1.8</td>
<td>&lt;2.1</td>
<td>&lt;1.9</td>
<td>&lt;2.1</td>
<td>&lt;2.0</td>
</tr>
<tr>
<td>BC-GP11-GW1</td>
<td>05/22/19</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
<td>&lt;1.8</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
</tr>
<tr>
<td>BC-GPGW-FD1</td>
<td>05/22/19</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
<td>&lt;1.8</td>
<td>&lt;2.0</td>
<td>&lt;1.9</td>
<td>&lt;2.0</td>
<td>&lt;1.9</td>
</tr>
<tr>
<td>BC-GP12-GW1</td>
<td>05/22/19</td>
<td>7.3</td>
<td>&lt;1.9</td>
<td>&lt;1.9</td>
<td>&lt;1.9</td>
<td>&lt;1.8</td>
<td>&lt;1.9</td>
<td>23</td>
</tr>
<tr>
<td>BC-GP13-GW1</td>
<td>05/22/19</td>
<td>13</td>
<td>6.0</td>
<td>3.2</td>
<td>6.8</td>
<td>3.0</td>
<td>6.7</td>
<td>5.3</td>
</tr>
<tr>
<td>BC-GP14-GW1</td>
<td>05/22/19</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
<td>&lt;1.8</td>
<td>&lt;2.0</td>
<td>&lt;1.9</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
</tr>
<tr>
<td>BC-FRB3</td>
<td>05/22/19</td>
<td>&lt;2.0</td>
<td>&lt;2.0</td>
<td>&lt;1.7</td>
<td>&lt;2.0</td>
<td>&lt;1.9</td>
<td>&lt;2.0</td>
<td>&lt;1.9</td>
</tr>
</tbody>
</table>

**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/m³)

The Butler Company

325 South Broadway Street
Butler, DeKalb County, Indiana

IBP Site No. 4170705

<table>
<thead>
<tr>
<th>Soil Gas Vapors</th>
<th>BC-SG2</th>
<th>BC-SG-FD1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>27.8</td>
<td>24.7</td>
</tr>
<tr>
<td>Benzene</td>
<td>14.4</td>
<td>14.6</td>
</tr>
<tr>
<td>Carbon disulfide</td>
<td>19.3</td>
<td>19.3</td>
</tr>
<tr>
<td>Chloroform</td>
<td>15.2</td>
<td>15.2</td>
</tr>
<tr>
<td>1,3-Dichlorobenzene</td>
<td>9.9</td>
<td>9.9</td>
</tr>
<tr>
<td>Dichlorodifluoromethane</td>
<td>9.3</td>
<td>9.3</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>10.3</td>
<td>10.3</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>14.8</td>
<td>14.8</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>12.6</td>
<td>12.6</td>
</tr>
<tr>
<td>Methylene Chloride</td>
<td>629</td>
<td>629</td>
</tr>
<tr>
<td>4-Methyl-2-pentanone (MIBK)</td>
<td>1,260</td>
<td>1,260</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>69.1</td>
<td>69.1</td>
</tr>
<tr>
<td>Propylene</td>
<td>23.0</td>
<td>23.0</td>
</tr>
<tr>
<td>Styrene</td>
<td>41.3</td>
<td>41.3</td>
</tr>
<tr>
<td>Tetrachloroethane</td>
<td>9.3</td>
<td>9.3</td>
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<tr>
<td>Toluene</td>
<td>41.3</td>
<td>41.3</td>
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<tr>
<td>1,1,2-Trichloroethane</td>
<td>88,000</td>
<td>88,000</td>
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<tr>
<td>Trichlorofluoromethane</td>
<td>4,400</td>
<td>4,400</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>220,000</td>
<td>220,000</td>
</tr>
<tr>
<td>m&amp;p-Xylene</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>19.2</td>
<td>19.2</td>
</tr>
</tbody>
</table>

**Notes:**
- All concentrations are reported in µg/m³. 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 Site VESL).
- 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

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Initial Summa Vacuum Measurement (inches Hg)</th>
<th>Final Summa Vacuum Measurement (inches Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC-G2</td>
<td>-29</td>
<td>-3</td>
</tr>
<tr>
<td>BC-SG-FD1</td>
<td>-2</td>
<td>-2</td>
</tr>
</tbody>
</table>
FIGURES
Site Location Map
The Butler Company
IBP Site No. 4170705
325 South Broadway Street
Butler, DeKalb County, Indiana

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

SCALE: 1 INCH = 2,000 FT; CONTOUR INTERVAL = 5 FT
LEGEND

- PROPERTY BOUNDARY
- FILL SAMPLING LOCATION
  BORING, BC-GP1 THROUGH
  BC-GP9 (NINE (9) LOCATIONS)
- 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
- SIDEWALK
- FENCE LINE
- SEWER
- POTENTIOMETRIC CONTOUR
- 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.
REMEDIATION WORK PLAN

APPENDIX E. EXPOSURE ASSESSMENT DATA

The Butler Company
325 S Broadway St
Butler, DeKalb County, Indiana 46721
BFD #4170705
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.
IDEM Source Water Proximity

Your point or land parcel is within a Wellhead Protection Area (-84.871, 41.427)

Your point or land parcel is NOT within a Source Water Area (-84.871, 41.427)

July 22, 2020

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),
<table>
<thead>
<tr>
<th>Species Name</th>
<th>Common Name</th>
<th>FED</th>
<th>STATE</th>
<th>GRANK</th>
<th>SRANK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mollusk: Bivalvia (Mussels)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alasmidonta viridis</td>
<td>Slippershell Mussel</td>
<td>SSC</td>
<td>G4G5</td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td>Epioblasma obliquata perobliqua</td>
<td>White catspaw</td>
<td>LE</td>
<td>SE</td>
<td>G1</td>
<td>SX</td>
</tr>
<tr>
<td>Epioblasma rangiana</td>
<td>Northern Riffleshell</td>
<td>LE</td>
<td>SE</td>
<td>G1</td>
<td>S1</td>
</tr>
<tr>
<td>Fusconaia subrotunda</td>
<td>Longsolid</td>
<td>C</td>
<td>SX</td>
<td>G3</td>
<td>SX</td>
</tr>
<tr>
<td>Lampisilis fasciola</td>
<td>Wavyrayed Lampmussel</td>
<td>SSC</td>
<td>G5</td>
<td>S3</td>
<td></td>
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<tr>
<td>Ligumia recta</td>
<td>Black Sandshell</td>
<td>SSC</td>
<td>G4G5</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td>Obovaria subrotunda</td>
<td>Round Hickorynut</td>
<td>C</td>
<td>SE</td>
<td>G4</td>
<td>S1</td>
</tr>
<tr>
<td>Pleurobema clava</td>
<td>Clubshell</td>
<td>LE</td>
<td>SE</td>
<td>G1G2</td>
<td>S1</td>
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<tr>
<td>Psychobranchus fasciolaris</td>
<td>Kidneyshell</td>
<td>SSC</td>
<td>G4G5</td>
<td>S2</td>
<td></td>
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<tr>
<td>Simpsoniaias ambigua</td>
<td>Salamander Mussel</td>
<td>C</td>
<td>SSC</td>
<td>G3</td>
<td>S2</td>
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<tr>
<td>Theliderma cylindrica</td>
<td>Rabbitsfoot</td>
<td>LT</td>
<td>SE</td>
<td>G3G4</td>
<td>S1</td>
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<tr>
<td>Toxolasma lividus</td>
<td>Purple Lilliput</td>
<td>C</td>
<td>SSC</td>
<td>G3Q</td>
<td>S2</td>
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<tr>
<td>Villosa fabalis</td>
<td>Rayed Bean</td>
<td>LE</td>
<td>SE</td>
<td>G2</td>
<td>S1</td>
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<tr>
<td><strong>Insect: Lepidoptera (Butterflies &amp; Moths)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catocala marmorata</td>
<td>Marbled Underwing Moth</td>
<td>SE</td>
<td>G3G4</td>
<td>S1</td>
<td></td>
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<tr>
<td><strong>Fish</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moxostoma valenciennesi</td>
<td>Greater Redhorse</td>
<td>SE</td>
<td>G4</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td><strong>Amphibian</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambystoma laterale</td>
<td>Blue-spotted Salamander</td>
<td>SSC</td>
<td>G5</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td><strong>Reptile</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emydioidea blandingii</td>
<td>Blanding's Turtle</td>
<td>C</td>
<td>SE</td>
<td>G4</td>
<td>S2</td>
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<tr>
<td>Thamnophis butleri</td>
<td>Butler's Garter Snake</td>
<td>SE</td>
<td>G4</td>
<td>S1</td>
<td></td>
</tr>
<tr>
<td><strong>Bird</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buteo platypterus</td>
<td>Broad-winged Hawk</td>
<td>SSC</td>
<td>G5</td>
<td>S3B</td>
<td></td>
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<tr>
<td>Circus hudsonius</td>
<td>Northern Harrier</td>
<td>SE</td>
<td>G5</td>
<td>S2</td>
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<tr>
<td>Cistotheorus platensis</td>
<td>Sedge Wren</td>
<td>SE</td>
<td>G5</td>
<td>S3B</td>
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<tr>
<td>Haliaeetus leucocephalus</td>
<td>Bald Eagle</td>
<td>SSC</td>
<td>G5</td>
<td>S2</td>
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<tr>
<td>Pandion haliaetus</td>
<td>Osprey</td>
<td>SSC</td>
<td>G5</td>
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<td>Rallus limicola</td>
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<td>G5</td>
<td>S3B</td>
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<tr>
<td><strong>Mammal</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lasiusurus borealis</td>
<td>Eastern Red Bat</td>
<td>SSC</td>
<td>G3G4</td>
<td>S4</td>
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<tr>
<td>Taxidea taxus</td>
<td>American Badger</td>
<td>SSC</td>
<td>G5</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td><strong>Vascular Plant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andromeda glaucophylla</td>
<td>bog rosemary</td>
<td>ST</td>
<td>G5T5</td>
<td>S2</td>
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<tr>
<td>Botrychium simplex</td>
<td>least grape-fern</td>
<td>SE</td>
<td>G5</td>
<td>S1</td>
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<tr>
<td>Carex echinata</td>
<td>little prickly sedge</td>
<td>SE</td>
<td>G5</td>
<td>S1</td>
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<tr>
<td>Dactylorhiza viridis</td>
<td>long-bract green orchid</td>
<td>SE</td>
<td>G5</td>
<td>S1</td>
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<tr>
<td>Glyceria grandis</td>
<td>American manna-grass</td>
<td>SE</td>
<td>G5</td>
<td>S1</td>
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<tr>
<td>Species Name</td>
<td>Common Name</td>
<td>FED</td>
<td>STATE</td>
<td>GRANK</td>
<td>SRANK</td>
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<tr>
<td>--------------------------------------</td>
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<td>-----</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
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<tr>
<td>Lathyrus ochroleucus</td>
<td>pale vetchling peavine</td>
<td>SE</td>
<td>G5</td>
<td>S1</td>
<td></td>
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<tr>
<td>Luzula acuminata var. acuminata</td>
<td>Hairy Woodrush</td>
<td>SE</td>
<td>G5T5</td>
<td>S1</td>
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<tr>
<td>Milium effusum</td>
<td>tall millet-grass</td>
<td>ST</td>
<td>G5</td>
<td>S1</td>
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<tr>
<td>Panax trifolius</td>
<td>dwarf ginseng</td>
<td>WL</td>
<td>G5</td>
<td>S3</td>
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<tr>
<td>Platanthera orbiculata</td>
<td>large roundleaf orchid</td>
<td>SX</td>
<td>G5</td>
<td>SX</td>
<td></td>
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<tr>
<td>Poa alsodes</td>
<td>grove meadow grass</td>
<td>ST</td>
<td>G4G5</td>
<td>S3</td>
<td></td>
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<tr>
<td>Poa paludigena</td>
<td>bog bluegrass</td>
<td>ST</td>
<td>G3G4</td>
<td>S3</td>
<td></td>
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<tr>
<td>Potamogeton friesii</td>
<td>Fries' pondweed</td>
<td>SE</td>
<td>G5</td>
<td>S1</td>
<td></td>
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<tr>
<td>Potamogeton richardsonii</td>
<td>redheaded grass</td>
<td>ST</td>
<td>G5</td>
<td>S3</td>
<td></td>
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<tr>
<td>Sida hermaphrodita</td>
<td>Virginia mallow</td>
<td>SE</td>
<td>G3</td>
<td>S1</td>
<td></td>
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<tr>
<td>Utricularia cornuta</td>
<td>horned bladderwort</td>
<td>SE</td>
<td>G5</td>
<td>S1</td>
<td></td>
</tr>
</tbody>
</table>

**High Quality Natural Community**

- **Forest - floodplain mesic**
  - Mesic Floodplain Forest
    - FED: SE  G3?
    - STATE: G3
    - GRANK: S1

- **Forest - upland dry-mesic Northern Lakes**
  - Northern Lakes Dry-mesic Upland Forest
    - FED: SG  GNR
    - STATE: GNR
    - GRANK: S1

- **Forest - upland mesic Central Till Plain**
  - Central Till Plain Mesic Upland Forest
    - FED: SG  GNR
    - STATE: GNR
    - GRANK: S3

- **Forest - upland mesic Northern Lakes**
  - Northern Lakes Mesic Upland Forest
    - FED: SG  GNR
    - STATE: GNR
    - GRANK: S1

- **Wetland - swamp shrub**
  - Shrub Swamp
    - FED: SG  GU
    - STATE: GU
    - GRANK: S2
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

<table>
<thead>
<tr>
<th>Land Type</th>
<th>Soil ID</th>
<th>Act Front.</th>
<th>Eff. Depth</th>
<th>Size</th>
<th>Rate</th>
<th>Adj. Rate</th>
<th>Ext. Value</th>
<th>Infl. %</th>
<th>Value</th>
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<tbody>
<tr>
<td>Primary Commercial/Indust Land</td>
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<td>0</td>
<td>2.5500</td>
<td>$21,000.00</td>
<td>$21,000.00</td>
<td>$53,550.00</td>
<td>($75.00)</td>
<td>$13,390.00</td>
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<tr>
<td>Homesite</td>
<td>0</td>
<td>0</td>
<td>1.00</td>
<td>$9,964.00</td>
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</table>

Commercial Buildings

<table>
<thead>
<tr>
<th>Description</th>
<th>C/I Building C 05</th>
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</thead>
<tbody>
<tr>
<td>Use Area</td>
<td>2,652</td>
</tr>
<tr>
<td>Not in Use</td>
<td>0</td>
</tr>
<tr>
<td>Use</td>
<td>Light Utility Storage</td>
</tr>
<tr>
<td>Floor</td>
<td>1</td>
</tr>
</tbody>
</table>

Plumbing RES/CI

| Total | 0 | 0 | 0 | 0 |

Sprinkler

Heating
A/C

Wall Type
SB B 1 U
1

Total

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
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) § 13-25-4-3(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 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 from 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**

<table>
<thead>
<tr>
<th>Contaminant Detected</th>
<th>Sample Location (Depth in feet bgs) &amp; Results (parts per million (ppm))</th>
<th>RDCSL</th>
<th>IDCSL</th>
<th>EX DCSL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BA</td>
<td>BB</td>
<td>BC</td>
<td>BD</td>
</tr>
<tr>
<td>0-2</td>
<td>2-4</td>
<td>2-4</td>
<td>0-2</td>
<td>6-8</td>
</tr>
<tr>
<td>Lead</td>
<td>299</td>
<td>35</td>
<td><strong>7.160</strong></td>
<td>8.6</td>
</tr>
<tr>
<td>Chromium*</td>
<td>7.8</td>
<td>8.9</td>
<td>56</td>
<td>63</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Contaminant Detected</th>
<th>Sample Location &amp; Results (parts per billion (ppb))</th>
<th>Res TAP GWSL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BC</td>
<td>BH</td>
</tr>
<tr>
<td>Total Cadmium</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Dissolved Cadmium</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Total Copper</td>
<td>2,100</td>
<td>2,300</td>
</tr>
<tr>
<td>Dissolved Copper</td>
<td>&lt;20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Total Lead</td>
<td>57,000</td>
<td>64,000</td>
</tr>
<tr>
<td>Dissolved Lead</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Total Selenium</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Dissolved Selenium</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Total Zinc</td>
<td>17,000</td>
<td>19,000</td>
</tr>
<tr>
<td>Dissolved Zinc</td>
<td>2,200</td>
<td>2,200</td>
</tr>
</tbody>
</table>

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 §§13-23-13 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); § 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 DCSDL 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 omissions 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@ia.in.gov.

Sincerely,

[Signature]

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
TAX DEED

WHEREAS FSPI 401K EMPL PROFIT sharing PLAN 401 (k) did the 23rd day of August, 2012 produce to the undersigned, JOHN W. FEITERS 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 Feiters 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 Strocho, 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) is 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 9th day of November, 2013 between the State of Indiana by JOHN W. FEITERS 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. FEITERS, 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.

Attest: HOLLY ALBRIGHT
Treasurer: Dekalb County

State of Indiana

County of Dekalb

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

In witness whereof, I have hereunto set my hand and seal this 9th day of November, 2013.

MARTHA GRIMM, C.C.C.S.

This instrument prepared by JOHN W. FEITERS, Auditor

I affirm, under the penalties for perjury, that I have taken reasonable care to read all Social Security Numbers on this document, unless required by law. JOHN W. FEITERS, Auditor

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

DULY ENTERED
FOR TAXATION

HIV 09 7 2012

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
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>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
<th>Screening Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance A</td>
<td>[Value]</td>
<td>[Value]</td>
</tr>
<tr>
<td>Substance B</td>
<td>[Value]</td>
<td>[Value]</td>
</tr>
<tr>
<td>Substance C</td>
<td>[Value]</td>
<td>[Value]</td>
</tr>
</tbody>
</table>

(Additional rows as needed)

*Please note: Concentrations exceeding the applicable IDEM RCG Screening Levels indicated in the table.*
<table>
<thead>
<tr>
<th>Contaminant Detected</th>
<th>Sample Location (Depth bgs) &amp; Results (parts per million (ppm))</th>
<th>RDCSL</th>
<th>IDCSDL</th>
<th>EX DCSL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BA</td>
<td>BB</td>
<td>BC</td>
<td>BD</td>
</tr>
<tr>
<td>Lead</td>
<td>299</td>
<td>35</td>
<td><strong>7,160</strong></td>
<td>8.6</td>
</tr>
<tr>
<td>Chromium*</td>
<td><strong>7.8</strong></td>
<td><strong>8.9</strong></td>
<td>56</td>
<td>63</td>
</tr>
</tbody>
</table>

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.
EXHIBIT F

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