

## EXCAVATION SUMMARY REPORT

PROJECT: EAST LIBERTY – SITE PREPARATION CONTRACT NUMBER 4  
“LIBERTY GREEN / RIVER ROOTS PARK” (Project)

OWNER: URBAN REDEVELOPMENT AUTHORITY OF PITTSBURGH (URA)

PRIME CONTRATOR: TEDESCO CONSTRUCTION COMPANY (Contractor)

CONSTRUCTION MANAGER: MACKIN ENGINEERING COMPANY (CM)

AUTHOR: DOUGLAS W. AIKEN, P.E.  
*Douglas W. Aiken* - March 24, 2021

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BRIEFING: The Excavation Summary Report (Report) is provided to satisfy the requirements of the Soil Management Plan(SMP), Section *12.0 Recordkeeping and Reporting*. The SMP was authored by GAI Consultants, GAI Project Number E150758 and was incorporated into the Project’s Specifications. The Report is intended to summarize and/or confirm certain activities undertaken by the Contractor to satisfy the requirements of the SMP as part of their construction contract with the URA. Specifically, this Report address excavation activities and disposition of waste excavations on the Act 2 sites listed below.

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### SITE LOCATIONS

1. LIBERTY GREEN  
Also referred to as the CNIG Park Site. First of two sites for new construction activities for above-referenced Project. Site location in the Larimer neighborhood of the City of Pittsburgh, is bound by Princeton Place and Larimer Avenue to the north and south respectively, Kalida Drive and Station Street to the east and west respectively. Refer to Project Drawing L-001.
  2. RIVER ROOTS  
Second of two sites for new construction activities for the above-referenced Project. Site location in the Larimer neighborhood of the City of Pittsburgh and is bound by East Liberty to the north; with Kalida Drive/Princeton Place intersection to the south. Refer to Drawing L-001.
  3. 62<sup>ND</sup> STREET SITE  
The third site is part of the Project to accept any waste soil from Liberty Green or River Roots that was determined to be clean soil. Site is bounded by Allegheny Valley Railroad and Butler Street to the north and south respectively; with Suydam St and 62<sup>nd</sup> St to the east and west respectively. Refer to Drawing C-306.
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## CATEGORY A SOIL

From prior site investigations, areas designated as Category A were presumed as clean soil and did not require special handling or treatment. Per Contract plans and specifications, the Contractor excavated material out as per Drawings C303 to C305, and either reused on site or hauled waste Category A soils from Liberty Green and River Roots to the 62<sup>nd</sup> St site. Material was stockpiled as per Drawing C306.

The CM provided full time inspection during these activities and provided documentation that is compiled in this Report. Instances when Category A soil was stockpiled or re-used on site is considered in compliance with the SMP and not compiled as part of this Report.

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Plan Quantities: 14,700 CY

Calculated Actual Quantities: 17,535 CY

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### Documents Included:

- Clean Fill Determination for the Project by GAI Consultants, dated June 20, 2017
- URA correspondence to PA DEP and Form FP-001, Certification of Clean Fill - Soil Category A
- Trucking logs for Category A soils. Dates range from July 1, 2019 to August 3, 2020
- Daily Inspection Reports for days of Cat. A hauled off site can be found in the Appendix



June 20, 2017  
Project E150758.00

Ms. Emily Mitchell  
Planning and Design Specialist  
Urban Redevelopment Authority  
200 Ross Street, 12th Floor  
Pittsburgh, Pennsylvania 15219

**Clean Fill Determination  
Larimer/East Liberty Park  
Allegheny County, Pittsburgh, Pennsylvania**

Dear Ms. Mitchell:

GAI Consultants, Inc. (GAI), is pleased to provide Urban Redevelopment Authority (URA) with a summary report of the clean fill determination work performed for the Larimer/East Liberty Park (Site) located in the East Liberty section of Pittsburgh, Allegheny County, Pennsylvania (PA). GAI understands that the planned development of the Site will require excavation and regrading of existing cover soil and underlying soil to bring the Site to design grade. At this time, it is assumed that less than 15,000 cubic yards (CY) of material will be excavated and removed from the Site.

The excess material to be excavated is planned to be transported to a local PA Land Recycling and Environmental Remediation Standards Act (Act 2) property for use as fill material. The property is known as the 62nd Street Industrial Park (62nd Street Property), located northwest of the intersection of 62nd Street and Butler Street in Pittsburgh, PA. GAI understands that the excavated material can be accepted by the 62nd Street Property for use as fill if it is shown to be of equal or better quality than the existing near surface material at the 62nd Street Property. The clean fill sampling, analytical results, comparison to the Pennsylvania Department of Environmental Protection (PADEP) Management of Fill Policy Clean Fill and Regulated Fill Concentration Limits, comparison to the 62nd Street Property soil quality, and conclusions are summarized in the following paragraphs.

**Clean Fill Sampling**

GAI performed clean fill sampling in an effort to prequalify the soils to be excavated and removed from the Site as "clean fill" per the PADEP Management of Fill Policy (document 258-2182-773) dated August 7, 2010. Soil borings were advanced in proposed excavation areas across the Site, as indicated in the Cut/Fill Summary provided by GAI, in order to generate a representative data set of soil quality.

Prior to initiating intrusive investigation activities, a PA One-Call was placed for the Site to have underground utilities located. The Site was divided into five designated areas (Areas A through D, and Area CI) as shown on Figure 1 – Soil Boring Location Plan. The five areas were selected so as to represent approximately 3,000 CY or less each of soil to be excavated and potentially removed from the Site.

A total of 27 borings were advanced by Eichelbergers, Inc. of Mechanicsburg, PA using a track mounted Geoprobe® unit on May 17, and 18, 2017. Soil boring locations are depicted on Figure 1 relative to Site features and the five designated volume areas. The Geoprobe unit advanced a lined Macro-Core® sampler to collect samples of the unconsolidated soils. Continuous soil sampling was completed for each boring. Each Macro-Core sample was examined by the field geologist immediately after removal from the sampler. Core samples were visually characterized and inspected for the presence of staining, discoloration, free-phase product, or other visible indicators of potential impacts. The Macro-Core sleeves were opened and the soil samples were scanned for the presence of volatile organic vapors with a photoionization detector (PID) calibrated to isobutylene.

The borings generally encountered a sand and silt mixture with varying amounts of rock fragments and clay. PID reading obtained from the samples ranged from 0.0 parts per million (ppm) to 0.5 ppm, and were generally non-detect across the Site. Soil boring logs with soil descriptions and PID readings are presented in Appendix A.

For the borings located in Areas A through D, soil sampling was completed from the ground surface to the final depth of boring. Following boring completion and sample collection, the boreholes were backfilled with excess soil cuttings to the surrounding ground surface elevation.

Per the License Agreement between URA and the Housing Authority of Pittsburgh, dated February 16, 2017, the borings located in Area CI were hand excavated to a depth of approximately two feet bgs through the clean cover soil to expose the underlying witness barrier. The excavated cover soil was segregated and placed on a clean sheet of visqueen plastic. The witness barrier was then cut away in that location and the soil boring advanced. Following boring completion, the excess soil cuttings from below the witness barrier were placed in the borehole to the witness barrier depth. The removed witness barrier section was then replaced, followed by the segregated cover soil to the surrounding ground surface elevation.

For each designated area, twelve soil samples were collected in general accordance with the PADEP Management of Fill Policy. Each soil sample was screened for volatile organic vapors using the PID. A small volume of soil from each of the three samples exhibiting the highest volatile organic vapor readings was collected for laboratory analysis of volatile organic compounds (VOCs). In the event no elevated PID readings were observed, three of the twelve samples were randomly selected for subsequent analysis of VOCs. Once samples were collected for VOC analysis, GAI then generated three composite samples per area from the remaining volume of the twelve soil samples, with each composite sample comprised of four samples each. Composite samples were collected in a manner so as to be representative of shallow, mid-depth, and deep soil horizons in each area.

Samples selected for laboratory analysis of VOCs were collected using dedicated TerraCore® devices to fill laboratory supplied and pre-preserved sample vials. Composite samples were collected in laboratory supplied soil jars for laboratory analysis of priority pollutant metals, polycyclic aromatic hydrocarbons (PAH), and polychlorinated biphenyls (PCBs). Each sample vial/jar was labeled and placed onto ice to chill the samples to at least 4° Celsius. At the completion of the field work, a chain-of-custody form was completed, and the soil samples were delivered to the analytical laboratory. Samples were submitted to ALS Environmental (ALS), a PA certified laboratory, located in Middletown, PA. Table 1 presents a summary of the composite soil sample and VOC sample collection locations for each area.

### **Analytical Results**

Table 2 presents the laboratory analytical data for the 15 soil samples collected during this investigation. The table references both PADEP Clean Fill and Regulated Fill Concentration Limits. Analytical parameters identified at a concentration exceeding the applicable limits are highlighted. The ALS laboratory analytical data report providing all results for the soil samples is provided in Appendix B.

Review of the soil quality data in Table 2 indicates that concentrations of all parameters were below their respective PADEP Clean Fill and Regulated Fill Concentration Limits with the exception of arsenic. Arsenic was detected above its respective PADEP Clean Fill Concentration Limit of 12 mg/kg in three samples (Area D Comp MD – 16.5 mg/kg, CI Area Comp MD – 14.8 mg/kg, and CI Area Comp DP – 12.6 mg/kg). Detected concentrations of all other parameters were below their respective PADEP Clean Fill Concentration Limits.

The PADEP Clean Fill Policy approves using the 95% Upper Confidence Limit (UCL) of the arithmetic mean to determine whether a parameter meets the appropriate concentration limit for clean fill determination. The 95% UCL for arsenic was calculated using the United States Environmental Protection Agency (USEPA) approved ProUCL program. The calculated 95% UCL value of 10.96 mg/kg for arsenic is below its respective Clean Fill Concentration Limit of 12 mg/kg. The 95% UCL determination results are included in Appendix C. As a result, by utilizing the permitted 95% UCL, GAI is of the opinion that the soil volume investigated can be managed as clean fill.

### Comparison to 62nd Street Property Soil Quality

The Site clean fill testing results were also compared to available soil quality data from the 62nd Street Property. Soil quality data for the 62nd Street Property were obtained from the following environmental reports:

- ▶ Civil Environmental Consultants (CEC) Site Characterization Report (SCR), 62nd Street Industrial Park, dated September 5, 2002.
- ▶ GAI Baseline Environmental Report (BER), 62nd Street Industrial Park, dated February 10, 2011.

Soil quality data provided in the CEC SCR was generated in 2002 and the soil quality data provided in the GAI BER was generated in 2010. Maximum concentrations for each applicable parameter documented in the CEC SCR and GAI BER are included in Table 2 for both the south and north sides of the 62nd Street Property. GAI understands the south side of the 62nd Street Property has been afforded Act 2 relief of liability under a non-residential use standard whereas the north side has been afforded Act 2 relief of liability under a residential use standard.

Arsenic concentrations in the Site soil are similar to the concentrations of arsenic in near surface soil (i.e. upper six feet) of the 62nd Street Property. The maximum arsenic concentration in the Site soil (16.5 mg/kg) is below the 62nd Street Property near surface maximum concentration of 17.4 mg/kg. Maximum concentrations of the remaining parameters in the Site soil are generally below the 62nd Street Property near surface maximum concentrations.

Based on the analytical results, the Site soil to be transported to the 62nd Street Property has been demonstrated to be of equal or better quality than the existing near surface soil of the 62nd Street Property. Based on these results and the results of the 95% UCL demonstration discussed above, GAI is of the opinion that the Site soil is of equal or better quality relative to the 62nd Street Property soil quality and therefore acceptable for use as fill at the 62nd Street Property.

### Conclusions

Based on the results of the clean fill testing, and by utilizing the permitted 95% UCL, GAI is of the opinion that the Site soil volume investigated, totaling less than 15,000 CY, can be managed as clean fill. Based on the comparison of Site soil quality relative to the existing soil quality of the 62nd Street Property, the Site soil has been demonstrated to be of equal or better quality than the existing near surface soil of the 62nd Street Property. Based on this demonstration, GAI is of the opinion that the Site soil is therefore acceptable for use as fill at the 62nd Street Property.

Should you have any questions or require additional information, please feel free to contact Mr. A. Edward Sciuilli, PG at 412.399.5046.

Sincerely,

**GAI Consultants, Inc.**



Andrew C. Savill, PG, LEED AP  
Senior Project Geologist



A. Edward Sciuilli, PG, PMP  
Senior Hydrogeology Manager

ACS:AES/ptm

Attachments: Figure, Tables, Appendix A: (Soil Boring Logs), Appendix B: (ALS Environmental Laboratory Data Report), Appendix C: (95% UCL Determination)