Buzzard Point-Soccer Stadium
Cleanup Action Plan-Comments
Toxic Substances Division

Underground Storage Tank Branch
Hazardous Site Response Program
Voluntary Cleanup Program

General Comments

- The CAP doesn't fully address potentially necessary groundwater remediation measures. Information should be provided on how groundwater (GW) will be treated during and after construction activities including the type of technology to be used.
- The CAP doesn't fully address the potential vapor intrusion issues due to residual groundwater contamination.
- The CAP mentions that there are potentially regulated hazardous wastes that will be removed and disposed of. If some materials slated for disposal are in fact hazardous waste, the site will need to be registered as a generator of hazardous waste. A temporary registration number can be obtained from the DOEE Hazardous Materials Branch at the time of generation.
- Based on a review of boring logs from submitted Phase II reports (more specifically Super Salvage), free product was observed at depths of 10 feet below ground surface. This depth corresponds to the proposed limits of excavation and points to the possibility that groundwater will be encountered during excavation.
- Select soil samples collected during Phase II (for example DC Parcel Square 0603S, Lot 0800 and Salt Dome facility) were not collected above first encountered groundwater; therefore the analytical results presented in the reports may not be representative of actual site conditions.
- Select reports include analytical reports for groundwater samples, however there is no discussion regarding groundwater sampling activities completed (i.e. Salt Dome).
- If Phase II reports have not delineated contamination in soils, it may be beneficial to collect confirmation bottom samples throughout the Site (not only from pre-determined AOCs). DOEE understands that this will increase the total number of confirmation soil samples, however it will result in a more representative picture of site conditions (as it relates to potential contamination remaining in place).
- Most comments to the Stadium CAP can apply to the Ancillary CAP as they are similar in nature.
- A final map with confirmation sample locations should be included in the final report. Final grid should be based on final design, with potential elevator pits etc. being targeted for sampling due to typically deeper excavations there.
- Did not see any in-depth discussion of groundwater depth across the entire site. From a conceptual site model (CSM) perspective we would want this data compiled (as much as

possible) so we know just how close to GW the 10 foot excavation depth is meant to be in the various areas.

- If additional AOCs are found during the excavation activities, DOEE should be notified and a new sampling grid/plan should be established for that area.

Section 2

- States soil vapor extraction (SVE) system removed approx. 9625 gallons of liquid (then an additional 1,350 gallons).
    - How did a SVE remove this much liquid, if any at all – is this a possible error?
- EPA RSLs referenced are from January 2015. Please be advised that EPA released an update to the RSLs in June 2015.
    - Please confirm standards prior to reporting.
- RSL reference date for soil and groundwater are different (both January 2015 and May 2014 referenced).
    - Please confirm standards.

Section 3

- The GW risk scenario was only evaluated for dermal exposure to commercial workers. The inhalation factor due to the presence of residual VOC in GW to occupants, soccer players and visitors must also be evaluated.
- Please develop and include a contingency plan in case the proposed excavation extends to beyond the assumed 10 feet below ground surface (bgs). Some areas may be over excavated for geotechnical purposes and to achieve desired bearing capacity. Over excavation may intersect perched and natural GW triggering remediation measures.
- Please provide information on how the impacted soil will be screened and segregated. Instead of stating applicant will regularly communicate with an Environmental Professional, the applicant should assure presence of a full time /dedicated environmental professional at all times to screen the soil using a PID.
- Discuss how the location and number of confirmatory soil samples will be determined. In the case of the baseball stadium soil sampling was performed at 100' intervals with an exception of elevated concentration areas where samples were taken at 50' intervals.

Section 3.2

- Screening Levels (soil)
    - EPA RSLs have been updated and latest version should be used as a reference point for CAP (for non-petroleum contamination or compounds-of-concern not detailed in RBCA).

- Screening Levels (groundwater)
    - The Report details the indoor and outdoor inhalation for resident child from DC RBCA, but how will they address potential risk for non-petroleum contamination?
        - Please detail in CAP
    - Surface water standards used for potential impacts to surrounding surface water bodies?

Section 3.3.6

- Ensure that the laboratory reporting limits used did not exceed the standards. If so, the data may not support actual site conditions. Explain how the concentration of COCs was determined to be Non-Detect (ND) when the Detection Limit for VOC and SVOC is greater than the GW Screening Level?

Section 3.4

- No post-construction vapor mitigation plan was provided. Given the historical use of the subject property, potential exposure due to vapor intrusion is likely. Therefore, an effective Vapor Mitigation System (VMS) will be necessary to minimize/eliminate the potential exposure pathway. Please provide details on how this system will be designed and installed.
- If confirmation soil sampling is proposed, a work plan detailing the sampling and analysis plan should be submitted to DOEE for review and comment. At a minimum, the WP should include sampling frequency, area-of-concern, approximate sampling (grid) locations on a map, EPA analysis and reporting requirements.
- If during field activities, additional AOCs are observed, they should be sampled per the proposed plan and reported to DOEE
- CAP states… "*Monitoring and sampling soil remaining after excavation:*
    - How is this proposed?
- CAP states… "*Mitigating potential vapor intrusion risks during construction of the on-Site buildings*".
    - How will this risk be determined? Will this be post HHRA?

Section 4.1.3

- CAP states… "once water is treated, it will be discharged to MS4…".
    - Please detail "how" the water will be treated and the sampling and analysis plan that goes along with the MS4 permit?

Section 5.1

- CAP states…"Bottom confirmation soil samples will be collected and analyzed for the chemical constituents at AOPCs".
    - Will confirmation samples only be collected at AOPC (as shown on Figure 3) or throughout the footprint of the Site Boundary?
- What analysis (and EPA Method) will be completed on the confirmation soil samples?

Section 5.2

- CAP states …"*Confirmation soil sample analytical results within the upper 10 feet of the Site's soil, **if collected**, will be compared to the selected soil screening levels*".
    - This sentence is unclear in that if the upper 10 ft of soil is proposed to be excavated and transported off-site for proper disposal; data collected in the upper 10 ft will likely not be used for risk assessment purposes.
- CAP states…"*Soil deeper than 10 feet bgs with concentrations that exceed soil screening levels will therefore require no further remediation*".
    - This sentence appears to be "definite" in that no further remediation in soil deeper than 10 ft. (that exceed screening levels), will be required. This determination will likely be based on a risk assessment, not on data alone.

Section 5.3

- If a vapor barrier and/or active-passive mitigation system is required, the Site developer should submit the specifications and monitoring plan (as needed) for each to DOEE for review.
- Please note that recent publications by ITRC and EPA (including the vapor intrusion screening level calculator) may aid in determining if VI is a risk at the Site.

The Department of Energy and Environment (DOEE)
Water Quality Division (WQD)
Comments on the *Cleanup Action Plan (CAP) Voluntary Cleanup Program Buzzard Point D.C. United Soccer Stadium Development Washington, D.C* prepared by Haley & Aldrich, Inc., *Dated* August 2015.

1. General Comments:
    a. A through characterization of groundwater has not been completed, resulting in an inappropriate assessment of the risk of exposure to contaminated groundwater by all receptors. Planned groundwater samples were not collected or analyzed because of current field conditions, analytical results were reported using analytical detection limits above groundwater standards, and a complete characterization of deeper groundwater was not planned or proposed. Further groundwater samples should be collected to completely characterize groundwater from the vadose zone through the saturated zone, until the vertical depth of contamination is delineated or a confining unit is established. The current characterization does not support a decision for no further action as it relates to groundwater.
    b. Groundwater analytical results for several parcels underwent dilution at the laboratory resulting in method detection limits above the groundwater screening levels. Dilution is generally only conducted when laboratory screening indicates the high concentration of contaminants in the sample that has the potential to damage laboratory equipment or will be above the equipment's calibration curve. Additionally, these results should not be used to make regulatory decisions or conclude the absence of groundwater contamination.
2. Section 2.1 District of Columbia (Parcels 1 and 2)
    a. Page 6; states, "Soil and groundwater samples were collected at location GTW-661-800-1". This statement is not consistent with information provided in the Phase I report; which states, "On 26 June 2014, Haley & Aldrich monitored the advancement of a temporary groundwater monitoring well (GTW-661-800-1, see Figure 3) at the subject site by Vironex Drilling, Inc. The well was advanced to approximate depth of 22 feet bgs until the Geoprobe hit refusal (i.e. the Geoprobe rod could not be advanced further under full pressure of the Geoprobe rig). The well was dry at 22 feet and therefore no groundwater samples were collected from this monitoring well."

       Although soil contamination was identified at both Parcels 1 and 2, groundwater was not investigated during the Phase I and limited Phase II environmental site assessments.
3. Section 2.2 EIN (Parcel 3)
    a. Page 7, paragraph 1; The statement "A review of groundwater analytical results indicated that chemical concentrations did not exceed the historical screening criteria" is not consistent with the findings of the 2014 Haley Aldrich Phase I and limited Phase II which states, "In addition, free-phase oil was observed in groundwater in well GTW-605-7-2 from a depth of 7.6 feet bgs to 20.9 feet bgs. Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO) were measured at a concentration of 24.6 milligrams per liter (mg/L) in groundwater at this

location, exceeding the DC Tier 1 Surface & Groundwater Standards of 3.57 mg/L." A historical screening criterion is never defined, and DC Tier 1 Surface & Groundwater Standards are not used as screening criteria in the CAP.

   b. In addition to the free product observed in temporary monitoring well of GTW-605-7-2, the results of soil samples collected between 23 and 28 feet below land surface in the vicinity of historical soil borings SB-1 and SB-4 indicate the presence of contamination within the water bearing zone.

4. Section 2.3 super Salvage (Parcel 4)

   a. All the recommendations made in the Phase II for Parcel 4 should be addressed in the CAP; specifically, "Groundwater sample collection at the unlined/unpaved sump area to investigation concentrations and field observations noted at the adjacent Rollingwood property." These recommendations are based on the need to fill data gaps created by field conditions created inaccessible locations. The data gaps should not remain unfilled.

5. Section 2.4 Akridge (Parcel 8)

   a. Groundwater monitoring results from the 2013 sampling of monitoring well GTW-607-13-1A were omitted from the CAP. The results from this well indicated VOC contamination in the groundwater; Tetrachloroethylene (TCE) 43.9 µg/L and vinyl chloride (VC) and 38 µg/L. The DC Groundwater Standards for TCE and VC are 5.0 µg/L and 2.0 µg/L, respectively. Groundwater monitoring results for GTW-607-13-1, an adjacent shallower well, from this time period were reported in the CAP. It appears monitoring well GTW-607-13-1A was only sampled one time.

6. Section 3.1 Receptors and Potential Exposure Pathways

   a. Exposure to surface water by contaminated groundwater is not evaluated as an exposure pathway. Exposure to surface water is present in various forms; direct discharge from groundwater to surface water via the groundwater surface water interface, which can be present along the shoreline or via upwelling within the river or channel. Surface water may also be exposed to contaminated groundwater via infiltration of the separate stormwater system. If contaminated groundwater is allowed to infiltrate the stormwater sewer, it will flow directly to the river without any dilution. Additionally, during construction and post-construction groundwater may need to be drawn down or away from the excavation of foundation. This groundwater will then need to be discharged to the separate stormwater system. If the contaminated groundwater is not treated it will be directly discharged to waters of the District.

7. Section 3.3.6 Groundwater

   a. Because groundwater was not sufficiently characterized and the receptors and pathways were not accurately identified groundwater is not appropriately addressed in this section. Groundwater should be further characterized and re-evaluated within this section to address groundwater exposure to all receptors.

   b. Analytical results detected the presence of various contaminants above DC Groundwater Standards. These concentrations were not discussed or addressed, resulting in the failure to recommend further groundwater sampling or remediation. The current characterization does not support a decision for no further action as it relates to groundwater.

Buzzard Point-Soccer Stadium
Cleanup Action Plan-Comments
Air Quality Division

In the Phase I documents most of the environmental concerns appear to be associated with the storage, and leaks to soil and groundwater associated with the use and storage, of chemicals and petroleum products at the various properties. The Phase I documents also mentioned a few instances of storm water specific issues associated with sumps and piping. The Phase II documents indicated the need to conduct groundwater and soil remediation activities based on sampling conducted, as well as monitoring procedures during demolition activities. After a review of all the submitted documents, we have no comments on the provided Cleanup Action Plan documents to address the findings in the Phase I and Phase II documents, except to add that if any asbestos containing material (ACM) is discovered during the environmental monitoring or field screening operations within materials or soil to be removed, all of the collected material must be treated as ACM and handled and disposed of accordingly.

Overall we anticipate that from an air quality perspective the activities that will most likely require attention are any remediation activities (soil and ground water) as well as any construction or demolition operations. The applicable air quality regulations are listed below:

- For all soil and groundwater remediation activities at any of the affected properties, the requirements of 20 DCMR 717 (Soil and Groundwater Remediation) will apply. Specifically, if a soil or groundwater remediation system results in volatile organic compound (VOC) emissions of greater than 1 pound an air quality permit (under 20 DCMR Chapter 2) is required. In addition, the VOC emissions from each system shall be controlled by at least 95 percent.
- Any structures or systems that contain asbestos found in the affected properties must be properly removed following the requirements of 20 DCMR 800 (Control of Asbestos). Specifically, any asbestos abatement activities that exceed 260 linear feet, 160 square feet or 35 cubic feet will require an asbestos abatement permit from DOEE and will have to follow the proper handling, removal and disposal requirement as specified in 20 DCMR 800.
- Any demolition, renovation or other construction activities at the affected properties will have employ sufficient control methods to prevent fugitive dust from migrating to public space as required under 20 DCMR 605. Also, any trucks or on-road vehicles used as part of the activities at any of the affected properties cannot sit and idle in excess of 3 minutes as specified in 20 DCMR 900.

In addition, we would propose for this scale of a project that portable monitors be set up along the perimeter of the job sites to measure particulate emissions (and VOC emissions if it is feasible) similar to the Pepco Benning Road demolition project.