Site Environmental Management Plan

W1 Property | Tampa, Florida

AUGUST 2022

Prepared for:
KS Tampa Ybor Phase I Devco LLC
8255 Greensboro Drive, Suite 200
McLean, VA 22102

Prepared by:
Verdantas
15711 Mapledale Blvd, Suite B
Tampa, Florida 33624

Statement of Professional Review

This Site Environmental Management Plan has been prepared by or under the responsible supervision, direction, or control of the Florida-licensed Professional Engineer whose signature and seal appears below.

Digitally signed by Steven D. Folsom
Reason: This item has been electronically signed and sealed using a Digital Signature. Printed copied are not considered signed and sealed and the signature must be verified on electronic copies.
Date: 2022.08.09 14:26:20 -04'00'

Steven D. Folsom, PE, BCEE
State of Florida License No. 59319
Vice President
Verdantas LLC

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1.0 Purpose

This Site Environmental Management Plan (SEMP) has been prepared by Verdantas on behalf of KS Tampa Ybor Phase I Devco LLC (Owner) for the property located along the southwest intersection of 7th Avenue and Nuccio Parkway in Tampa, Hillsborough County, Florida (the "Site"). Environmental investigations on and beneath the Site have revealed the presence of certain chemical constituents that exceed the default Soil Cleanup Target Levels established in Chapter 62-777 Florida Administrative Code (FDEP) by the State of Florida Department of Environmental Protection (FDEP).

This SEMP was prepared to document the identification of: (i) the nature and extent of soil impacted with these constituents that may remain on the Site and be encountered during civil construction activities; (ii) health and safety measures for maintaining a safe work environment in the presence of potentially impacted soil; (iii) appropriate measures for protecting the public from health, safety, and environmental hazards associated with exposed soil; and (iv) the appropriate measures for disposal or reuse of potentially impacted soil encountered during or after the redevelopment of the Site. All contractors conducting work on the Site that must abide by the terms of this SEMP whenever these conditions dictate.

2.0 Environmental Media Findings

Soil samples have revealed the presence of the polycyclic aromatic hydrocarbon (PAH) chemical compounds benzo(a)pyrene and its analogous PAH constituents (collectively referred to as benzo(a)pyrene equivalents, BaP Eq) at concentrations that exceed residential direct exposure criteria (RDE-SCTL) at sporadic sampling locations within the Site. Although detections were sporadic, soils should be presumed to exhibit BaP Eq concentrations in excess of the RDE-SCTL, unless laboratory analytical testing specifically confirms otherwise.

Future potential incidental exposures to soil (such as could occur during construction activities or future repairs to utilities, etc.) will be managed through this SEMP, a Site-specific health and safety plan (HASP), and worker notification with corresponding training.

3.0 Site Worker Health and Safety

A Site Environmental Health and Safety (EH&S) Coordinator deemed competent, as defined in CFR 29 Part 1910.120, must be assigned to or provided by each contractor for the purpose of assuring and documenting compliance with this SEMP during activities that have the potential to expose impacted soils. Compliance with the SEMP includes, but is not limited to safe work practices, application of property Personal Protective Equipment (PPE), monitoring environmental conditions within the work zone, and proper handling, characterization, and disposition of impacted soil.

Contractor employees who may encounter impacted soil must receive Site-specific training, to be provided by the EH&S Coordinator. The training will provide a basic level of understanding of Site-specific environmental hazards and SEMP requirements. Thereafter, contractors may be allowed to self-document compliance with SEMP requirements.

Any earthwork activity on the Site during Site development or construction activities may result in an exposure to impacted soils, unless it can be shown that the soils that may be encountered is not, in fact, impacted. Chemical fact sheets that describe properties for the potential constituents of concern are provided as **Appendix A** to provide education and information related to limiting exposures to potentially impacted soil.

Appropriate PPE for Site work that may result in contact with impacted soil is provided below.

- Gloves are required for all personnel when handling impacted soil.
- Safety glasses are recommended at all times.
- Proper clothing is recommended to provide a proper barrier from impacted soils.

Each contractor has the responsibility to comply with the intent and purpose of the SEMP. By agreeing to provide services at the Site, they also agree to abide by the terms of this SEMP. Contractors who are not expected to encounter or handle any impacted soil are exempt from this SEMP but they still have the responsibility to understand the terms of the SEMP in the event that their work scope increases to include a task that results in contact with potentially impacted soil. If their scope of work changes to involve tasks that may expose their workers to potentially impacted soil, they must have the responsibility to notify the Site owner representative and seek proper training and assistance to comply with worker protection and the elements of the SEMP specified herein.

Additional health and safety hazards related to construction activities (e.g., heavy equipment and concrete cutting) may also occur during redevelopment activities on the Site conducted by various contractors. Hazards related to equipment operation, physical hazards and working conditions common to general construction are outside the scope of this SEMP and should be addressed in a Site-specific Health and Safety Plan. Each contractor is responsible for providing a safe working environment for their own workers and visitors.

4.0 Media Management

4.1 Soil Disturbance

During site redevelopment, construction activities are anticipated to be conducted that require handling and management of site soils. Earthwork activities such as clearing and grubbing is anticipated to be conducted, along with anticipated topographic grading, and underground utility infrastructure installation requirements during redevelopment will expose soil which may be impacted with BaP Eq constituents. Any earthwork must be performed in a manner that minimizes or controls the area of disturbance and exposure unless it can be shown that the area of surface exposure is not, in fact, contaminated. The following general procedures shall be followed for earthwork activities:

- Earthwork activity planning activities shall be conducted in participation with the Owner's environmental consultant to determine best management practices for soil management in specific work areas of the Site.
- Soils removed from its current in-place orientation shall be contained to prevent exposure to workers and the environment and characterized for determination of appropriate means and methods for reuse or off-site management.
- Equipment in contact with potentially contaminated soil shall be managed in a manner that mitigates tracking through the use of soil tracking prevention devices, or equipment cleaning at regular intervals to prevent soils accumulation and/or inadvertent transfer.

4.2 Characterization

Soils accumulated during earthwork activities with the intent of reuse and/or off-site management shall be appropriately characterized for the presence of BaP Eq by laboratory analysis via US EPA Method 8270B. A National Environmental Laboratory Accreditation Program (NELAP)-accredited, commercial analytical lab must analyze the samples.

A composite sample of these materials shall be collected by combining at minimum of five grab samples per 100 cubic yards of staged soil volume for reuse on the Site. In cases where soil is generated from discontinuous areas, a single characterization sample shall be prepared that represents the soil from each area.

Prior to importing fill onto the Site from off-Site sources, the preferred source of the material should be characterized. The characterization of the fill material shall be conducted prior to transport to the Site, with laboratory analysis conducted based on FDEP guidance for the presence of:

- Florida Petroleum Residual Organics for Total Recoverable Petroleum Hydrocarbons;
- EPA Method 8260 for Volatile Organic Compounds;
- EPA Method 8270 for Polynuclear Aromatic Hydrocarbons;
- EPA Method 625 for Base/Neutral and Acid Extractable Compounds;
- EPA Method 6010 and 7471 for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver; and
- EPA Method 8081 and 8141 for pesticides.

4.3 Disposal/Reuse

Soil that is analyzed and found to concentrations of BaP Eq at less than the RDE-SCTL can be considered unrestricted for reuse on Site as fill material or off Site reuse. Soil that exhibits BaP Eq concentrations that exceed the RDE-SCTL may be reused under certain circumstances with supporting engineering controls later discussed in this SEMP or disposed of off-Site in approved disposal facilities. Soil for off-Site disposal must be appropriately characterized as required by the specific receiving facility and manifested. Contractors who generate the soil shall be responsible for obtaining appropriate waste disposal permits and manifesting the waste for transportation, through coordination with the Site Owner.

5.0 Engineering Controls

The redevelopment plan for the Site includes construction of a mixed-use development containing multi-family residential apartment buildings, retail space, roadways, sidewalks, parking areas, and courtyards. Upon completion of construction, the property will be comprised of impervious areas on approximately 80% of the Site.

Accordingly, mitigation of occupancy risks posed by soils exhibiting concentrations of BaP equivalents above the RDE SCTL will be conducted as part of site redevelopment activities through the implementation of engineering controls. The engineering control will consist of a permanent cover material integral to the redevelopment of the Site that prevents exposure by direct contact to the underlying soil. The engineering control is expected to include: (i) asphalt and/or concrete paved surfaces of an adequate thickness; and (ii) building structures, iii) a clean soil cover of adequate thickness, or iv) a geosynthetic liner in combination with clean cover soil, all of which are appropriate engineering control techniques that meet the intent of direct exposure mitigation to underlying soil.

Collectively, the asphalt and/or concrete paved surfaces, building structures, and clean cover soil barrier will comprise 100 percent of the property surface area.

A Professional Engineer shall participate in the review and coordination of activities associated with execution of the above-referenced engineering controls during construction in accordance with this SEMP. Upon the completion of the redevelopment construction activities comprising the engineering control and final inspection by a Professional Engineer, a certification of completion shall be provided to certify that the engineering control is consistent with commonly accepted engineering practices, is appropriately designed for its intended purpose, and has been implemented.

5.1 Inspection of Engineering Control

It is the responsibility of the owner to inspect and maintain the integrity of the engineering control. Accordingly, the owner of the Site or its designee shall inspect the engineering control once every 12 months to identify conditions that may suggest the failure of the engineering control to prevents exposure by direct contact to the underlying soil as intended. These inspections shall be documented and written records of the inspections shall be kept for minimum of 10 years and include the date of inspection, name or person who performed the inspection, results of the inspection, description of deficiencies, and photographic documentation of the inspection.

6.0 Limitations

Soil impacts have been confirmed to be present at the Site as described in this SEMP. The purpose of the SEMP is to prescribe the specifications and protocols for the proper handling, disposal, or on-Site management of any impacted media that may be encountered by any person on the Site based upon current conditions. The SEMP also describes the currently known health risks associated with such contamination. The SEMP assumes that any soil encountered on the Site is impacted with the constituents described above.

The SEMP does not provide general health and safety guidance for worker protection. Contractors performing any work on the Site are responsible for the health and safety risks related to their general work tasks performed at the Site.

Verdantas assumes no liability for any exposure or potential exposure to contaminated media resulting from activities undertaken at the Site that fail to comply with the SEMP. Further, Verdantas assumes no liability for the failure of the owner of the Site to fail to disclose the SEMP to any person that may otherwise encounter contaminated media on the Site.

Appendix A

Chemical Fact Sheets

Polycyclic Aromatic Hydrocarbons (PAHs) - ToxFAQs™

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List (NPL) sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pŏl′ĭ-sī′klĭk ăr′ə-măt′ĭk hī′drə-kar′bənz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.
- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.
- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

Polycyclic Aromatic Hydrocarbons

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636.

ToxFAQs™ Internet address via WWW is http://www.atsdr.cdc.gov/toxfaqs/index.asp.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic aromatic hydrocarbons (PAHs) are a class of chemicals that occur naturally in coal, crude oil, and gasoline. They also are produced when coal, oil, gas, wood, garbage, and tobacco are burned. PAHs generated from these sources can bind to or form small particles in the air. High-temperature cooking will form PAHs in meat and in other foods. Naphthalene is a PAH that is produced commercially in the United States to make other chemicals and mothballs. Cigarette smoke contains many PAHs.

How People Are Exposed to PAHs

People are usually exposed to mixtures of PAHs. Breathing air contaminated with motor vehicle exhaust, cigarette smoke, wood smoke, or fumes from asphalt roads are common ways exposure occurs. People take in PAHs when they eat grilled or charred meats or foods or foods on which PAH particles have settled from the air. After PAHs are swallowed, breathed in, or in some cases, passed through the skin, the body converts PAHs into breakdown products called metabolites that pass out of the body in the urine and feces.

How PAHs Affect People's Health

Human health effects from environmental exposure to low levels of PAHs are unknown. Large amounts of naphthalene in air can irritate eyes and breathing passages. Workers who have been exposed to large amounts of naphthalene from skin contact with the liquid form and from breathing naphthalene vapor have developed blood and liver abnormalities. Several of the PAHs and some specific mixtures of PAHs are considered to be cancer-causing chemicals.

Levels of PAH Metabolites in the U.S. Population

In the *Fourth National Report on Human Exposure to Environmental Chemicals (Fourth Report)*, CDC scientists measured ten different PAH metabolites in the urine of 2,504 or more participants aged six years and older who took part in the National Health and Nutrition Examination Survey (NHANES) during 2003–2004. The *Fourth Report* includes results from the earlier survey period of 2001–2002 for several PAH metabolites. By measuring PAH metabolites in urine, scientists can estimate the amounts of PAHs that have entered people's bodies.

PAHs were measured in most participants, indicating widespread exposure in the U.S. population. Research has found that urinary PAH metabolites are higher in adults who smoke than in nonsmoking adults.

Finding a measurable amount of one or more PAH metabolites in the urine does not mean that the levels of one or more PAH metabolites or PAHs cause an adverse health effect. Biomonitoring studies on levels of PAH metabolites provide physicians and public health officials with reference values so that they can determine whether people have been exposed to higher levels of these chemicals than are found in the general population. Biomonitoring data can also help scientists plan and conduct research on exposure and health effects.

For More Information

- Agency for Toxic Substances and Disease Registry
  ToxFAQs for Polycyclic Aromatic Hydrocarbons (PAHs)
  http://www.atsdr.cdc.gov/tfacts69.html

- Environmental Protection Agency
  Consumer Factsheet on: BENZO(A)PYRENE
  http://www.epa.gov/ogwdw000/contaminants/dw_contamfs/benzopyr.html

- United States Geological Survey
  Definition Page for Polynuclear Aromatic Hydrocarbons
  http://toxics.usgs.gov/definitions/pah.html

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