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February 2, 2015

Mr. Terry Shook  
Partner  
Shook Kelley, Incorporated  
2151 Hawkins Street Suite 400  
Charlotte, NC 28203

Re: Environmental Services  
Former Lexington Home Brands Facility  
411 Salisbury Road  
Lexington, North Carolina  
URS Corporation – North Carolina Project No. 38941548

Dear Mr. Shook:

## 1.0 INTRODUCTION

In response to your recent request, URS Corporation – North Carolina (URS), an AECOM affiliated company, has prepared this proposal for Shook Kelley, Incorporated (Shook Kelley) to summarize current environmental status for a section of the former Lexington Home Brands facility located at 411 Salisbury Road in Lexington, Davidson County, North Carolina (herein referred to as site or subject property) in order to facilitate the development of the subject property for future use. The environmental status of the site is based upon data gathered as part of URS' efforts during the Phase I Environmental Site Assessment (ESA) and a review of a previous Phase II ESA of the project area (See attached site plan – Figure 1).

## 2.0 BACKGROUND

Based on information provided by Shook Kelley, the subject property was originally constructed in 1899 with additional renovations during the operational span of the site. The site consists of several commercial/industrial structures across approximately 18.1 acres. It is URS' understanding that the client is planning to re-develop a portion of the site (constructed in 1935) into a microbrewery. Although a Phase I ESA has been performed for the entire project area in 2007, an update of the assessment was performed by URS in June of 2014 to determine if any changes to the site or surrounding properties have occurred, as well as whether or not any data gaps were present from the previous Phase I ESA. Additionally, the Phase I ESA update will be focused on the area of the site intended for the building of the proposed microbrewery. Shook Kelley requested that URS assist in determining environmental actions needed, if any, to prepare the portion of the building intended for construction of the microbrewery, while remaining in compliance with the Brownfields Agreement for the subject property (Brownfields Project #10054-06-29) and federal and state laws regarding historic preservation efforts.

### 3.0 PHASE II ESA REVIEW

In order to properly identify areas of concern (AOCs) at the subject property, URS reviewed the Phase II ESA report performed and prepared by Hart and Hickman (H&H) for the subject property in 2009. The purpose of this review was to determine if any data gaps exist as they pertain to soil, vapor, or groundwater quality beneath the site, or any offsite properties that could potentially impact the site. Although it is known that the 2009 Phase II was performed on the entire 18.1 acre project area, URS is unsure as to whether or not sufficient data is available for this focused area of the redevelopment. Thus, URS' intention of the review was to determine if additional soil/groundwater/vapor intrusion assessment activities will be necessary in the area intended for the microbrewery redevelopment in order to comply with the terms of the Brownfields agreement for Site #10054-06-29. The area of interest for redevelopment in the near future will be referred to in this document as Study Area 1, which is consistent with the nomenclature used in the 2009 H&H Phase II ESA. Items of interest in the report included the following:

- Soil boring and monitoring well locations and depths;
- Sampling techniques;
- Sample analytical methods;
- Soil and groundwater sample results;
- Whether or not soil or groundwater delineation had been achieved for each constituent detected onsite; and,
- The presence of data gaps, based upon the information obtained in the Phase II ESA review and Phase I ESA update.

#### 3.1 Soil Boring and Monitoring Well Locations and Depths

Soil borings installed within Study Area 1 included those designated as SB-1, SB-2, SB-3, SB-6, SB-7, SB-10, SB-11, SB-12, SB-13, SB-14, SB-15 and SB-17. In addition, four monitoring wells (MW-1a, MW-2A, MW-3A and MW-4A) were installed within Study Area 1. Locations of these borings and wells are shown on **Figure 3** of the Phase II ESA. The intent of the soil boring advancements and monitoring well installations within Study Area 1 were to evaluate the following:

- Drainage structures near aboveground storage tanks (ASTs);
- The bermed area near the mixing room;
- The bermed area near an AST;
- Floor drains located in the boiler room;
- The downgradient drainage area;
- The air blowdown area;
- Upgradient groundwater quality;
- The area downgradient of the paint storage and mixing rooms and hazardous waste storage pad; and,
- The area downgradient of the former finishing plant.

All soil samples obtained for laboratory analysis in Study Area 1 were within 3 feet of surface grade due to the shallow ground water table encountered in this area. However, it is the opinion of URS that the presence of shallow water could indicate perched water and not a true representation of the surficial aquifer below the site. Permanent monitoring wells MW-1A, 2A, 3A and 4A were installed within Study Area 1 and soil samples were obtained from each of these wells during their installation

### **3.2 Sampling Techniques and Methods**

Soil borings were advanced for soil sample collection and discrete groundwater sample collection via direct-push technology (DPT).

Soil samples from borings SB-1, SB-2, SB-3, SB-6, SB-7, SB-10, SB-14, SB-15, SB-17, SB-21, SB-22, SB-23 and SB-24, as well as monitoring wells MW-1A through MW-4A, were analyzed for volatile organic compounds (VOCs) via Environmental Protection Agency (EPA) Method 8260b. Soil samples collected from borings SB-1, SB-2, SB-3, SB-6, SB-7, SB-10, SB-12, SB-13, SB-14, SB-15, SB-17, SB-21, SB-22, SB-23 and SB-24, as well as monitoring wells MW-1A through MW-4A, were analyzed for semi-volatile organic compounds (SVOCs) via EPA Method 8270C. Soil samples collected from borings SB-1, SB-2, SB-3, SB-6, SB-10, SB-14, SB-15, SB-17, SB-21, SB-22, SB-23 and SB-24, as well as monitoring wells MW-1A through MW-4A, were analyzed for Resource Conservation and Recovery Act (RCRA) metals via EPA Methods 6010B and 7471A. Soil samples collected from borings SB-11, SB-12 and SB-13 were analyzed for Massachusetts Department of Environmental Protection (MADEP) extractable petroleum hydrocarbons (EPHs). The soil sample collected from boring SB-11 was also analyzed for MADEP volatile petroleum hydrocarbons (VPHs). The water samples from borings SB-2, SB-4, SB-6, SB-7, SB-10, SB-14, MW-1A, MW-2A, MW-3A and MW-4a were analyzed for VOCs, SVOCs, RCRA metals via the above described methods. The water samples collected from borings MW-3A and MW-4A were also analyzed for pesticides via EPA method 8081. This sampling metric was in accordance with the plan presented in **Table 1** of the Phase II ESA.

SB-4 and SB-5 were advanced but soils were not sampled because ground water was encountered within ½ foot of surface grade. Soil was also not collected from borings SB-8 and SB-9 because of the shallow (less than 3' bgs) ground water level. These borings were proposed to evaluate unsaturated soil conditions at the bottom of the former 3,000 thinner overflow tank and the former 7,500 gallon naphtha tank. However, due to the high water table, samples collected at the required depth would have been below the water table. In a January 13, 2008 conversation with Mr. Michael Rogers of the NC DENR Underground Storage Tank (UST) Section, Winston Salem Regional Office, H&H was advised that collection of soil samples at these locations would not be necessary because the base of the former USTs were within saturated soils.

### **3.3 Soil/Groundwater Analytical Results**

Based upon URS' review of analytical results from the 2009 Phase II ESA onsite, soil sample results indicated the presence of various constituents of concern (COCs) within Study Area 1. Specifically, analytical results indicated exceedances of respective North Carolina Department of Environment and Natural Resources (NCDENR) health-based soil remediation goals (SRGs) for various SVOCs in soil samples collected from borings SB-1 (1,2,4-trimethylbenzene), SB-15 (benzo(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene and indeno(1,2,3-cd)pyrene), SB-21 (benzo(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene, bis(2-ethylexyl)phthalate, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and naphthalene) and SB-24 (bis(2-ethylexyl)phthalate), as well as monitoring well MW-4A (naphthalene). Additionally, soil sample analytical results from borings SB-2 and SB-10 indicated the presence of arsenic above the associated NCDENR health-based SRG.

Groundwater analytical results indicated the presence of various COCs above their associated North Carolina groundwater standards in samples collected from borings and monitoring wells onsite within Study Area 1. Specifically, the following compounds and/or elements were detected above associated groundwater standards in groundwater samples collected within Study Area 1:

- benzene was detected above its associated groundwater standard of 1 microgram per liter ( $\mu\text{g/l}$ ) in groundwater sample collection locations SB-2, SB-6, SB-10 and SB-14;
- 1,2-dichloroethane (1,2-DCA) was detected above its associated groundwater standard of 0.4  $\mu\text{g/l}$  in groundwater sample collection locations SB-2 and SB-10;
- Lead was detected above its associated North Carolina groundwater standard of 15  $\mu\text{g/l}$  in groundwater sample collection locations SB-4 and SB-7, and the EPA maximum concentration limit (MCL) of 2  $\mu\text{g/l}$  in groundwater sample location SB-6;
- 1,2-dichloropropane was detected above its associated groundwater standard of 0.6  $\mu\text{g/l}$  in groundwater sample collection location SB-10;
- Arsenic was detected above its associated groundwater standard of 10  $\mu\text{g/l}$  in groundwater sample collection location SB-10;
- Naphthalene was detected above its associated groundwater standard of 6  $\mu\text{g/l}$  in groundwater sample collection locations SB-6 and MW-4A;
- Total xylenes were detected above the associated groundwater standard of 500  $\mu\text{g/l}$  in groundwater sample collection location SB-6; and,
- P-isopropyltoluene, tetrachloroethene, 2-methylnaphthalene, dibenzofuran, fluorine and phenanthrene were detected above their associated groundwater standards in groundwater sample collection location MW-4A.

#### **3.4 Soil/Groundwater COC Delineation**

Based upon analytical results from in 2009 Phase II ESA onsite within Study Area 1, it is apparent that certain COCs have not been successfully delineated. Specifically, the following compounds and elements require further horizontal soil delineation associated with Study Area 1:

- Arsenic has not been successfully been delineated to the north and east of soil boring SB-2, and to the north and west of soil boring SB-10;
- 1,2,4-trimethylbenzene has not been successfully been delineated to the north and west of soil boring SB-1;
- Benzo(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and naphthalene have not been successfully delineated to the west of soil boring SB-21; and,
- Bis(2-ethylhexyl)phthalate has not been successfully delineated to the west of soil boring SB-21, and to the east of soil boring SB-24.

Additionally, the following compounds and elements require further horizontal groundwater delineation associated with Study Area 1:

- Benzene has not been successfully been delineated for groundwater to the north and east of soil boring location SB-2, to the north and west of soil boring SB-10, to the south and west of soil boring location SB-14, and, to the south and west of monitoring well location MW-4A.
- Lead has not been successfully been delineated for groundwater to the east of soil boring location SB-4, and to the west and north of soil boring location SB-10;
- 1,2-DCA has not been successfully been delineated for groundwater to the north and east of soil boring location SB-2, and to the west and north of soil boring location SB-10;
- 1,2-dichloropropane has not been successfully been delineated for groundwater to the west and north of soil boring location SB-10;
- Arsenic has not been successfully been delineated for groundwater to the west and north of soil boring location SB-10;

- Naphthalene has not been successfully delineated for groundwater to the west of soil boring location SB-6, and to the south and west of monitoring well location MW-4A;
- Total xylenes have not been successfully delineated for groundwater to the west of soil boring location SB-6; and,
- P-isopropyltoluene, tetrachloroethene, 2-methylnaphthalene, dibenzofuran, fluorine and phenanthrene have not been successfully delineated for groundwater to the west of monitoring well location MW-4A

### **3.5 Data Gaps**

Based upon review of the 2009 Phase II ESA for the site, as well as Recognized Environmental Conditions (RECs) identified onsite from the June 2014 Phase I ESA, URS has identified the following data gaps beyond that of lack of delineation for groundwater and soil across the subject property:

- No assessment has been performed in relation to the transformers located onsite, which, upon investigation of serial numbers, either currently, or likely contained dielectric fluids with presence of polychlorinated biphenyls (PCBs).
- During the 2009 Phase II ESA activities, only the 8 RCRA metals list was reported, and other metals such as manganese were not reported;
- Samples were not analyzed for the presence of 1,4-Dioxane during the 2009 Phase II ESA onsite;
- No investigation has been performed to determine the presence of soil impacts beneath the former candy factory basement floor, where several containers of potentially hazardous materials were identified;
- No assessment has been conducted in the air compressor room to determine presence or absence of soil impacts beneath this area;
- No investigation has been performed in relation to the potential vent pipe located onsite outside the eastern gate/fence. URS identified this as a potential location for an UST until further investigation could prove otherwise;
- There have been no vapor intrusion evaluation activities performed onsite. Based upon 2009 Phase II ESA groundwater concentrations onsite, benzene, naphthalene and total xylenes exceed their applicable residential vapor intrusion screening levels (VISLs); and,
- Several wastes and fluids from previous operations by Lexington Home Brands, Inc. are still located onsite, with no immediate plans for waste characterization or disposal.

### **3.0 RECOMMENDATIONS**

Based upon review of the 2009 Phase II ESA for the site in Study Area 1, as well as the data gathered from the 2014 Phase I ESA update, URS offers the following recommendations:

- Conduct additional soil assessment activities, including in the compressor room area and basement of the former candy factory building, to further delineate soil impacts across the site for already established COCs, including the expanded metals list and 1,4-Dioxane;
- Conduct additional groundwater assessment activities to further delineate groundwater impacts across the site for already established COCs, including the expanded metals list and 1,4-Dioxane;
- Perform a series of subsurface tests to determine the presence or absence of an UST near the encountered vent pipe outside the eastern gate onsite;
- Collect a series of waste characterization samples for unidentified chemicals found onsite during Phase I ESA activities, and schedule their disposal along with other chemicals already identified onsite.
- Conduct a vapor intrusion evaluation to address the exceedances of naphthalene, total xylenes and benzene above their associated residential VISLs; and,
- Perform an assessment in the area of the six (6) liquid-filled transformers for the presence of PCBs, including collecting samples of the fluid within each transformer and schedule the disposal of the fluid and transformers, sample concrete and soil around the transformers for the presence of PCBs.

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URS appreciates the opportunity to provide our professional environmental services to Shook Kelly. If you have any questions or concerns, please do not hesitate to call. Thank you.

Sincerely,

**URS Corporation – North Carolina, an AECOM Affiliated Company**

A handwritten signature in blue ink, appearing to read "C. Rocco", is positioned above the printed name. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Christopher M. Rocco  
Project Manager

cc: URS Electronic Files