

Comment	Section	Page	Comment	Response to Comment
Underground Storage Tank Branch, Hazardous Waste Division				
1	General	--	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.	<p>Groundwater is at approximately El. 0 which is greater than 10 feet below the currently planned excavation grade and will not be encountered during the proposed redevelopment activities, therefore no dewatering and treatment of groundwater will be necessary. Furthermore, we understand that an identified source of free product on the water table was remediated through the use of SVE and pump and treat and a no further action determination was granted by DDOE based on post-remediation monitoring activities.</p> <p>There is a likely chance that perched groundwater may be encountered while excavating in the upper 10 feet of the site. If perched groundwater is encountered, it will be pumped into a container truck on-site and the water will be analyzed for the constituents that are required by the contractor's permit, to be obtained after contractor award. Based on the results of the testing, the water will be disposed at an appropriate disposal facility.</p>
2	General	--	The CAP doesn't fully address the potential vapor intrusion issues due to residual groundwater contamination.	<p>Potential vapor intrusion issues will be evaluated as stated in Section 5.3 using the results of a soil gas survey. Since VOCs may be present in both soil and groundwater, the use of soil gas data will provide a more accurate measure of VOC concentrations in the vadose zone from VOC volatilization from soil and from groundwater impacts.</p> <p>The soil gas survey will consist of up to 20 sample locations within the footprint of the stadium. Samples will be collected at 5 feet below ground surface (bgs) and analyzed for VOCs by EPA Method 8260B by an on-site analytical laboratory. Sample locations will target areas with elevated VOC concentrations in soil and groundwater. Based on the results of a soil gas survey and a human health risk assessment (HHRA), a vapor barrier will be designed to protect the occupants of the stadium, if warranted.</p>
3	General	--	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.	Noted - should waste profiling during redevelopment determine that generated wastes are hazardous, the site will be registered through the DOEE.

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4	General	--	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.	Soil saturated with free product was encountered in the vadose zone at approximately 10 feet bgs based on the test boring logs. The depth to groundwater at this location was reported as 20.9 feet bgs. Free product was observed in the well at a depth between 7.6 and 20.9 feet bgs. However, the well was screened at a depth of 20 to 30 feet bgs, which indicates that the free product moved into the well through the top foot of the screen and moved to the unscreened portion of the well. This does not suggest that free product will actually be encountered at 10 feet bgs since the actual thickness of free product is much less than what is measured floating on top of a monitoring well. Based on these observations and using the equations presented in "Practical Design Calculations for Groundwater and Soil Remediation" (Kuo, 1999), it more likely that the free product was present at a depth of approximately 18 feet bgs. Additionally, as indicated above, the water at this depth in the soil profile is most likely perched water level and not the true stabilized groundwater level.
5	General	--	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.	The intent of this comment is unclear. However, please note that soil samples are representative of actual site conditions for vadose zone and saturated soil depending on the collection depth.
6	General	--	Select reports include analytical reports for groundwater samples, however there is no discussion regarding groundwater sampling activities completed (i.e. Salt Dome).	Discussion of the initial groundwater sampling activities is provided in the corresponding Phase I/limited Phase II reports. An additional round of sampling was conducted at accessible wells and the results were submitted with the Akridge Phase II report. Discussion of the results was not warranted at that time (see response to Comment 1).
7	General	--	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).	See response to Comment 18.
8	General	--	Most comments to the Stadium CAP can apply to the Ancillary CAP as they are similar in nature.	Noted - most responses apply to both CAPs
9	General	--	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.	A final map with confirmation sample locations will be included in the final report.

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10	General	--	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.	As indicated in the response to Comment 1, the water encountered in the upper 10 to 15 feet of the site is a perched water level. The actual true stabilized groundwater level is at approximately 20 feet bgs. The revised CAP will include information regarding perched water observations and measured groundwater levels from recently installed on-site wells.
11	General	--	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.	Language will be added to the CAP that the DOEE will be notified should new AOPCs be identified.
12	2.4	8	States soil vapor extraction (SVE) system removed approx. 9625 gallons of liquid (then an additional 1,350 gallons). o How did a SVE remove this much liquid, if any at all – is this a possible error?	As stated in the AEC Phase I, the "SVE system reportedly removed approximately 6,925 gallons of petroleum..." and "the pump and treat system removed an estimated 1.5 gallons of groundwater and 1,350 gallons of petroleum". The text will be updated to state that the SVE system removed the petroleum from soil (assumed) and not groundwater.
13	3.2	11	EPA RSLs referenced are from January 2015. Please be advised that EPA released an update to the RSLs in June 2015. o Please confirm standards prior to reporting.	The CAP will be revised to include a comparison to the June 2015 EPA RSLs.
14	3.2	10, 11	RSL reference date for soil and groundwater are different (both January 2015 and May 2014 referenced). o Please confirm standards.	The CAP will be revised to include a comparison to the June 2015 EPA RSLs.
15	3.2	11	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.	DC Tier 1 risk-based groundwater screening levels for indoor and outdoor inhalation for the resident child (a conservative approach to consider the site occupant - soccer players, visitors, etc.) were included with the groundwater screening levels as stated in Section 3.2.
16	3.4	13	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.	Excavation deeper than 10 feet below ground surface is not currently proposed. Contingency language will be added to state that if redevelopment plans change, DOEE will be notified and the CAP will be updated accordingly. In addition, by performing a HHRA before we begin excavating at the site, we will have a better idea as to how deep we need to excavate to protect human health and the environment.

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17	4	15, 16	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.	The section referenced in this comment indicates that the requested information is in Appendix A. Additional clarification will be added in this section as to the content of Appendix A, which details how soil will be screened (using visual and olfactory observations, PID readings, and historical information), and how it will be segregated during redevelopment activities. An environmental consultant will provide oversight at all times during redevelopment activities as stated in the text.
18	5.1	18	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.	Confirmation soil samples will be collected at the rate of 1 sample per 400 square feet of excavation bottom at AOPCs as stated in the text. If the entire site will not be excavated to 10 feet bgs (as revised redevelopment plans suggest), sidewall samples may also be collected at AOPCs at the rate of 1 sample per 200 square feet of excavation sidewall. This will be added to the text. Additionally, language will be added to state that one sample will be collected for laboratory analysis within each grid that was not previously sampled. Samples will be analyzed for chemicals of potential concern that will be defined after completion of the HHRA including the soil gas survey prior to redevelopment activities. The HHRA will be conducted to identify what mitigation and/or remediation is warranted to be protective of human health and groundwater quality. A post-remediation HHRA will also be conducted after excavation and confirmation samples will be collected and analyzed to verify no further remediation is required. This language will be added to the CAP.
19	3.2	10	Screening Levels (soil) o 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).	See response to Comment 13
20	3.2	11	Screening Levels (groundwater) o 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 o Surface water standards used for potential impacts to surrounding surface water bodies?	Non-petroleum chemicals results were compared to MCLs. Surface water standards (DC Tier 1 surface water standards) will be used as the water quality objectives for assessing threat to groundwater/surface water due to chemical leaching; since groundwater is not being used for municipal purposes and the Anacostia River is situated adjacent to the site. It is proposed that soil samples be analyzed using the SPLP test to derive groundwater/surface water protection levels for soil that are protective of these water quality objectives.

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21	3.3.6	12	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?	As the comment indicates the detection limits for select VOCs and SVOCs exceeded the groundwater screening levels, although the results were reported as non-detect. However, since groundwater will not be encountered during redevelopment and is not a source of potable water, it will not be further assessed.
22	3.4	13	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.	Section 5.3 will be revised to state that a soil gas survey will be conducted before redevelopment activities to assess the potential for vapor intrusion into indoor air from VOCs in soil and groundwater. Once this survey is completed, a HHRA will be conducted to assess whether a VMS is warranted. If so, the VMS will be designed for installation during construction, and the design drawings submitted to DOEE for review prior to construction.
23	5.1	18	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.	A sampling and analysis plan will be added as an appendix to the CAP. The plan will include sampling frequency, AOPC locations, EPA analysis, and reporting requirements.
24	General	--	If during field activities, additional AOCs are observed, they should be sampled per the proposed plan and reported to DOEE	See response to Comments 11 and 18.
25	3.4	13	CAP states... "Monitoring and sampling soil remaining after excavation: o How is this proposed?"	This bulleted list refers to Section 4 which details the monitoring and sampling of removed soil.
26	3.4	13	CAP states... "Mitigating potential vapor intrusion risks during construction of the on-Site buildings". o How will this risk be determined? Will this be post HHRA?	See response to Comment 22.
27	4.1.3	16	CAP states... "once water is treated, it will be discharged to MS4...". o Please detail "how" the water will be treated and the sampling and analysis plan that goes along with the MS4 permit?	As stated in Section 4.1.3, the permit requires developing a sampling and analysis plan which will be the responsibility of the redevelopment contractor prior to discharging encountered water. The plan will, therefore, be available for review at the time the permit application is submitted.
28	5.1	18	CAP states..."Bottom confirmation soil samples will be collected and analyzed for the chemical constituents at AOPCs". o Will confirmation samples only be collected at AOPC (as shown on Figure 3) or throughout the footprint of the Site Boundary?	It is proposed that confirmation soil samples will be collected only after excavation at the excavation bottom and sidewalls at AOPCs and at the locations listed in the response to Comment 18.
29	5.1	18	• What analysis (and EPA Method) will be completed on the confirmation soil samples?	Samples will be analyzed for chemical constituents at AOPCs that require remediation (i.e., chemicals exceeding soil screening levels) using the methods consistent with the previous sampling.

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30	5.2	18	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". o 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.	It is assumed that an on-site receptor would not be exposed to soil present at depths greater than 10 feet bgs. Therefore, only the results of confirmation samples collected within the upper 10 feet of soil (i.e., the excavation does not extend to the depth of 10 feet below ground surface or the sample is collected at the excavation sidewall) and other in-place sample results will be included in the post-remediation human health risk assessment.
31	5.2	18	CAP states..."Soil deeper than 10 feet bgs with concentrations that exceed soil screening levels will therefore require no further remediation". o 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.	HHRA only considers direct contact with soil within the upper 10 feet. However, the leaching potential of soil within the entire vadose zone will be evaluated to assess potential threat to groundwater/surface water quality (see response to Comment 20). Residual concentrations that are determined to not pose a threat to human health or groundwater quality will not warrant remediation.
32	5.3	18	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.	See response to Comment 27.
33	5.3	18	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.	Noted. These guidance will be used in the pre-development HHRA and the post-remediation HHRA, if remediation is warranted.
Water Quality Division (WQD)				
34	General	--	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.	See response to Comment 1.

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35	General	--	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.	Noted.
36	2.1	6	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.	The text will be revised to state that groundwater samples were not collected at Parcel 1.
37	2.2	7	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.	Text will be revised to state that the analytical results exceeded the historical screening criteria.
38	2.2	7	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.	Noted.

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39	2.3	7	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.	Groundwater will not be encountered during the proposed redevelopment activities, therefore additional groundwater investigation will not be conducted at this time.
40	2.4	8	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.	Sample results from GTW-607-13-1A will be included in the CAP.
41	3.1	10	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.	See response to Comment 20.
42	3.3.6	12	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.	See response to Comment 1 and 20.
43	3.3.6	12	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.	See response to Comment 1.
Legends Project Development				

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44	General	--	In reviewing the CAP there appears to be no mention regarding remediation to the PEPCO easement or the public realm around the proposed DC United site. DC United assumes that any financial cost for remediation of these areas is outside the responsibility of DC United.	Noted.