Updated Table 1
Sample Matrix
Campus Bay, Richmond, California

Location	Proposed Sample Identification	DTSC Comment to Address	Matrix	Approximate Sample Depth (feet bgs)	Continuous Core Inspect for Cinder	VOCs	Dioxin	Sample Rationale
LOT 1								
Lot 1-2	Lot 1-48-(depth)	Vertical Characterization Greater than 20 feet bgs (Confirm MIP Results)	Groundwater	25		X		MIP results from Lot 1-2-MIP-1 indicated low VOC concentrations below 20 feet bgs. A grab groundwater sample will be collected from approximately 5 feet below the deepest indication of VOCs to confirm the MIP results and characterize the vertical extent of TCE beneath the Lot 1-2 area.
Lot 1-5	Lot 1-46-(depth)	Vertical Characterization Greater than 20 feet bgs (Confirm MIP Results)	Groundwater	37		X		MIP results from Lot 1-5-MIP-5 indicated low VOCs concentrations below 32 feet bgs. A grab groundwater sample will be collected from approximately 5 feet below the deepest indication of VOCs to confirm the MIP results and characterize the vertical extent of TCE beneath the Lot 1-5 area.
	Lot 2-47-(depth)	Lateral Characterization (Southwest) of Groundwater Greater than 20 feet bgs (Confirm MIP Results collected within the Lot 2-19 area)	Groundwater	25		X		MIP results from Lot 1-5-MIP-5 indicated elevated VOC concentrations in groundwater at approximately 25 feet bgs. MIP results from Lot 2-19-MIP-3 indicated low VOC concentrations in groundwater greater than 20 feet bgs at this location. Therefore, to monitor the 25-foot zone of groundwater indicated by the Lot 1-5-MIP-5 location, a grab groundwater sample will be collected from approximately 25 feet bgs.
Lot 1-MW-25	P-9-(depth)	Lateral Characterization (West) of Groundwater Shallower than 20 feet bgs. Assess groundwater flow direction northwest of the Site.	Groundwater	8-18	X	X		P-9 will be located approximately 400 feet northwest of the Lot 1-MW-25 area. The grab groundwater sample collected from this new piezometer will help characterize the lateral extent of VOCs to the west of the Lot 1-MW-25 area. Water elevation data collected from P-9 will be assessed in conjunction with MW-25, MW-26, and MW-27 and will be used to monitor the groundwater flow direction in the northwestern portion of Lots 1 and 2; in particular, water elevation data from P-9 will be used to monitor the groundwater flow direction in the northwestern corner of the Site.
	Lot 1-40-(depth)	Vertical Characterization Greater than 20 feet bgs (Confirm MIP Results)	Groundwater	35		X		For groundwater deeper than 20 feet bgs in the Lot 1-MW-25 area, the vertical extent of VOCs in groundwater was characterized by MIP borings MW-25-MIP-1.-3, -4, and -5 to be approximately 30 feet bgs. These results will be confirmed with grab groundwater samples collected from proposed locations Lot 1-42, -41, -40, and -43.
	Lot 1-41-(depth)		Groundwater	35		X		
	Lot 1-42-(depth)		Groundwater	35		X		
	Lot 1-43-(depth)		Groundwater	35		X		
	Lot 1-44-(depth)	Lateral Characterization (South and East) of Groundwater Shallower than 20 feet bgs. Assess groundwater flow direction northwest of the Site.	Groundwater	25		X		MIP results collected from the MW-25 area indicate VOCs in groundwater from approximately 20 to 30 feet bgs. Therefore, to assess the extent of VOCs in groundwater at 25 feet bgs, south and east of the MW-25 area, Lot 1-44 and Lot 1-45 will be advanced.
	Lot 1-45-(depth)		Groundwater	25		X		

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LOT 2								
Lot 2-27	Lot 2-49-(depth)	Vertical Characterization Greater than 20 feet bgs (Confirm MIP Results)	Groundwater	30		X		MIP results collected from the Lot 2-27 area indicated that the extent of VOCs in groundwater extends to approximately 24 feet bgs. Therefore, a confirmation sample will be collected from approximately 30 feet bgs.
Lot 2-17 and CPT-5	P-7-(depth)	Lateral Characterization (West) of Groundwater Shallower than 20 feet bgs. Assess groundwater flow direction along western portion of the Site.	Groundwater	8-18	X	X		The proposed location of new piezometer P-7 is approximately 60 feet west of the Lot 2-17 grab groundwater sample location and approximately 150 feet west of Lot 2-CPT-5. The grab groundwater sample collected from P-7 will help characterize the lateral extent of TCE in groundwater shallower than 20 feet bgs to the west-southwest of Lot 2-17. The proposed location of new piezometer P-8 is on the UC Field Station property and approximately 350 and 400 feet west-northwest of Lot 2-17 and Lot 2-CPT-5, respectively. The grab groundwater sample from P-8 will be assessed to characterize VOCs in shallow groundwater west of Lot 2-27 and UCB-4. The depth to groundwater data collected from the two piezometers will be assessed in conjunction with the depth to groundwater measured at piezometer P-9 (see MW-25 discussion) and from monitoring wells MW-25, MW-26, and MW-27, to evaluate groundwater flow direction along the western property boundary.
	P-8-(depth)			8-18	X	X		
LOT 3								
Lot 3	Lot 3-2A	Additional soil samples to be collected for dioxin analysis. Results to be incorporated into the Human Health Risk Assessment	Soil	1.5			X	The DTSC conducted a preliminary risk screening calculation on the dioxin data collected at the Site previously. The DTSC determined that, based on the dioxin toxicity equivalency concentrations (TEQ), the risk is equivalent to a maximum of $3X10^{-6}$, which is within the acceptable risk range established by the U.S. Environmental Protection Agency. The DTSC required that the potential risks posed by the dioxins will need to be incorporated into the risk assessment. However, the sample size collected within Lot 3 represents an insufficient data set for risk assessment purposes, and,, therefore the DTSC required that six additional samples be collected from Lot 3 at an approximate depth of 1.5 feet bgs and submitted to an analytical laboratory for dioxin analysis.
	Lot 3-13A		Soil	1.5			X	
	Lot 3-19A		Soil	1.5			X	
	Lot 3-21A		Soil	1.5			X	
	Lot 3-27A		Soil	1.5			X	
	Lot 3-52A		Soil	1.5			X	

Notes:

bgs: below ground surface

DTSC: Department of Toxic Substances Control

MIP: membrane interface probe

TCE: trichloroethene

VOCs: Volatile organic compound analysis by Environmental Protection Agency (EPA) Method 8260

X: Compounds for which grab sample collected will be analyzed