



November 3, 2022

Ms. Amanda Mauceri
Dauntless Development
2419 Michigan Ave., Suite E
Santa Monica, CA 90404

Subject: Report of Additional Soil, Soil Vapor, and Groundwater Assessment
Garden Palms
101 Garden Street, Santa Barbara, CA 93101
SMU Site #749
APNs 017-630-008; -009, -018, -021, -024, -027

Dear Ms. Mauceri,

The Santa Barbara County Public Health Department, Environmental Health Services (EHS), Site Mitigation Unit (SMU) has reviewed the following documents prepared by GeoEnviro Services Inc. (GESI): *Report of Additional Soil, Soil Vapor, and Groundwater Assessment (Assessment Report)*, dated June 30, 2022 and *Addendum to Report of Additional Soil, Soil Vapor, and Groundwater Assessment (Addendum)*, dated October 26, 2022. Work was conducted in March of 2022 in accordance with the June 11, 2019 work plan and EHS' July 24, 2019 conditional approval letter. The proposed development project consists of the merger of six parcels, removal of all existing structures, and the construction of a new 152,346 square foot hotel with 250 rooms and 83,344 square foot subterranean parking garage. The project includes a total of 266 parking spaces (232 below ground and 34 at grade) as well as seven check-in spaces at the entry. Grading would consist of 25,500 cubic yards of cut with no fill.

Previous site assessment and remediation included the removal of an Underground Storage Tank (UST) and impacted soil in 1992. The UST case was granted case closure in 1994. A sitewide soil and groundwater assessment was conducted by Rincon Consultants in 2012, with additional soil and groundwater assessment conducted by GESI in 2016. Total Petroleum Hydrocarbons (TPH), select Volatile Organic Compounds (VOCs) and select metals were detected in soil and groundwater in excess of applicable Environmental Screening Levels (ESLs).

The *Assessment Report* documents the collection of soil, groundwater, and soil vapor samples as follows:

1. Five soil borings were drilled using direct push methods to a depth of 8' below ground surface (bgs) with soil samples collected at depths of 3', 5', and 8' bgs;
2. Fifteen soil/Hydropunch borings were drilled using direct push methods to a depth of approximately 15' bgs with soil samples collected at 3', 5', 8' bgs and groundwater samples collected;

3. A total of 60 soil samples were analyzed for TPH full range, VOCs, Semi-Volatile Organic Compounds (SVOCs) including creosote and pentachlorophenol, and Title 22 metals;
4. A total of 15 groundwater samples were analyzed for TPH as gasoline (TPHg), VOCs, SVOCs (including creosote compounds and pentachlorophenol), and Title 22 metals. Metal samples were filtered by the lab prior to analysis/preservation. Shallow groundwater was identified in March 2022 at depths of approximately 8.5' to 9.5' bgs; and
5. Soil vapor samples were collected from fourteen temporary direct push probes that were drilled to a depth of 5' bgs. No soil vapor sample was collected from location SV-1 due to the presence of clay, which did not produce sufficient vapor flow at the time of sampling.

As identified in a 2016 Phase I, the Envirostor Database indicated that the site was used as 'bomb storage'. Research was conducted by GESI and InDepth Corporation concerning the historical use of munitions on or near the project site. There is reference to an old munitions bunker but no mention of its location other than it was used for storage by the University of California, Santa Barbara. Neither GESI or the InDepth UXO Technician found any indication that an old storage bunker was located on the project site. In speaking with the property manager, no buildings were historically located onsite that would meet the description of a munition's storage bunker (generally constructed of thick-walled concrete). On March 29, 2022, a UXO trained field technician employed by InDepth Corporation completed a surface visual survey and surface scan of the proposed soil boring locations using a hand-held magnetometer. This survey did not encounter surface indications of any UXO, Discarded Military Munitions (DMM), nor Munitions Debris (MD) and no magnetometer indication of metal anomalies on/near the surface (within 18-inches below ground surface).

Artificial fill was observed in 11 of 20 of the soil borings including SB-2, -3, -4, -5, -6, -8, -9, and -13, which were located on the northern portion of the site, and SB-15, -19, and -20, which were located on the southern portion of site. Artificial fill was present from below concrete, asphalt or gravel surface pavement and generally extended to depths ranging from 4.5' to 7' bgs and to depths greater in SB-13 and SB-20 (8' bgs) and SB-19 (10' bgs). Artificial fill generally consisted of medium to dark brown, fine to coarse grained silty sand with minor degraded concrete rubble. A sewer odor was noted in boring SB-7 at a depth of 5' bgs. Petroleum odor was observed in SB-15 between 4.5' and 15' bgs and slight petroleum odor and black soil were noted in SB-19 at 6' bgs.

Select soil samples contained naphthalene, styrene, TPH as diesel (TPHd), and TPH as motor oil (TPHo) above their respective Tier 1 ESLs, and TPHg above EHS' Investigation Level (IL). Additionally, select metals were reported in excess of of respective Tier 1 ESLs and Soluble Toxicity Threshold Criteria (STLC) in certain samples.

Benzene and ethylbenzene were detected in select soil vapor samples at concentrations in excess of their respective commercial/industrial ESLs for vapor intrusion. Tetrachloroethene (PCE) was also detected in two samples in the central portion of the site at concentrations above it Tier 1 ESL, but below its commercial/industrial ESL.

In groundwater, the VOCs MTBE, Trichloroethene (TCE), cis-1,2-Dichloroethene (cis 1,2-DCE) exceeded their respective Tier 1 ESLs. The majority of groundwater samples contained dissolved arsenic, barium, and lead above Tier 1 ESLs. In addition, select samples contained beryllium and selenium in excess of their respective Tier 1 ESLs.

The *Assessment Report* concludes that onsite artificial fill exists in the southeast, south and southwest portions of the site. The primary constituents of concern are TPHg, TPHd, and TPHo in shallow soil, metals including arsenic, cadmium, copper, lead, molybdenum, selenium, thallium,

vanadium, and zinc in soil. In soil vapor, chemicals of concern include benzene, ethylbenzene, and PCE. VOCs including MTBE, TCE, and cis1, 2 DCE and arsenic, barium, beryllium, lead and selenium are chemicals of concern in shallow groundwater.

The *Assessment Report* concludes that localized TPHg is likely from a former UST, with TPHd and TPHo from onsite releases related to historical industrial use. Elevated metals are likely attributed to artificial fill. Soil vapor impacts appear to be sourced near building 1 and coincide with dissolved phase TCE and 1,2-DCE in groundwater. The source is not known and may be related to historical property use. Dissolved MTBE may be from a source in the northern portion of the site or potentially from an off-site source to the north.

The *Assessment Report* concludes that concentrations of TPH, VOCs, SVOCs, and metals in soil generally appear to be acceptable for the planned development except for localized areas of TPH and Title 22 metals exceeding commercial screening levels that can be excavated and properly disposed once structures and materials have been removed from the site. Further delineation of TPHd in soil in the vicinity of SB-15 may be necessary prior to removal. Concentrations of soil vapor samples collected at depths of 5' bgs exceed commercial ESLs. Further delineation should be considered and potentially required by EHS. Overall, contaminant concentrations appear sufficiently low and localized, and do not warrant remediation. However, mitigation measures such as a vapor barrier will likely be necessary. It is noted that after building demolition, localized soil remediation by excavation (for TPH and lead impacted soil), and site grading, any residual VOC concentrations in soil will diminish. Additional testing to confirm removal may be warranted after grading. Low concentrations of VOCs in groundwater that were slightly above their respective MCLs were noted. However, no additional assessment or remediation of Groundwater is proposed. If dewatering is required for redevelopment, treatment or transportation and proper disposal would likely be necessary.

The *Assessment Report* recommends preparing an updated Site Remediation Feasibility Study (FS) that incorporates the updated site assessment data into the Site Conceptual Model. This will evaluate scope of remediation necessary under unrestricted and commercial/Land Use Covenant scenarios. After that, the *Assessment Report* recommends preparation of updated remedial action plan and a soil management plan.

The *Addendum* includes figures showing dissolved metal concentrations in groundwater in excess of MCLs with metal concentrations in soil in excess of Tier 1 ESLs. It also includes a site map showing the footprint of the proposed hotel building including underground parking areas. Additionally, site maps showing all COCs in soil in excess of Tier 1 ESLs and 100 mg/kg for TPH are provided. The hotel layout is also provided on one of the figures.

After a careful review of the *Assessment Report*, *Addendum* and site file, EHS has the following comments and directives:

1. Select groundwater samples exceed their respective MCLs for methylene chloride, MtBE, vinyl chloride, TCE, cis-1,2-dichlorethene, lead, barium, arsenic, selenium, and beryllium. Permanent groundwater wells are required to establish contaminant trends and groundwater flow directions (see item #4f below). EHS will ultimately review these data with the Central Coast Regional Water Quality Control Board to determine the path forward with respect to these constituents in groundwater.
2. Select soil vapor samples exceed their respective Tier 1 and/or commercial/industrial ESLs for PCE, benzene, and ethylbenzene. A soil vapor survey will be required to evaluate the vapor intrusion potential based upon the final site excavation parameters. This may be done once the excavation has been completed, if soil that will be removed for the underground parking garage contains volatile constituents the may affect the soil vapor

results. If this is not the case, then the soil vapor survey would need to occur prior to excavation. Based upon the site data, a vapor mitigation system may be required to be incorporated into the building design and may require provisions to allow for post construction sub-slab monitoring and passive venting with an option to convert the system to active venting.

3. Select soil samples exceed their respective Tier 1 ESLs for select metals and TPH, with select samples additionally exceeding their respective commercial/industrial and/or construction worker ESLs.
 - a. EHS notes that Cadmium exceeded the STLC in three samples, GP2-3, GP2-5, and GP9-5. These areas would be considered hazardous waste for disposal purposes and ultimately will need to be removed prior to mass grading under a remedial action plan.
 - b. Select samples for lead and thallium additionally exceed their respective construction worker ESLs.
 - c. Many samples contained various metals in excess of Tier 1 and/or commercial industrial ESLs. TPH exceeds the EHS Investigation Level of 100 mg/kg in many samples.
 - d. EHS requires all Constituents of Concern (COCs) that are above their respective Tier 1 ESLs, EHS Investigation Levels and/or background levels to be vertically and laterally delineated. This will be required such that post excavation the mass and volume of residual metals at the site can be calculated. In the remedial action plan, present figures (including plan views and cross sections) and tables depicting the areas and samples that will be removed by the excavation and the location and samples of COCs that will remain in place. This will assist EHS in determining if the proposed remediation is acceptable and if a Land Use Covenant is required.
4. EHS generally requires delineation of all contaminants of concern to the Tier 1 ESLs prior to development of a corrective action plan. Submit a workplan for the data gaps identified in the *Assessment Report* as follows:
 - a. The lateral extent of TPHd in soil boring SB15;
 - b. The lateral extent benzene in soil vapor to the west and south of SV-7 and SV-8;
 - c. The lateral extent of MtBE in groundwater north of SB6;
 - d. The lateral extent TCE in groundwater to the west and southwest of soil boring SB15;
 - e. Assessment of 20' setback area near Garden Street. This appears to be a drainage area and it has not yet been assessed. EHS generally requires drainage areas to be verified to be free of contaminants to their leaching to groundwater ESLs;
 - f. With respect to groundwater COCs, EHS requires the installation of permanent monitoring wells. Propose several well locations in the work plan to identify onsite or offsite sources. Position wells where they wont conflict with excavation if possible. Future groundwater monitoring and/or remediation may be required based on multiple rounds of groundwater monitoring and consultation with the Central Coast Regional Water Quality Control Board.
5. Upload to GeoTracker with email confirmation to EHS a work plan that addresses the above items by **December 14, 2022**.
6. Groundwater is approximately 9' bgs at the project site. Dewatering and long-term maintenance will likely be required due to subterranean parking. Consider this in the redevelopment plans.
7. EHS generally considers commercial/industrial ESLs applicable to a hotel development. However, remediation to levels above unrestricted land use (Tier 1 ESLs) may require a Land Use Covenant as a condition of case closure.
8. Include information on identifying potential UXO in the Health and Safety Plan (HASP) and notice to workers.

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If you have any questions regarding this letter, please contact me at (805) 346-8345. Written correspondence regarding this matter should be sent to EHS at 2125 S. Centerpointe Parkway, Room 333, Santa Maria, CA 93455 or via email to Marissa.censullo@sbcphd.org.

Sincerely,



Marissa Censullo
Hazardous Materials Specialist
SMU Program

Ec:

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Mr. Greg Bishop, Central Coast Regional Water Quality Control Board (Greg.Bishop@waterboards.ca.gov)
GeoTracker Database

Mlc/tmr: 749_20221028