

October 20, 2022

Alyx Karpowicz
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street #1400, Oakland, CA 94612

Subject **Response to California Environmental Quality Act (CEQA) Checklist – 3775 Bayshore Blvd, Brisbane, CA**

Dear Alyx,

On behalf of Univar Solutions USA Inc. and VWR International, LLC (collectively, “Univar/VWR”), EHS Support LLC (“EHS Support”) has prepared this response to the California Environmental Quality Act (CEQA) environmental checklist for planned thermal conductive heating (TCH) at 3775 Bayshore Boulevard in Brisbane, California (**Figure 1**).

Project Information

1. Project Title: Parcel B Thermal Remediation
2. Lead Agency Name and Address: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street #1400, Oakland, CA 94612
3. Lead Agency Contact Person and Contact Information: Alyx Karpowicz, 510-622-2427, Alyx.Karpowicz@waterboards.ca.gov
4. Project Location: 3775 Bayshore Boulevard, Brisbane, CA 94005
5. Party Performing Remediation Name and Address: Univar Solutions USA Inc., 3075 Highland Parkway, Suite 200, Downers Grove, Illinois 60515
6. Party Performing Remediation Contact Person and Contact Information: Greg White, 224-422-6261, greg.white@ehs-support.com
7. General Plan Designation: Remediation on developed commercial land.
8. Zoning: TC-2 (Southeast Bayshore Commercial District).
9. Project Description: see Project Description section below.
10. Surrounding Land Uses and Setting: see Project Description section below.
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? No

Project Description

Project Background

The Property consists of three contiguous parcels of property located at 3745 and 3775 Bayshore Boulevard, totaling 15.2 acres: (1) APN 007-150-030 (“Parcel A”); (2) APN 007-150-040 (“Parcel B”); and (3) APN 007-150-070 (“Parcel C”). The Property and all three parcels are shown in **Figure 2**. The proposed TCH remediation activities will be carried out on Parcel B (“Site”) only.



The Property is relatively flat, almost completely covered by hardstand areas (e.g., buildings with concrete slab floors, asphalt/concrete parking areas), and has a nominal surface elevation of 10 feet (ft) above mean sea level. According to the City of Brisbane zoning map, the Property is zoned TC-2 (within the Southeast Bayshore Commercial District).¹ According to the Association of Bay Area Governments Resilience Program, the Property is located in a very high liquefaction susceptibility hazard area, a violent shaking hazard area (based on a magnitude 7.8 earthquake along the San Andreas Fault), and a minimal flood hazard area (between 0.2 and 1 percent annual chance of flood) (Federal Emergency Management Agency flood zone X).²

Adjoining the eastern side of the Property is the Caltrain right-of-way that runs northwest to southeast. East of the Caltrain right-of-way is the Brisbane Lagoon, which is to the north and east of the Property. Brisbane Lagoon is a remnant of San Francisco Bay (“Bay”) created during the construction of U.S. Highway 101 in the 1950s. Brisbane Lagoon is connected to the Bay through a series of channels that cross under U.S. Highway 101 at the northeastern end of the lagoon at the Brisbane Lagoon Fisherman’s Park. Land to the south is open space surrounding a freeway overpass and the convergence of Bayshore Boulevard and U.S. Highway 101. Land use to the west across Bayshore Boulevard includes residential and commercial/light-industrial developments. The Property is at the base of San Bruno Mountain; the elevation of Bayshore Boulevard immediately west of the Property is generally at least 30 ft higher.

Parcel A is improved with an approximately 225,000-square-foot concrete warehouse, as well as office buildings constructed in the early 1960s (**Figure 3**). Parcel B is improved with an approximately 80,000-square-foot concrete tilt-up building, constructed in 1980, with two adjacent tenant spaces (northern and southern), each of which is comprised of two smaller warehouse areas (**Figure 4**). Parcel C is a small contiguous parcel to Parcel B, known as the Tunnel Property, where an old rail line used to run through San Bruno Mountain (**Figure 5**). The parcel is improved with a paved parking area and fencing; there are no buildings on Parcel C (**Figure 2**).

Parcel A was historically used for warehousing and distribution of general scientific supplies and prepackaged chemicals. Administrative operations were also conducted at Parcel A. The Parcel A warehouse building was cleaned and decommissioned from January 2013 to December 2014 as part of the facility closure. The closure work was overseen by San Mateo County Environmental Health Department (SMCEHD) and was conducted in accordance with Title 22 of the California Code of Regulations (CCR), Sections 66265.111 and 66265.114, which require the decontamination and closure of facilities that have handled hazardous materials and wastes. Closure activities were documented in the Facility Closure Report (ERM, 2015), approved by SMCEHD in March 2015 (SMCEHD, 2015). The Parcel A warehouse is currently vacant and is planned to be re-occupied for commercial freight forwarding operations beginning in 2022.

Parcel B was historically used for storage of pure-phase chemicals and blended product in aboveground storage tanks; presumably transferred to/from a bulk loading/unloading area via rail and truck. Based on a review of aerial photographs, the aboveground storage tanks and associated piping and appurtenances were removed between 1975 and 1980, before the construction of the existing warehouse building in 1980. The Parcel B warehouse is currently vacant and is planned to be re-leased

¹ <https://www.brisbaneca.org/cd/page/zoning-information>

² <http://resilience.abag.ca.gov/earthquakes/sanmateo/>



for commercial freight forwarding operations following the completion of the planned TCH remediation activities.

Parcel C was not used for historical operations, is not listed in the Brownfields application that requested agency oversight of investigation and remediation at Parcel A and Parcel B, and does not require remediation based on investigation data collected at Parcel B that has confirmed that organic contamination subject to remediation at Parcel B has not migrated to Parcel C. Based on a review of aerial photographs, Parcel C was undeveloped, vacant land before 1946. By 1950, an old rail line was constructed that ran across the parcel and through San Bruno Mountain. By 1968, the old rail line was removed and the parcel appeared to be used as an unpaved parking area. By 2005, the parking area was paved and appeared similar to its current configuration.

Since 2013, Univar/VWR have performed voluntary environmental investigation activities at the Property with regulatory oversight provided by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB). Although there are no documented releases, investigation data identified three distinct areas with different potential release mechanisms at Parcel B (**Figure 5**) (EHS Support, 2018):

- Former Chemical Tank Farm Area
- Former Railspur
- Former Catch Basin

Site investigations confirmed that sufficient non-aqueous phase liquid (NAPL) mass was released within the Former Chemical Tank Farm Area to facilitate downward NAPL migration through the fill and Young Bay Mud to the Old Bay Mud contact (at a depth of approximately 55 ft below ground surface [bgs]), but insufficient mass was released to facilitate pooling at these contacts. While NAPL was historically mobile, through a combination of natural mass loss mechanisms and limiting geologic factors, the remaining NAPL mass is predominantly immobile, concentrated at the fill and Young Bay Mud contact in these areas, and present as small droplets or groups of droplets in isolated pore spaces. Further, the investigations indicate that the areas of NAPL impacts are localized, and the extent of impacts is confined to Parcel B.

Historical releases along the Former Railspur and in the Former Catch Basin were likely attributable to point sources that were surficial. NAPL in these areas is limited predominantly to the fill and, to a limited extent, the Upper Young Bay Mud. Consistent with the findings in the Former Chemical Tank Farm Area, NAPL is predominantly immobile in these areas.

Most of the constituent mass is present as NAPL with approximately 90 percent of NAPL mass within the Former Chemical Tank Farm Area. Vertically, most of the mass is present at the fill/Young Bay Mud contact (at depths ranging from approximately 10 to 35 ft bgs) in the Former Chemical Tank Farm Area and the fill in all other areas (at depths ranging from approximately 0 to 15 ft bgs).

Soil impacts are generally limited to the vicinity of NAPL impacts, and groundwater impacts attenuate rapidly downgradient of these areas. Natural degradation is contributing to constituent mass destruction at the Site.



Site investigations have indicated that the following organic constituents for soil and groundwater in Parcel B require remediation:

- Petroleum hydrocarbons
- Chlorinated volatile organic compounds (VOCs)
- 1,4-dioxane

Based on the Site characterization (EHS Support, 2018), development of cleanup levels (EHS Support, 2020), and pre-design investigation activities (EHS Support, 2022), the lateral extents subject to active remediation were identified for the 0 to 5 ft bgs, 5 to 15 ft bgs, and 15 to 55 ft bgs depth intervals (**Figure 6**, **Figure 7**, and **Figure 8**, respectively).

Remedial Approach

As detailed in the Interim Remedy Implementation Plan (Appendix G of the Pre-Design Investigation Report [EHS Support, 2022]), interim remedial measures at the Site included soil source removal (excavation) for impacts located south of the existing warehouse building (**Figure 9**; areas B-1 through B-4). Interim measure soil excavation was completed from May to July 2022. Therefore, the total areal treatment extent for TCH is approximately 23,500 square feet. Greater than 85 percent of the total treatment area is located beneath the existing warehouse building (**Figure 10**).

The TCH configuration is shown in **Figure 10**. Most of the equipment (e.g., heater cans and conveyance piping) will be located inside the existing building with a few heater cans outside, east of the building. The thermal oxidizer will be located in the southern parking lot. The thermal oxidizer consists of a discharge stack that will be 2 feet in diameter and 45 feet above ground surface. Vertical extraction wells (co-located in boreholes with heater wells) will be used to remove the vaporized contaminants and steam.

The goal of this project is to implement a remedy that is protective of public health and the environment and enables continued industrial/commercial land use, consistent with the goals of the RWQCB Brownfields Program. TCH is the proposed final remedy at Parcel B. TCH has been identified for the following reasons:

- Tenant vacancy provides a near-term window of opportunity to gain access to the Site for remediation, which will minimize disruption to Site operations.
- TCH remediation timeframes are generally short (on the order of one to two years) and require less long-term operations, maintenance, and monitoring than *in situ*, containment, and controls-based remedies.
- Site hydrogeology and the presence of contamination in the low permeability Young Bay Mud (extending to 55 ft bgs) beneath the warehouse inherently limit other remedial options.
- Dissolved-phase and vapor-phase concentrations decrease significantly with distance from NAPL and soil source areas (i.e., there is not a long plume emanating from the source areas) enhancing the ability to treat contamination in all phases with a source removal remedy.
- TCH is reasonably expected to achieve the RWQCB-approved Remedial Action Objectives and Cleanup Levels.
- TCH aligns with the Brownfields program goals by enabling continued Site use as an industrial/commercial property following remediation.
- TCH aligns with Property owner and stakeholder goals of expeditiously remediating the Site.



The following provides an overview of the various steps of the proposed TCH remedy.

Thermal Conductive Heating Approach:

- TCH is proposed to remove organic contamination from the subsurface at the Site from depths ranging from 0 to 55 ft bgs via thermal desorption and vaporization of contaminants by heating the subsurface to approximately 100 degrees Celsius (°C). Most of the contaminant mass is located beneath the water table at the fill/Young Bay Mud contact.
- The TCH design indicates a heater spacing of approximately 15 feet to heat groundwater within the treatment areas to its boiling point.
- Vertical extraction wells (co-located in boreholes with heater wells) will be used to remove the vaporized contaminants and steam, and to maintain pneumatic and hydraulic control.

Vapor and Liquid Treatment Approach:

- Extracted vapor will be treated using a thermal oxidizer permitted through the Bay Area Air Quality Management District (BAAQMD), due to the high mass present at the Site. In the event of a potential outage of the thermal oxidizer, a backup vapor treatment system will be constructed before startup. The backup system will contain a bypass process vacuum blower, three Vapor-Phase Granular Activated Carbon (VGAC) vessels in series, followed by one potassium permanganate vessel.
- Condensate and vapor will be treated using moisture separators, and pumped through an oil-water separator, bag filters, and two Liquid-Phase Granular Activated Carbon (LGAC) vessels in series.

Monitoring:

- The temperature will be monitored throughout the TCH operation to track subsurface heating.
- Vapor and liquid treatment systems will be monitored for mass removal and discharge compliance.

Treatment will occur under the air and water discharge permit provisions. Treated effluent will be discharged to the publicly owned treatment works (POTW) in accordance with applicable San Francisco Public Utilities Commission (SFPUC) permit requirements. EHS Support has been working closely with the BAAQMD to ensure effluent vapors from the thermal oxidizer are below applicable quality standards. The Air Permit (application number 31446) for the Site was approved by the BAAQMD on August 10, 2022, pursuant to the Bay Area 2017 Clean Air Plan, which is the applicable plan for San Mateo County.

The TCH remedy is anticipated to take approximately 1.5 years (mobilization through demobilization and decommissioning). Pending the requisite approvals and issuance of permits, mobilization for drilling and well installation is anticipated to begin in November 2022. The following are the key components of the proposed remedy:

1. Work Plan and Permitting
2. Premobilization/Procurement
3. Mobilization and Setup
4. Drilling and Well Installation



5. Cover Installation
6. Well Field Piping
7. Electrical Installation
8. Treatment System Installation
9. Install Monitoring and Instrumentation
10. Pre-Startup and Shakedown
11. Operation
12. Decommissioning
13. Remove Heaters/Wells/Cover
14. Site Restoration
15. Site Clearance and Demobilization
16. Final Report

Following demobilization, post-remediation monitoring will be conducted in accordance with RWQCB-approved plans.

Environmental Factors Potentially Affected

As discussed in the Project Description section, EHS Support has been working closely with stakeholders and regulators to assure any potential future impact will be mitigated at the Site. The environmental factors listed in the *CEQA Appendix G: Environmental Checklist* form are evaluated below. Based on the mitigation measures already in place or planned as part of remedy construction, this project will not have a significant impact on the environment with mitigation incorporated; therefore, a *Less Than Significant Impact with Mitigation Incorporated* determination has been made for this project.

I. Aesthetics.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Evaluation: Parcel B is developed commercial land consisting of a warehouse building with two adjacent tenant spaces (northern and southern), each of which is comprised of two smaller warehouse areas (**Figure 4**). The building height extends to approximately 28 feet above ground surface. Most of the equipment will be located inside the existing building and the heater cans, which are located outside and east of the building, will not be visible to the public as they will be approximately 3 feet above the ground, and are therefore blocked from view by the existing building (**Figure 10**). The discharge stack, located in the southern parking lot, will be 2 feet in diameter and 45 feet above ground surface and will be standing taller than the existing building. However, the remedial approach is temporary (approximately 1.5 years) and will have no permanent structure on-site; therefore, there is no substantial effect on the Site’s aesthetic.

Conclusion: The project will have **No Impact** because the remedial approach is temporary (approximately 1.5 years) and will have no permanent structure on-site.

Mitigation Measures: None.

II. Agriculture and Forestry Resources.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Evaluation: According to the City of Brisbane zoning map, the Property is zoned TC-2 (within the district Southeast Bayshore Commercial District; <https://www.brisbaneca.org/cd/page/zoning-information>).

Conclusion: The project will have **No Impact** because there is no proposed change to the current zoning code.

Mitigation Measures: None.

III. Air Quality.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Evaluation: Construction activities at the Site are limited to drilling the vertical extraction wells, which will not cause significant dust. Vertical extraction wells will be used during active remedial operations to remove the vaporized contaminants and steam from the subsurface and the extracted vapor will be treated using a thermal oxidizer. The Bay Area 2017 Clean Air Plan (CAP) (BAAQMD, 2017) is the applicable air quality plan for San Mateo County. EHS Support obtained an Air Permit (application number 31446) for the Site for this remedy approach, which was approved by the BAAQMD.

Air quality non-attainment maps according to California Air Resources Board (<https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>) for the San Francisco area show “non-attainment” of:



- Federal standards for 1) 8-hr ozone and 2) PM2.5 (fine particulates)³
- State standards for 1) ozone and 2) PM2.5 (fine particulates)

The project will not result in a cumulatively considerable net increase of ozone or fine particulates because 1) ozone is not a byproduct in emissions from the thermal oxidizer/scrubber and 2) *de minimis* fine particles in the thermal oxidizer exhaust will be removed by the wet scrubber.

Conclusion: The project will have a **Less than Significant Impact with Mitigation Incorporated** because EHS Support has an Air Permit for the Site, the project will not conflict with or obstruct the implementation of the 2017 CAP (BAAQMD, 2017), and the project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Mitigation Measures: The use of BAAQMD air permit-required emissions control technology(ies) is proposed to prevent violation of permitted air quality standards (application number 31446).

IV. Biological Resources.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

³ PM2.5 is particulate matter (PM) that have a diameter of less than 2.5 micrometers.



d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: As provided in the Project Background, the Property is predominantly comprised of hardstand areas that do not provide suitable habitat for flora and fauna. A narrow strip of partially vegetated land is present on the eastern side of the Site. The vegetation in this area is maintained for facility operations. No water bodies or wetlands are present on the Property. TCH is proposed to remove organic contaminants from the subsurface at the Site via thermal desorption and vaporization of contaminants by heating the subsurface to approximately 100 °C. Vertical extraction wells (co-located in boreholes with heater wells) will be used to remove the vaporized contaminants and steam (**Figure 10**). The heater spacing will be approximately 15 feet to heat groundwater within the treatment areas to its boiling point. Temperatures above boiling are typically limited to less than 12 to 18 inches from heater borings and groundwater will return to ambient temperatures approximately 12 feet from the treatment areas. As shown in **Figure 11**, some heater cans are proposed to be located outside to the east of the existing building in unpaved areas currently covered with rock and debris from the former rail line. **Figure 12** illustrates the vegetation present in the area within and adjacent to the zone of influence of the heater cans to the east of the building.

An evaluation was conducted to determine if the TCH remediation would a) have the potential to cause adverse effects on species identified as candidate, sensitive, or special status; b) have the potential to cause adverse effects on riparian habitat or other sensitive natural communities; c) have the potential to cause adverse effects on federally protected wetlands as defined by Section 404 of the Clean Water Act; d) interfere substantially with the movement of fish or wildlife; e) conflict with any local policies or ordinances; or f) conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other conservation plans. The following text summarizes the findings of the evaluation for each of the five biological resources of interest. Given the limited footprint of the project and the existing developed nature of the property, a provisional United States Fish and Wildlife Service Information for Planning and Consultation (IPaC) search was conducted for the Site⁴. In addition, a field reconnaissance was carried out to assess whether the vegetation on-site was comprised of listed species or could be used as the host plant for listed insects (butterflies).

⁴U.S. Fish and Wildlife Service. Information for Planning and Consultation, <https://ipac.ecosphere.fws.gov/>, (accessed 6/8/2021).



Item a): The IPaC indicated 22 threatened or endangered (T&E) organisms in the vicinity of the Site as presented in **Table 1**. The Site is unlikely to provide suitable habitat for the listed mammals, birds, and reptiles provided above. Moreover, the footprint of the TCH remediation is localized to areas covered with buildings, concrete, and rock/debris of the former rail line and is not likely to result in any habitat modification to the surrounding developed land. Additional reconnaissance was conducted on June 10, 2022, to assess the vegetation present in the vicinity of the TCH and to confirm whether candidate or special status species were present. **Figure 12** provides a summary of this reconnaissance, which concluded that no candidate or special status plant species were present. Five threatened or endangered butterflies were present on the IPaC list. The presence of these species caused an additional review for the specific plant host species those butterflies rely on. A Site reconnaissance was conducted and none of the host plant species were identified.

Table 1 Summary of Listed Threatened and Endangered Species

Common Name	Scientific Name	Status
Mammals		
Salt Marsh Harvest Mouse	<i>Reithrodontomys raviventris</i>	Endangered
Southern Sea Otter	<i>Enhydra lutris nereis</i>	Threatened
Birds		
California Clapper Rail	<i>Rallus tongirostris obsoletus</i>	Endangered
California Least Tern	<i>Sterna antillarum browni</i>	Endangered
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	Threatened
Western Snowy Plover	<i>Charadrius nivosus</i>	Threatened
Reptiles		
Green Sea Turtle	<i>Chelonia mydas</i>	Threatened
San Francisco Garter Snake	<i>Thamnophis sirtalis tetrataenia</i>	Endangered
Amphibians		
California Red-legged Frog	<i>Rana draytonii</i>	Threatened
Fishes		
Delta Smelt	<i>Hypomesus transpacificus</i>	Threatened
Tidewater Goby	<i>Eucyclogobius newberryi</i>	Endangered
Insects		
Bay Checkerspot Butterfly	<i>Euphydryas editha bayensis</i>	Threatened
Callippe Silverspot Butterfly	<i>Speyeria callippe</i>	Endangered
Mission Blue Butterfly	<i>Icaricia icarioides missionensis</i>	Endangered
Myrtle's Silverspot Butterfly	<i>Speyeria zerene myrtleae</i>	Endangered
San Bruno Elfin Butterfly	<i>Callophrys mossii bayensis</i>	Endangered
Flowering Plants		
Franciscan Manzanita	<i>Arctostaphylos franciscana</i>	Endangered
Presidio Manzanita	<i>Arctostaphylos hookeri var. revenii</i>	Endangered
Robust Spineflower	<i>Chorizanthe robusta var. robusta</i>	Endangered
San Francisco Lessingia	<i>Lessingia germanorum</i>	Endangered
Showy Indian Clover	<i>Trifolium amoenum</i>	Endangered
White-Rayed Pentachaeta	<i>Pentachaeta bellidiflora</i>	Endangered



Items b), c), and d): The Caltrain right-of-way is situated between the Site and the Brisbane Lagoon (**Figure 13**). The Site and adjacent right-of-way do not have any riparian habitat as they are substantially elevated by historical fill materials. The southern end of Brisbane Lagoon has wetlands identified using the National Wetlands Inventory (NWI)⁵ as well as the California Aquatic Resource Inventory (CARI)⁶. The NWI listing designates the more northerly wetland feature as a lacustrine littoral wetland with an unconsolidated bottom and the feature farther to the southeast is a palustrine emergent wetland. Both features are given modifiers as the features are not natural. Rather, they are the result of the impoundment created to build Route 101, which created the Brisbane Lagoon. The spatial extents of the project and the area of influence of the TCH remedy are illustrated in **Figure 10** and **Figure 11**, respectively. The spatial extent of the area of influence of the TCH remedy is limited to the Site and immediate vicinity (within 15 feet of the eastern property boundary) and does not reach Brisbane Lagoon or any wetlands present on its southern end of the lagoon, which are located 115 feet or more from the Site (**Figure 13**). Therefore, the project is not likely to have a substantial adverse effect on any riparian habitat or other sensitive natural community. Additionally, the project is not likely to affect the wetlands and associated wetland flora and fauna. Finally, given the location of the project and Site characteristics, no interference in the movement of fish or wildlife is anticipated.

Item e): No tree removal or severe tree trimming is planned, so there is no conflict with the City of Brisbane’s tree preservation policy (City of Brisbane, 2021).

Item f): There are no statewide HCPs or NCCPs in the area. There is one local HCP in the area (the San Bruno Mountain Habitat Conservation Plan); however, the Site is outside the boundaries of the HCP management areas (San Mateo County Parks Department, 2008).

Conclusion: The project will have **No Impact** because it will not interfere with the adjacent water body and will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species.

Mitigation Measures: None.

V. Cultural Resources.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁵U.S. Fish and Wildlife Service. National Wetlands Inventory, <https://www.fws.gov/program/national-wetlands-inventory>, (accessed 10/17/2022).

⁶ San Francisco Estuary Institute & The Aquatic Science Center. California Aquatic Resources Institute, <https://www.sfei.org/it/gis/cari/>, (accessed 10/17/2022).



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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of dedicated cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Evaluation: The Property has been in commercial use since the early 1960s and the existing warehouse at Parcel B was constructed in 1980. No historical or archaeological resources have been identified at the Site and the short-term TCH remedy (approximately 1.5 years) will not materially change the existing developed nature of the Site.

Conclusion: The project will have **No Impact** because no historical or archaeological resources have been identified at the Site and the short-term TCH remedy (approximately 1.5 years) will not materially change the existing developed nature of the Site.

Mitigation Measures: None.

VI. Geology and Soils.

Would the project:

- | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii. Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii. Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| iiii. Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Evaluation: The project is short-term in nature (approximately 1.5 years), will be completed at a developed property (largely within the existing warehouse), will not require construction and/or demolition of any permanent structures, and will not require grade changes. Further, the thermal oxidizer emissions stack pad detail (**Figure 14**) was designed by a California Registered Professional Engineer to withstand wind and seismic loads. According to the Association of Bay Area Governments Resilience Program, the Property is located in a very high liquefaction susceptibility hazard area and a violent shaking hazard area (based on a magnitude 7.8 earthquake along the San Andreas Fault located approximately 5 miles from the site). According to the Alquist-Priolo Earthquake Fault Zoning Map, the Site is not located within an earthquake fault zone. Based on the potential changes TCH could make to the subsurface soils and structural concrete building elements (i.e., piles, grade beams, and slab), a structural and geotechnical assessment was conducted for the existing building at Parcel B (WJE, 2022).

The assessment concluded that *in situ* thermal heating could potentially reduce the pore water pressure in the existing fill materials and the top of the Young Bay Mud, thereby resulting in an increase in the effective stress. An increase in effective stress would cause settlement (WJE, 2022). Heating of the fill and Young Bay Mud would likely result in a temporary increase in the volume of these materials due to thermal expansion. However, to the extent that thermal expansion of the fill and Young Bay Mud occurs, WJE believes it would tend to reduce ground settlement (WJE, 2022).

The building will be monitored before, during, and after thermal remediation to assess the potential changes to the building structure as a result of thermal remediation. Restoration will be undertaken as needed to restore the building to service as a commercial building.

Conclusion: The project will have a **Less Than Significant Impact with Mitigation Incorporated** because although there is a potential that the proposed remedy might impact the subsurface and building structure, geologic and structural building conditions have been considered in the development of the remedial design. In addition, monitoring will be completed before, during, and after treatment to evaluate the building condition and minimize the scope and extent of potential repairs (WJE, 2022).

Mitigation Measures: No additional mitigation measures beyond those proposed by WJE (2022) are required to address potential changes to the subsurface soils because of the proposed remedy.



VII. Greenhouse Gas Emissions.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Evaluation: Vertical extraction wells will be used to remove the vaporized contaminants and steam from the subsurface and the extracted vapor will be treated using a thermal oxidizer. The operation of the natural gas-fired thermal oxidizer will produce greenhouse gases, including carbon dioxide, and may also contain nitrogen oxides and acidic gases. These greenhouse gases are addressed in the BAAQMD air permit (application number 31446) for the Site that was approved by the BAAQMD on August 10, 2022, pursuant to the Bay Area 2017 CAP (BAAQMD, 2017). Biogenic methane production in the subsurface may be enhanced during a short period (a few weeks) in the initial heat-up phase where the subsurface temperature increases into a more active biological range. After reaching approximately 40 °C, however, the biological activity will decrease due to the heat. Regardless, the vapor extraction system that removes organic contaminants will also remove methane present in the subsurface, which will be destroyed via the thermal oxidizer.

The Bay Area 2017 CAP (BAAQMD, 2017) is the applicable air quality plan for San Mateo County. EHS Support obtained an Air Permit (application number 31446) for the Site that was approved by the BAAQMD on August 10, 2022.

Conclusion: The project will have a **Less than Significant Impact with Mitigation Incorporated** because EHS Support has an Air Permit for the Site and compliance with the permit will ensure that the project will not conflict with or obstruct the implementation of the 2017 CAP (BAAQMD, 2017).

Mitigation Measures: None beyond the BAAQMD-permitted treatment technologies already prescribed to address the removal and destruction of target organic contaminants.

VIII. Hazards and Hazardous Material.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------



- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Evaluation: Parcel B is an unoccupied, vacant warehouse and there is no use of hazardous materials. The Department of Transportation defines hazardous waste to be a hazardous material *if* it must be shipped on a manifest under the Federal Resource Conservation and Recovery Act (RCRA) waste requirement in the Code of Federal Regulations Title 40 Part 262. Boreholes are proposed to be drilled on-site to install vertical extraction wells (**Figure 10**). Investigation-derived waste generated during the borehole advancement will be managed by media type. It is anticipated that soil (e.g., drill cuttings), construction



debris (e.g., concrete, asphalt, crushed gravel), and decontamination water will be placed into 55-gallon drums or other approved containers and/or stockpiles and disposed of in accordance with applicable state and federal regulations. The construction phase of the project is expected to be short-term in nature (approximately 6 months) and no routine transport of potentially hazardous waste (during transport it is a hazardous material) is planned. During operation, although unlikely, there is the potential for an upset and/or accident condition resulting in the release of hazardous waste. To prevent a potential release into the environment, secondary containment has been incorporated into the design of all relevant treatment train components.

Conclusion: The project will have a **Less than Significant Impact with Mitigation Incorporated** because the construction phase of the project is short-term in nature (approximately 6 months) and there will be no routine transport of potentially hazardous waste. Further, secondary containment has been incorporated into the design of all relevant treatment train components and waste will be properly disposed of in accordance with applicable state and federal requirements.

Mitigation Measures: All relevant treatment train components will have secondary containment to prevent a potential release to the environment in the event of an upset or accident condition and all hazardous waste will be managed in accordance with applicable state and federal regulations.

IX. Hydrology and Water Quality.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Evaluation: Parcel B is developed land for commercial use and the TCH remedy does not require any permanent construction or changes to grade or Site drainage patterns. TCH is proposed to remediate the soil and groundwater beneath the Site, resulting in improved groundwater quality. Treated effluent will be discharged to the POTW in accordance with applicable SFPUC permit requirements. During operation, although unlikely, there is the potential for an upset and/or accident condition resulting in the release of hazardous materials to surface water bodies via overland flow and/or through stormwater conveyances. To prevent a potential release into surface water bodies, secondary containment has been incorporated into the design of all relevant treatment train components.

Conclusion: The project will have a **Less than Significant Impact with Mitigation Incorporated** because generated effluent will be treated and discharged to the POTW in accordance with applicable SFPUC permit requirements. Further, the project does not require any changes to grade or Site drainage patterns and secondary containment has been incorporated into the design of all relevant treatment train components.

Mitigation Measures: Discharge of treated effluent water will be conducted in accordance with SFPUC permit requirements. All relevant treatment train components will have secondary containment to prevent a potential release to the environment in the event of an upset or accident condition.



X. Land Use and Planning.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: Parcel B is developed land for commercial use and the TCH remedy does not require any permanent construction or changes to grade or Site drainage patterns.

Conclusion: The project will have **No Impact** because there are no conflicts with existing land use or proposed plans for the Site.

Mitigation Measures: None.

XI. Mineral Resources.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Evaluation: The Property has been in commercial use since the early 1960s and the existing warehouse at Parcel B was constructed in 1980. No known mineral resources have been identified at the Site and the Site is zoned TC-2 (within the Southeast Bayshore Commercial District).⁷

Conclusion: The project will have **No Impact** because no known mineral resources have been identified at the Site and the Site is zoned commercial.

Mitigation Measures: None.

XII. Noise.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁷ <https://www.brisbaneca.org/cd/page/zoning-information>



Evaluation: The remediation approach (i.e., TCH) timeframes are generally short, on the order of one year, and there is no permanent structure proposed. While the system is under operation, the Parcel B warehouse will remain vacant.

The volume and hours are regulated by Section 4.88.330 (Exterior Noise Standards) of the San Mateo County Ordinance Code for Noise Control (“Ordinance”). According to the Ordinance, the project shall not cause the exterior noise level when measured at any single or multiple family residence, school, hospital, church, and/or public library situated in either the incorporated or unincorporated area to exceed the noise level standards. The most conservative daytime (7 a.m. – 10 p.m.) noise standard is 55 A-weighted decibels (dBA) and the most conservative nighttime (10 p.m. – 7 a.m.) noise standard is 50 dBA.

The thermal oxidizer will be located outside, to the south of the existing building (**Figure 10**). The blower noise estimates from manufacturers (the blowers will be the loudest individual components) are approximately 70 to 90 dBA outside and approximately 60 to 83 dBA inside. An air-operated diaphragm pump (used on the moisture separator skids and oil-water separator) is under 80 dBA. The balance of the equipment is non-noise generating.

The closest residence to the point source (thermal oxidizer) is approximately 450 feet (135 meters) southwest. According to the inverse square law, a calculation of the estimate of the sound you would get at a distant point in a reasonably open area, doubling the distance drops the intensity by approximately 6 dBA, and 10 times the distance drops the intensity by approximately 20 dBA. Using the highest noise of 90 dBA, 40 meters from the point source would yield an approximate noise of 40 dBA. That is below the most conservative noise standard and reached before the western edge of the Property boundary.

Also, the point source will be located adjacent to a four-lane highway (Bayshore Boulevard) approximately 300 feet to the west, but at a significantly lower elevation (approximately 70 feet) than the highway, and separated by dense foliage on the slope between them. If there are barriers between the point source and source of measurement, you may get less noise than the inverse square law predicts.

Conclusion: The project will have a **Less Than Significant Impact** because the remedial approach is temporary (approximately 1.5 years), with no permanent structures proposed; therefore, the project will not produce a long-term significant noise source. Also, the noise generated during remediation will not violate San Mateo County Exterior Noise Standards. Furthermore, the project is not located within or near an airport.

Mitigation Measures: None.

XIII. Population and Housing.

Would the project:



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: The Property has been in commercial use since the early 1960s and the existing warehouse at Parcel B was constructed in 1980. No permanent structures are required to complete the TCH remedy and no changes to the current Site zoning (within the Southeast Bayshore Commercial District)⁸ are planned or necessary to complete remediation.

Conclusion: The project will have **No Impact** because there are no permanent structures proposed and no changes to the current Site zoning.

Mitigation Measures: None.

XIV. Public Services.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁸ <https://www.brisbaneca.org/cd/page/zoning-information>



iii.	Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv.	Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v.	Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: The Property has been in commercial use since the early 1960s and the existing warehouse at Parcel B was constructed in 1980. No permanent structures are required to complete the TCH remedy and no changes to public services supporting the Site are warranted or anticipated to complete TCH remediation.

Conclusion: The project will have **No Impact** because there are no permanent structures proposed and no changes to the public services supporting the Site are warranted or anticipated.

Mitigation Measures: None.

XV. Recreation.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: Parcel B is developed commercial land consisting of a building with two adjacent tenant spaces (northern and southern), each of which is comprised of two smaller warehouse areas. The Property has been in commercial use since the 1960s and is intended to continue to be used for commercial/industrial operations into the future.

Conclusion: The project will have **No Impact** because the Site will continue to be used for commercial/industrial operations.

Mitigation Measures: None.

XVI. Transportation/Traffic.

Would the project:



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: Entrance to the Property is via a private road, Van Waters and Rogers Road. At the entrance, Van Waters and Rodgers Road and Bayshore Boulevard, a traffic light is established that serves to assure proper flow into and out of the Site. Parcel B is developed commercial land consisting of a building with two adjacent tenant spaces (northern and southern), each of which is comprised of two smaller warehouse areas. Commercial operations are anticipated to continue at Parcel A during the TCH remedy and the remedy itself will not materially impact traffic flow into or out of the Property during any phase of the project.

Conclusion: The project will have a **Less Than Significant Impact** because the construction phase of the project is expected to be short-term in nature (approximately 6 months) and operations are limited on-site. The traffic light established at the entrance of the Site will serve to assure no congestion occurs off-Site.



Mitigation Measures: None.

XVII. Tribal Cultural Resources.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: The Property has been in commercial use since the early 1960s and the existing warehouse at Parcel B was constructed in 1980. No known tribal cultural resources have been identified at the Site.

Conclusion: The project will have **No Impact** because no known tribal cultural resources have been identified.

Mitigation Measures: None.

XVIII. Utilities and Service Systems.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Evaluation: It is anticipated that the condensate generated as part of TCH operations will be treated and disposed of via permitted discharge to the POTW. The anticipated flow rate is on the order of 30 gallons per minute. Given the anticipated flow rate, no discharge capacity issues are anticipated. With respect to water usage capacity, EHS Support will work with the City to obtain a water meter to measure the amount of water being used from a Site hydrant.

The Site has previously disposed of solid waste and will continue to dispose of solid waste under United States Environmental Protection Agency (USEPA) ID # CAR000336222. The proposed borings will generate minimal amounts of solid waste. Waste scheduled for shipment will be conducted in accordance with applicable state and federal regulations including Department of Transportation regulations and guidelines.

Conclusion: The project will have a **Less Than Significant Impact with Mitigation Incorporated** because the wastewater generated will be treated before disposal to the POTW and the wastewater that will be generated is minimal. Further, the solid waste generated will be minimal and disposed of to comply with applicable federal, state, and local statutes.

Mitigation Measures: None other than compliance with applicable POTW discharge requirements for the discharge of treated effluent water.



XIX. Mandatory Findings of Significance.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Evaluation: The purpose of the remediation project is to protect human health and the environment through the removal and destruction of organic contamination present in the subsurface beneath the Site. Therefore, the project will enhance the quality of the environment and reduce the potential risk to human and ecological receptors.

Conclusion: The project will have **No Impact** because the remedial approach is designed to improve the quality of the environment.

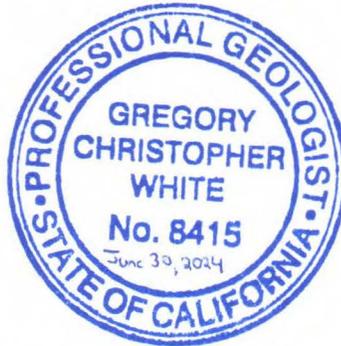
Mitigation Measures: None.



Closing

If you have any questions regarding this submission, please feel free to contact Greg White at 224-422-6261.

Sincerely,



Greg White
Senior Project Manager
California Professional Geologist No. 8415
EHS Support LLC

cc:

Mark Metcalf, Univar Solutions USA Inc.
Gavin Polite Fisco, Prologis, Inc.

References

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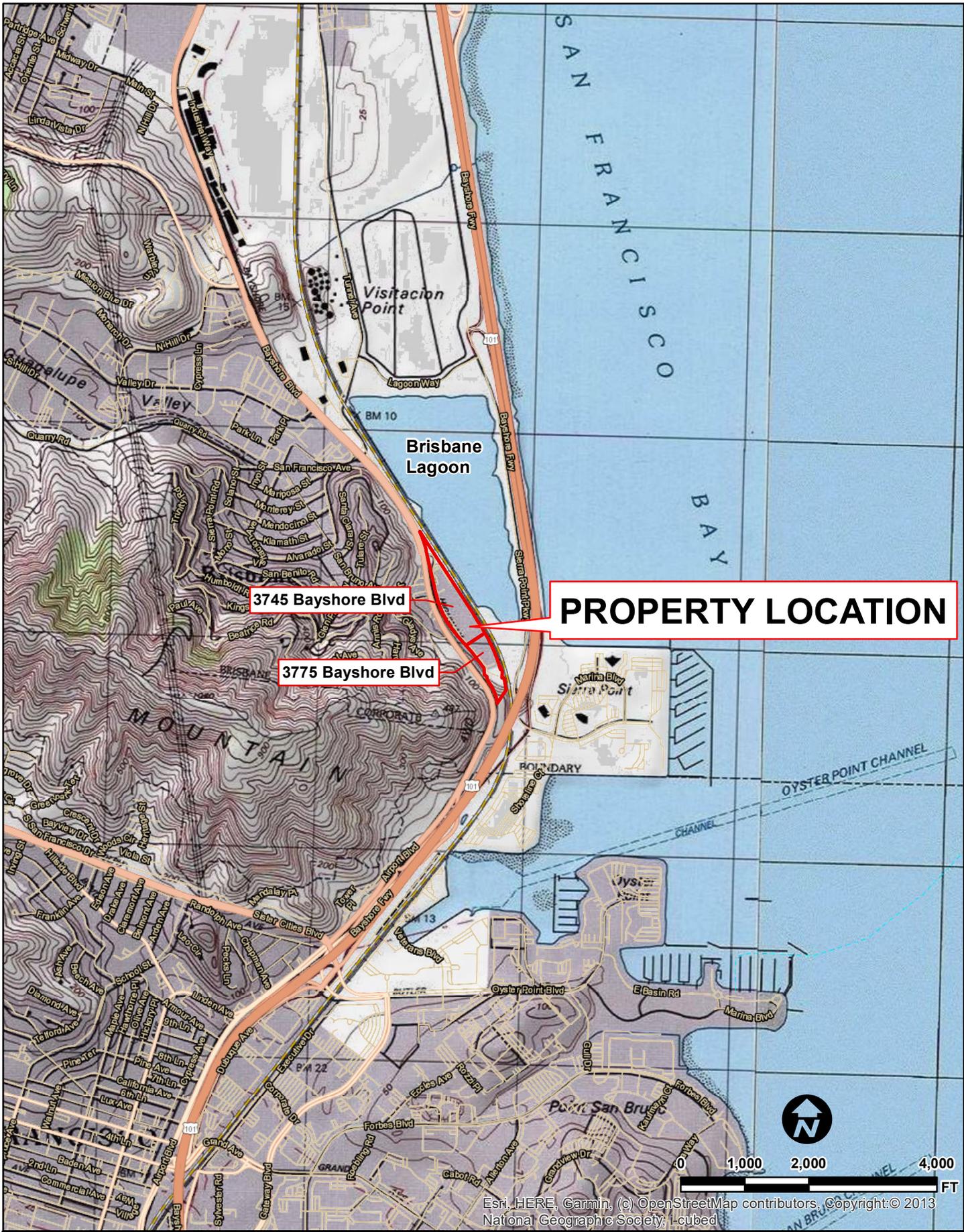
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Figures



EHS Support

3745 and 3775 Bayshore Blvd
Brisbane, CA

PROPERTY LOCATION MAP

FIGURE 1

Legend

- Parcel Boundary
- Property Boundary

Brisbane Lagoon

OFFICE

WAREHOUSE

WAREHOUSE

Parcel A
3745 Bayshore Blvd
APN: 007-150-030

Bayshore Blvd

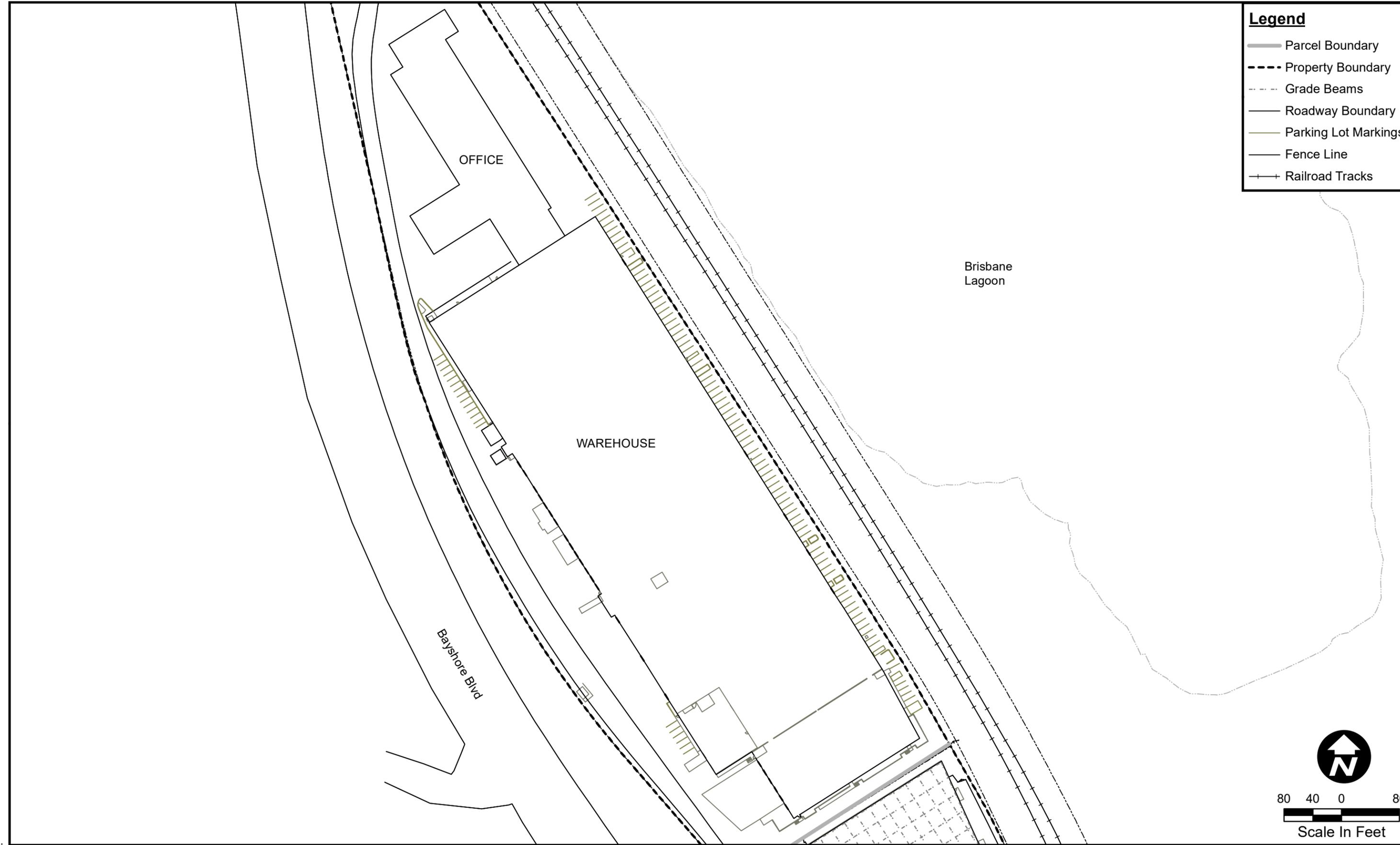
Parcel B
3775 Bayshore Blvd
APN: 007-150-040

Parcel C
3775 Bayshore Blvd
APN: 007-150-070



Legend

-  Parcel Boundary
-  Property Boundary
-  Grade Beams
-  Roadway Boundary
-  Parking Lot Markings
-  Fence Line
-  Railroad Tracks



Reviewed by:

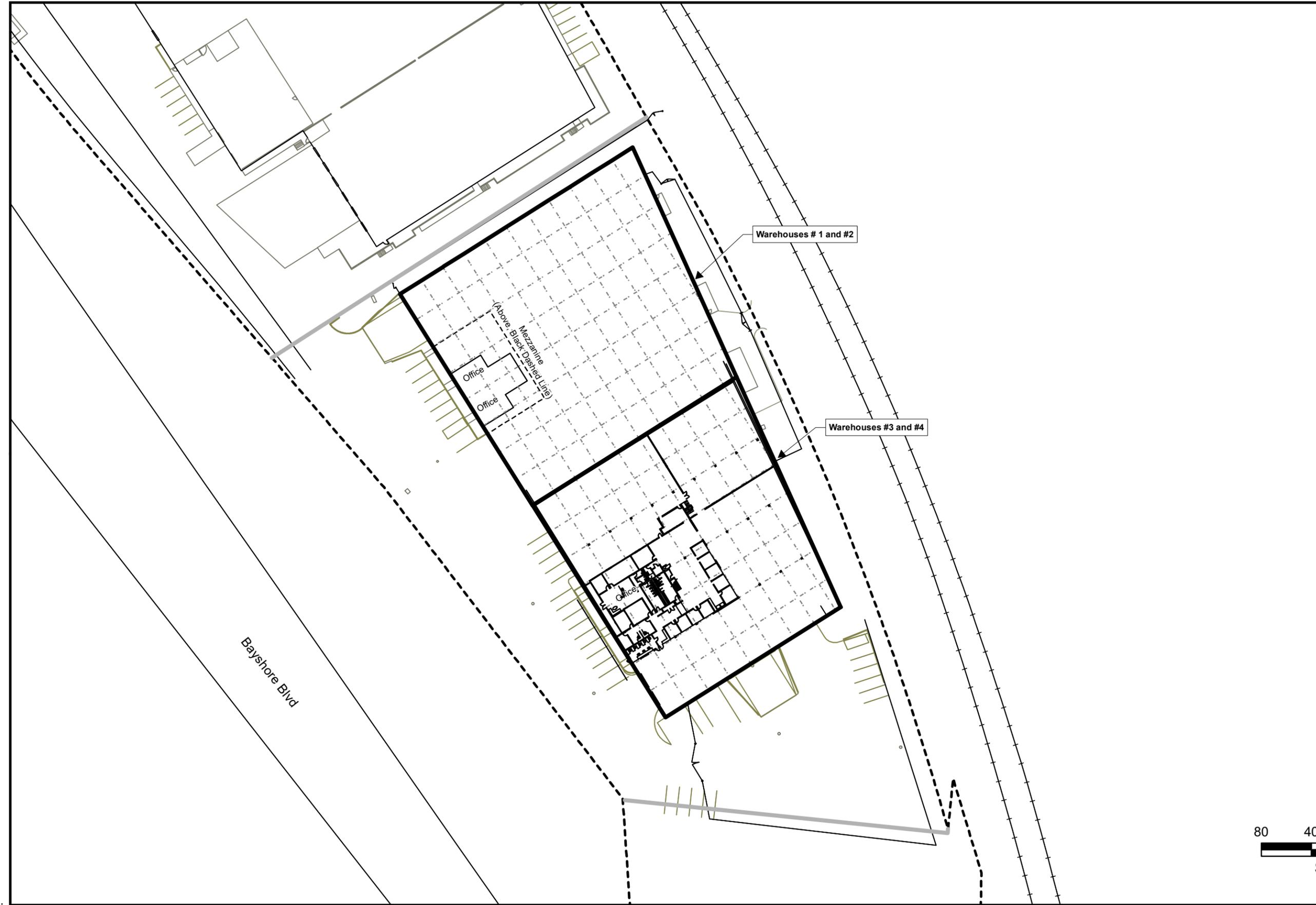


3745 Bayshore Blvd
Brisbane, CA

PARCEL A PLAN

FIGURE 3

- Legend**
- Parcel Boundary
 - - - Property Boundary
 - · - · - Grade Beams
 - Roadway Boundary
 - Parking Lot Markings
 - Fence Line
 - + + + Railroad Tracks



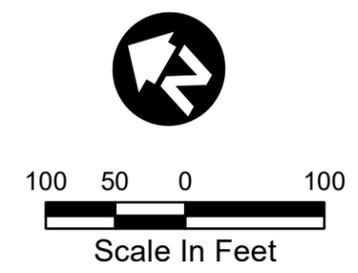
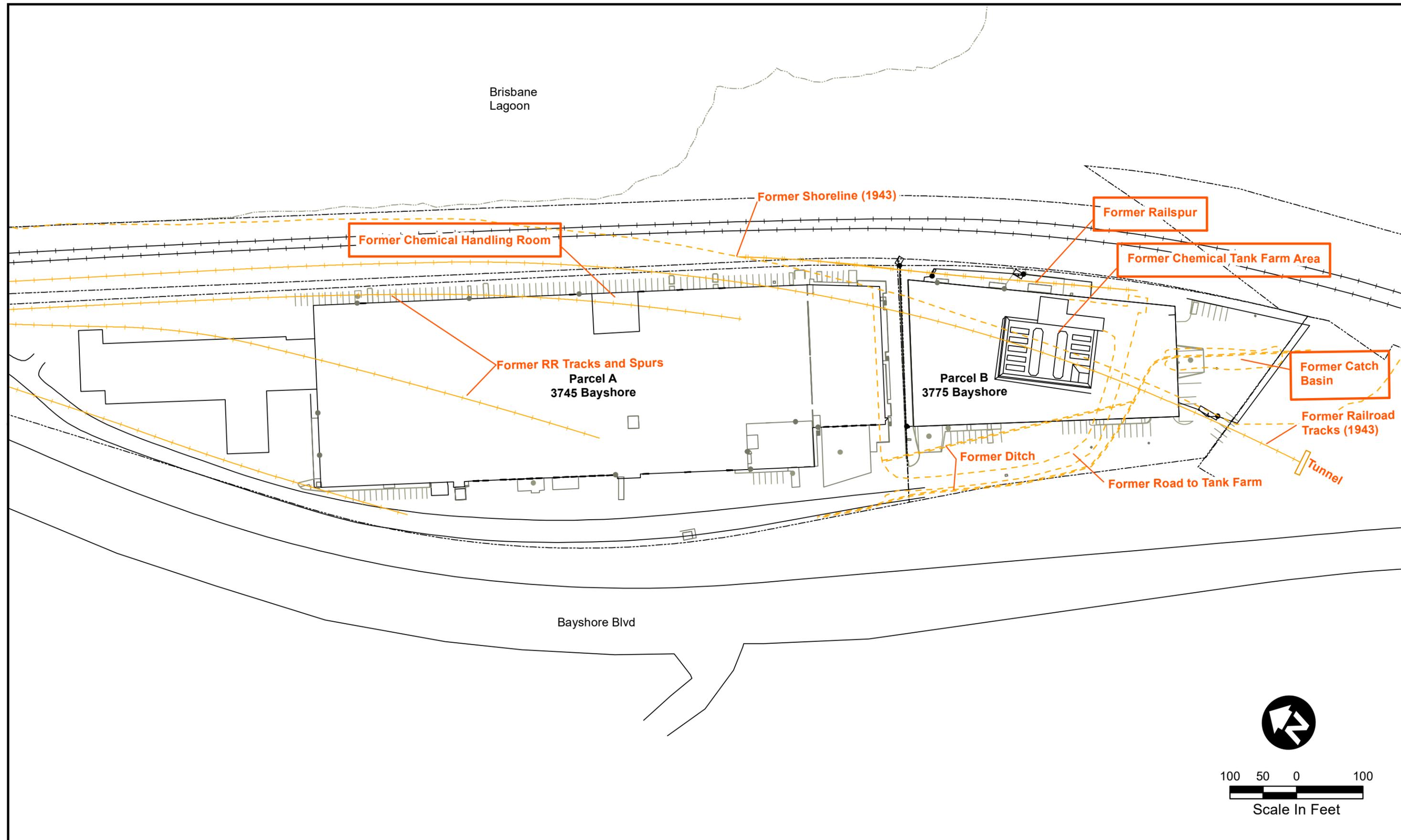
Reviewed by:



3775 Bayshore Blvd
Brisbane, CA

PARCEL B PLAN

FIGURE 4



Remedial Extent - 0 to 5 ft Below Ground Surface:

Total Area:
22,790 ft²

Area Underneath Existing Buildings:
16,583 ft² / 73%

Area Underneath Hardstand Surfaces:
4,174 ft² / 18%

Area Underneath No Hardstand Surfaces:
2,032ft² / 9%

Total Volume:
113,949 ft³ / 4,220 yd³

Volume Within Fill:
78,142 ft³ / 2,894 yd³ / 69%

Volume Within Young Bay Mud:
35,806 ft³ / 1,326 yd³ / 31%

Volume Within Fill Beneath Buildings:
71,627 ft³ / 2,653 yd³ / 86%

Volume Within Fill Beneath Hardstand Surfaces:
1,969 ft³ / 73 yd³ / 9%

Volume Within Fill Beneath No Hardstand Surfaces:
4,546 ft³ / 168 yd³ / 45%

Volume Within Young Bay Mud Beneath Buildings:
11,290 ft³ / 418 yd³ / 14%

Volume Within Young Bay Mud Beneath Hardstand Surfaces:
18,903 ft³ / 700 yd³ / 91%

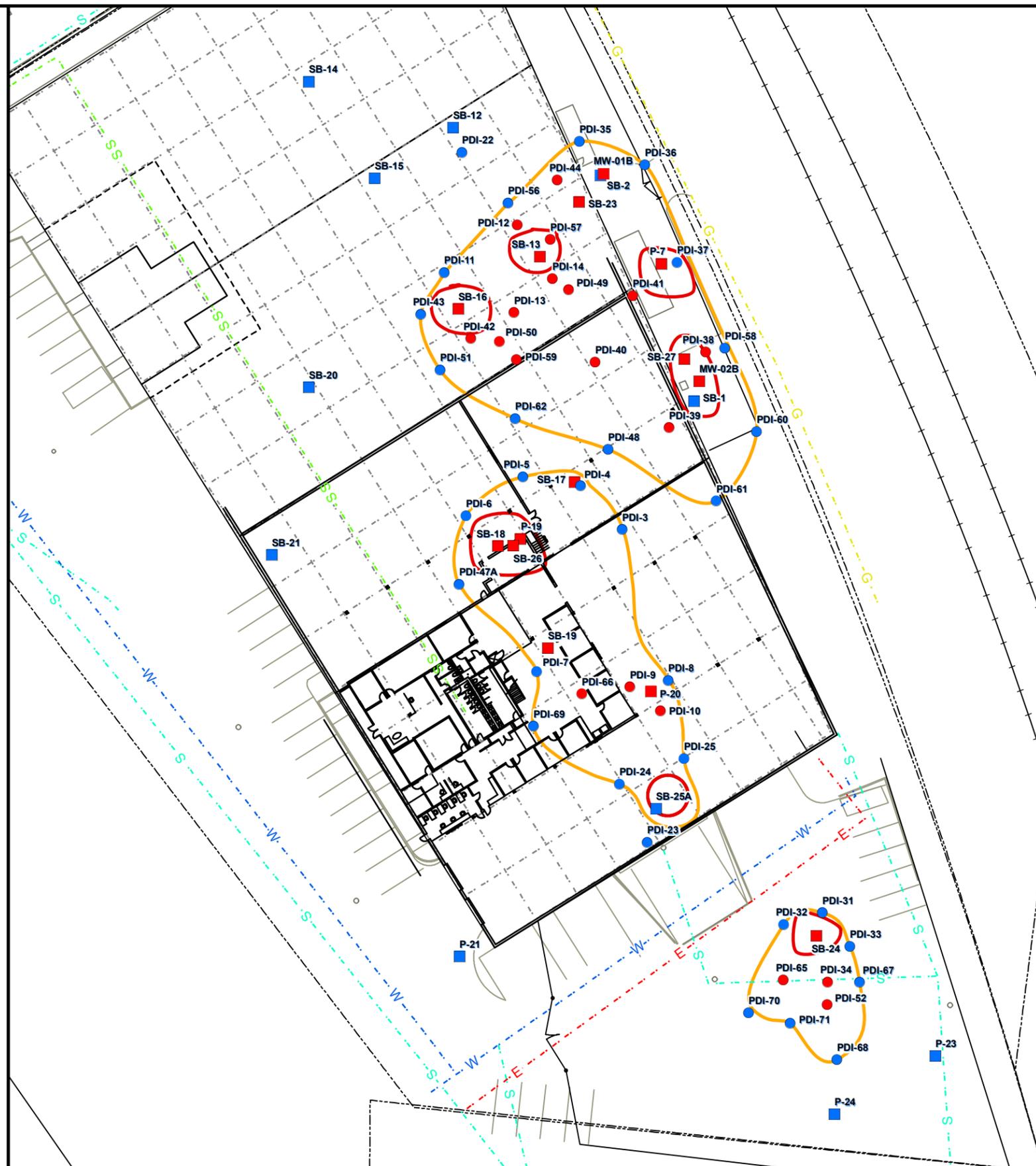
Volume Within Young Bay Mud Beneath No Hardstand Surfaces:
5,613 ft³ / 208 yd³ / 55%

NOTES

ft² = square feet
ft³ = cubic feet
yd³ = cubic yard
MIP = membrane interface probe
NAPL = non-aqueous phase liquid

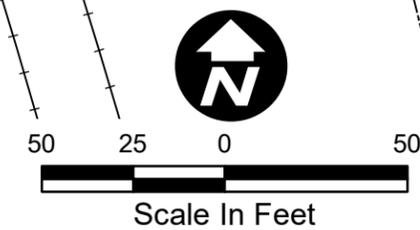
The delineation levels are the lowest of the Non-Degradation Soil Cleanup Levels and the Human Health Shallow Soil Cleanup Levels.

NAPL extents are approximated based on the following datasets collected throughout the investigative history for Parcel B: soil results exceeding the soil saturation limit, groundwater data exceeding the effective solubility limit, NAPL pore fluid saturation data, and/or MIP responses.



Legend

- Soil Sample (2021)
 - Soil Sample (Pre-2021)
 - Delineation Level
 - Non-Exceedance of Delineation Level
- Utility Type**
- - - E - - - Electrical
 - - - G - - - Finished Fuels Pipeline
 - - - SS - - - Sanitary Sewer
 - - - S - - - Storm Sewer
 - - - W - - - Water Line
 - NAPL Extent
 - Shallow Remedial Extent
 - - - Grade Beams



Remedial Extent - 5 to 15 ft Below Ground Surface:

Total Area:
19,174ft²

Area Underneath Existing Buildings:
13,930 ft² / 73%

Area Underneath Hardstand Surfaces:
4,215 ft² / 22%

Area Underneath No Hardstand Surfaces:
1,029 ft² / 5%

Total Volume:
191,744 ft³ / 7,120 yd³

Volume Within Fill:
78,789 ft³ / 2,918 yd³ / 41%

Volume Within Young Bay Mud:
112,956 ft³ / 4,184 yd³ / 59%

Volume Within Fill Beneath Buildings:
77,212 ft³ / 2,860 yd³ / 55%

Volume Within Fill Beneath Hardstand Surfaces:
161 ft³ / 6 yd³ / < 1%

Volume Within Fill Beneath No Hardstand Surfaces:
1,416 ft³ / 52 yd³ / 14%

Volume Within Young Bay Mud Beneath Buildings:
62.092 ft³ / 2,300 yd³ / 55%

Volume Within Young Bay Mud Beneath Hardstand Surfaces:
41,991 ft³ / 1,555 yd³ / > 99%

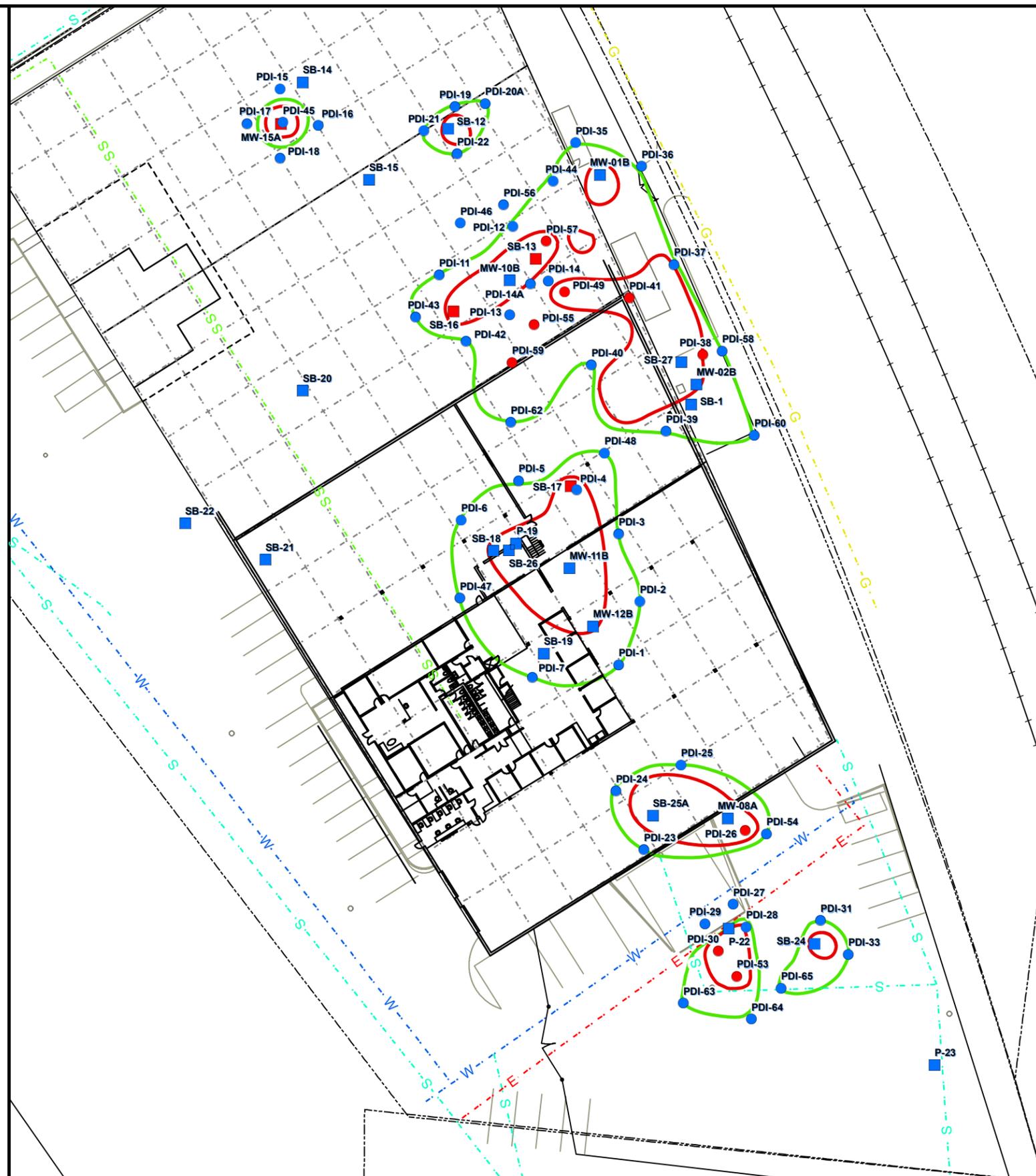
Volume Within Young Bay Mud Beneath No Hardstand Surfaces:
8,872 ft³ / 329 yd³ / 86%

NOTES

ft² = square feet
ft³ = cubic feet
yd³ = cubic yard
MIP = membrane interface probe
NAPL = non-aqueous phase liquid

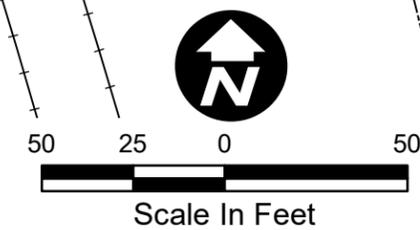
The delineation levels are the lowest of the Non-Degradation Soil Cleanup Levels and the Human Health Shallow Soil Cleanup Levels.

NAPL extents are approximated based on the following datasets collected throughout the investigative history for Parcel B: soil results exceeding the soil saturation limit, groundwater data exceeding the effective solubility limit, NAPL pore fluid saturation data, and/or MIP responses.



Legend

- Soil Sample (2021)
 - Soil Sample (Pre-2021)
 - Delineation Level
 - Non-Exceedance of Delineation Level
- Utility Type**
- - - E - - - Electrical
 - - - G - - - Finished Fuels Pipeline
 - - - SS - - - Sanitary Sewer
 - - - S - - - Storm Sewer
 - - - W - - - Water Line
 - NAPL Extent
 - Intermediate Remedial Extent
 - - - Grade Beams



Reviewed by:



3775 Bayshore Blvd
Brisbane, CA

PARCEL B FINAL REMEDIATION EXTENT 5-15 FT BGS

Figure 7

J:\EHSS_GIS\01661_Brisbane\01_ANALYSIS\20220511_SMP\figs\Soil_Delineation_Figures.mxd Printed 10/18/2022 2:45:50 PM by Kaitlyn Burrington

PARCEL B FINAL REMEDIATION EXTENT 15-55 FT BGS

Figure 8

Remedial Extent - 15 to 55 ft Below Ground Surface:

Total Area:	7,762 ft ²
Area Underneath Existing Buildings:	7,762 ft ² / 100%
Area Underneath Hardstand Surfaces:	0 ft ² / 0%
Area Underneath No Hardstand Surfaces:	0 ft ² / 0%
Total Volume:	310,496 ft ³ / 11,224 yd ³
Volume Within Fill:	7,439 ft ³ / 276 yd ³ / 4%
Volume Within Young Bay Mud:	303,057 ft ³ / 11,224 yd ³ / 98%
Volume Within Fill Beneath Buildings:	7,439 ft ³ / 276 yd ³ / 2%
Volume Within Fill Beneath Hardstand Surfaces:	0 ft ³ / 0 yd ³ / 0%
Volume Within Fill Beneath No Hardstand Surfaces:	0 ft ³ / 0 yd ³ / 0%
Volume Within Young Bay Mud Beneath Buildings:	303,057 ft ³ / 11,224 yd ³ / 98%
Volume Within Young Bay Mud Beneath Hardstand Surfaces:	0 ft ³ / 0 yd ³ / 0%
Volume Within Young Bay Mud Beneath No Hardstand Surfaces:	0 ft ³ / 0 yd ³ / 0%

NOTES

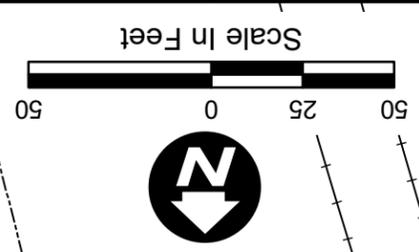
ft² = square feet
ft³ = cubic feet
yd³ = cubic yard
MIP = membrane interface probe
NAPL = non-aqueous phase liquid

The delineation levels are the lowest of the Non-Degradation Soil Cleanup Levels and the Human Health Shallow Soil Cleanup Levels.

NAPL extents are approximated based on the following datasets collected throughout the investigative history for Parcel B: soil results exceeding the soil saturation limit, groundwater data exceeding the effective solubility limit, NAPL pore fluid saturation data, and/or MIP responses.



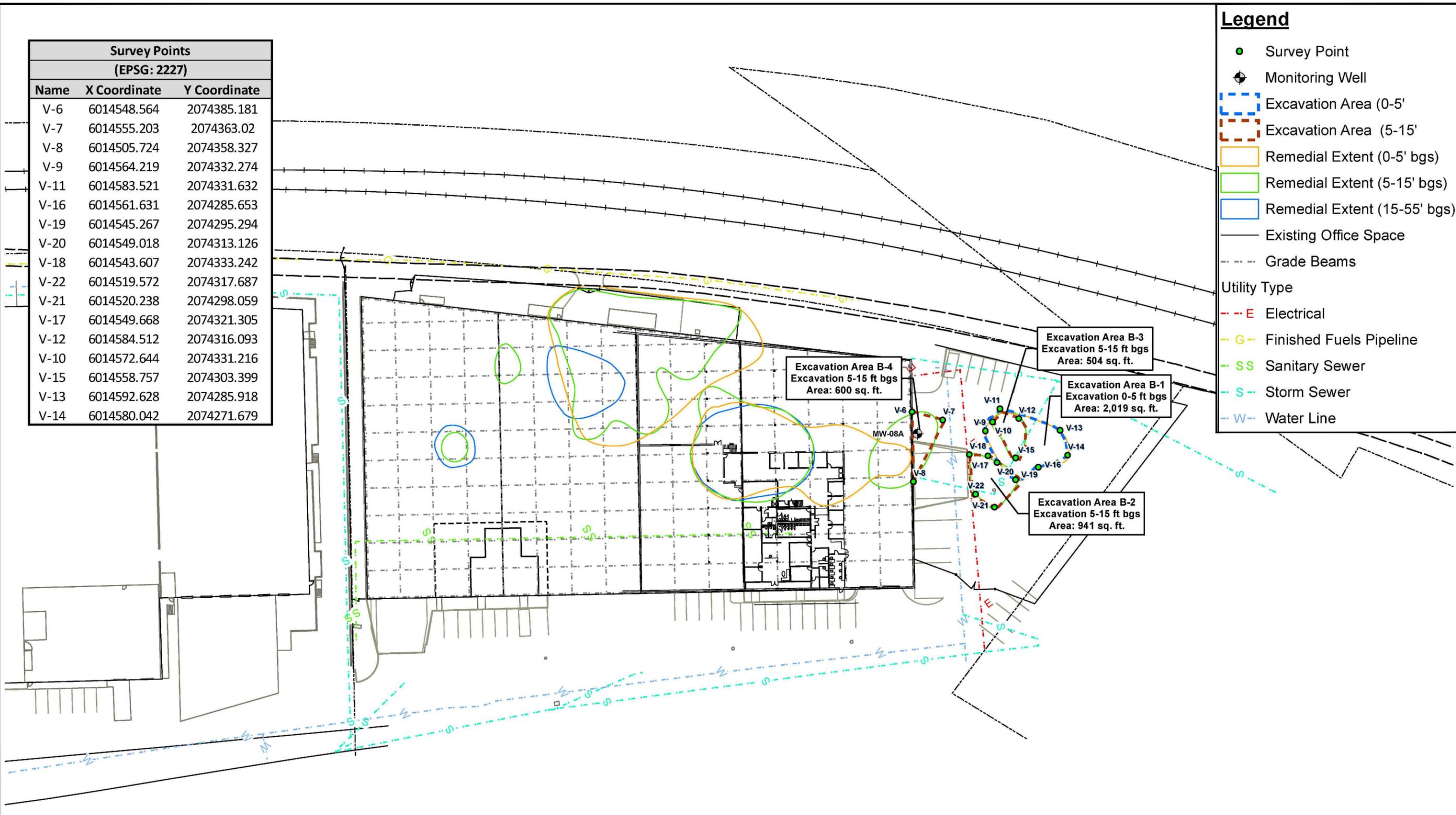
- Legend**
- Soil Sample (2021)
 - Soil Sample (Pre-2021)
 - Delineation Level
 - Non-Exceedance of Delineation Level
 - Utility Type
 - - - Electrical
 - - - Finished Fuels Pipeline
 - - - Sanitary Sewer
 - - - Storm Sewer
 - - - Water Line
 - Deep Remedial Extent
 - NAPL Extent
 - - - Grade Beams



Survey Points (EPSG: 2227)		
Name	X Coordinate	Y Coordinate
V-6	6014548.564	2074385.181
V-7	6014555.203	2074363.02
V-8	6014505.724	2074358.327
V-9	6014564.219	2074332.274
V-11	6014583.521	2074331.632
V-16	6014561.631	2074285.653
V-19	6014545.267	2074295.294
V-20	6014549.018	2074313.126
V-18	6014543.607	2074333.242
V-22	6014519.572	2074317.687
V-21	6014520.238	2074298.059
V-17	6014549.668	2074321.305
V-12	6014584.512	2074316.093
V-10	6014572.644	2074331.216
V-15	6014558.757	2074303.399
V-13	6014592.628	2074285.918
V-14	6014580.042	2074271.679

Legend

- Survey Point
- ⊕ Monitoring Well
- ▭ Excavation Area (0-5'
- ▭ Excavation Area (5-15'
- ▭ Remedial Extent (0-5' bgs)
- ▭ Remedial Extent (5-15' bgs)
- ▭ Remedial Extent (15-55' bgs)
- Existing Office Space
- - - Grade Beams
- Utility Type
- - - E Electrical
- - - G Finished Fuels Pipeline
- - - SS Sanitary Sewer
- - - S Storm Sewer
- - - W Water Line



Prepared By: **EHS Support**
 For:
 Doc ID:

3775 Bayshore Blvd.
 Brisbane, California

Parcel B Excavation Areas
 (0 - 15 FT BGS)

No.	Date	Revisions	By	CHKD
1	12/08/21	Updated Excavation Areas	MDO	JA

Project No.:
 C01959_2021

Date Drawn: 12/2021

Drawn By: MDO

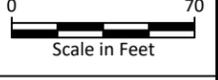


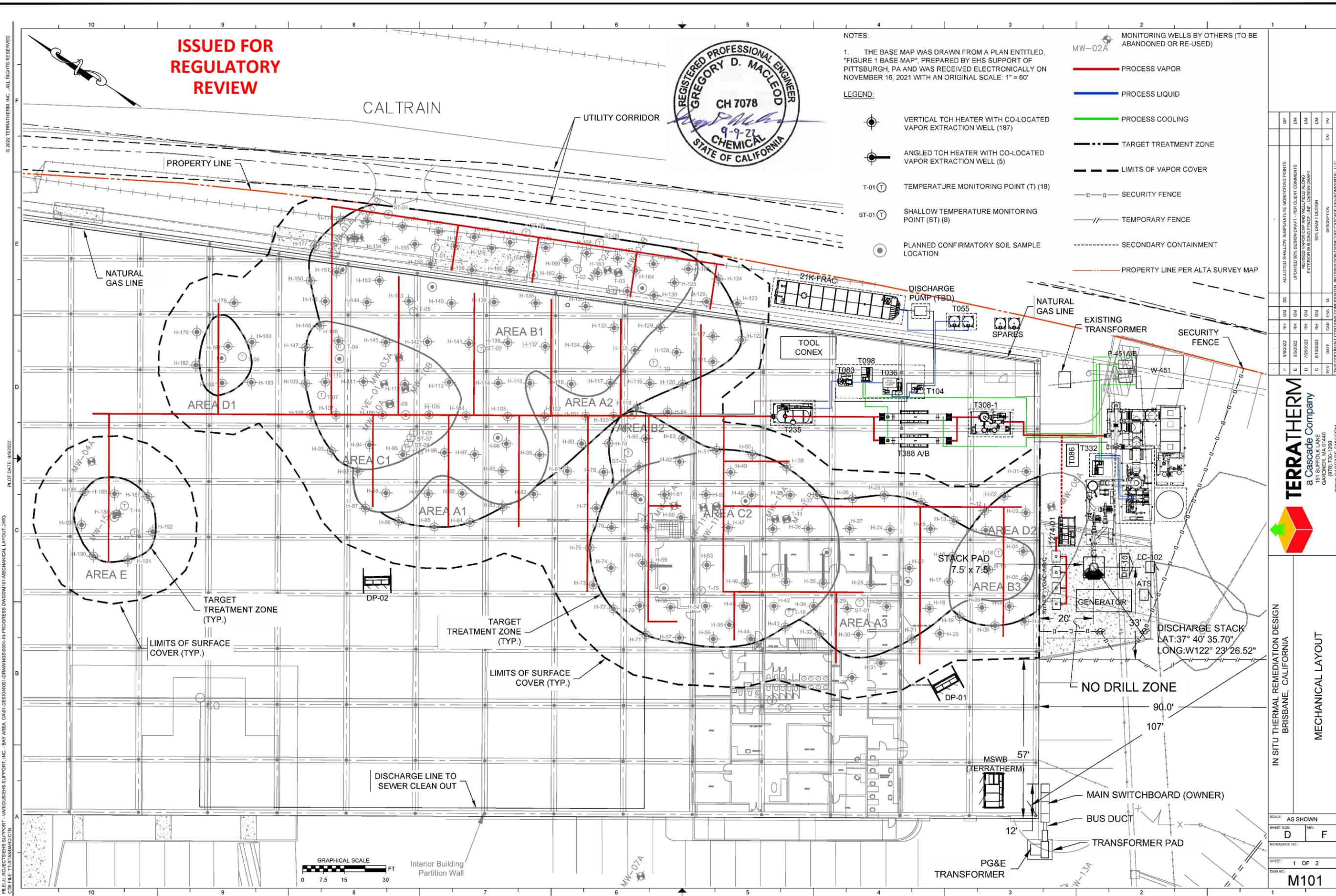
Figure
 9

ISSUED FOR REGULATORY REVIEW



NOTES:
 1. THE BASE MAP WAS DRAWN FROM A PLAN ENTITLED, "FIGURE 1 BASE MAP", PREPARED BY EHS SUPPORT OF PITTSBURGH, PA AND WAS RECEIVED ELECTRONICALLY ON NOVEMBER 16, 2021 WITH AN ORIGINAL SCALE: 1" = 60'

- LEGEND:**
- Vertical TCH Heater with Co-located Vapor Extraction Well (187)
 - Angled TCH Heater with Co-located Vapor Extraction Well (5)
 - Temperature Monitoring Point (T) (18)
 - Shallow Temperature Monitoring Point (ST) (8)
 - Planned Confirmatory Soil Sample Location
 - Monitoring Wells by Others (to be Abandoned or Re-used)
 - Process Vapor
 - Process Liquid
 - Process Cooling
 - Target Treatment Zone
 - Limits of Vapor Cover
 - Security Fence
 - Temporary Fence
 - Secondary Containment Location
 - Property Line per ALTA Survey Map



IN SITU THERMAL REMEDIATION DESIGN
 BRISBANE, CALIFORNIA
 MECHANICAL LAYOUT

SCALE:	AS SHOWN
SHEET SIZE:	D F
REFERENCE NO.:	
SHEET:	1 OF 2
DWG NO.:	M101

Prepared By: **IS Support**

For: _____

Doc ID: _____

3775 Bayshore Blvd.
 Brisbane, California

Thermal Remedy System Layout

No.	Date	Revisions	By	CHKD

Project No.: C01959_2021

Date Drawn: 09/2022

Drawn By: MDO

Figure 10

Reference:
 Figure based from TerraTherm Figure M101
 Mechanical Layout, dated 9/9/2022

Legend

- TCH Heater
- TCH Heater 15ft Buffer



Heater Can Heat Radius

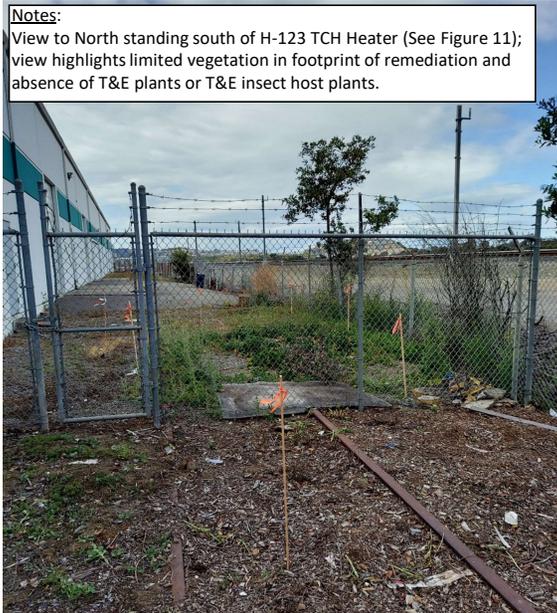
3775 Bayshore Blvd
Brisbane, CA



FIGURE 11

Reviewed By:

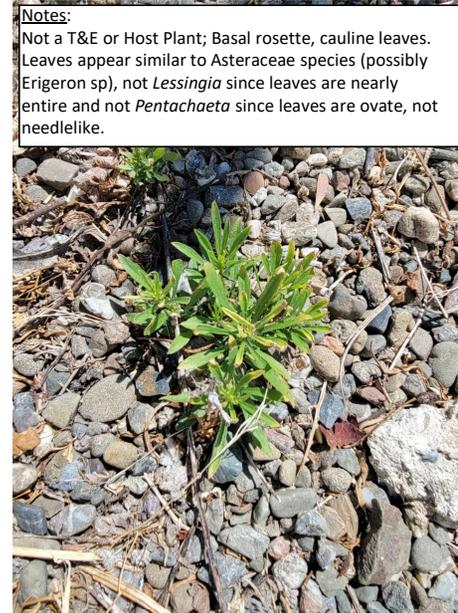
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Proposed Remediation Area View



Heteromeles arbutifolia



Asteraceae
(Possibly *Erigeron* sp.)



Brassicaceae sp.
(Possibly *Hirschfeldia*)



Brassicaceae sp.



Centranthus ruber



Fabaceae sp.
(Possibly *Vicia* sp. or *Lathyrus* sp.)

Notes:
T&E – Threatened and Endangered Species
Host Plant – Plant required by T&E insect (butterflies)

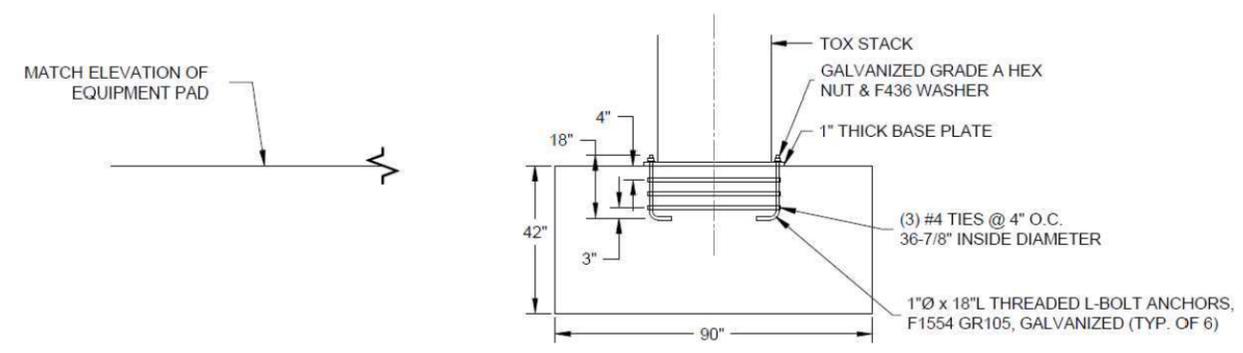
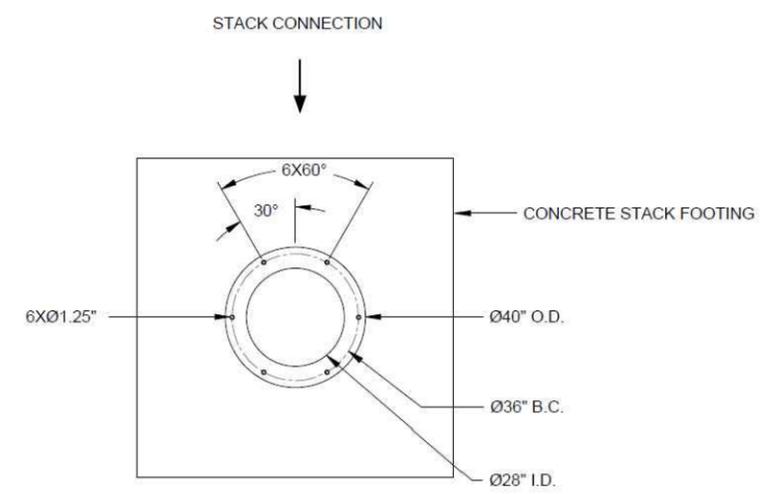
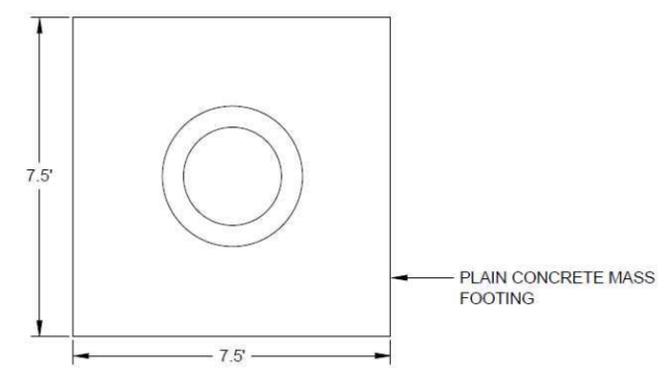
**T&E Vegetation and T&E Insect Plant
Host Reconnaissance Findings**

3775 Bayshore Blvd
Brisbane, CA



FILE: J:\PROJECTS\EHS SUPPORT - VARIOUS\EHS SUPPORT, INC. - BAY AREA, CA\01-DESIGN\01-DRW\WKS\0001-HR\PROGRESS DWG\M104-CONCRETE STACK FOOTING\7.5x7.5.DWG
 CIP FILE: T131ANDINDUCTB
 PLOT DATE: 08/2022

ISSUED FOR
REGULATORY
REVIEW



- NOTE:**
1. CONCRETE COMPRESSIVE STRENGTH, $f'_c = 4,000$ psi.
 2. ANCHOR BOLT DESIGN BASED ACI 318-19 AND ASME STS-1 2016.
 3. WIND AND SEISMIC DESIGN LOADS PER ASCE 7-16, RISK CATEGORY III, WIND EXPOSURE C, SEISMIC SIGHT CLASS D. USGS DATA FOR 3775 BAYSHORE BLVD. BRISBANE, CA.
 4. DESIGN STACK HEIGHT 45 FT.



REV	DATE	BY	DESCRIPTION
1	09/2022	CN	UPDATED PIN DESIGN DRAFT - PER CLIENT COMMENTS
0	08/2021	JW	DRAFT FOR PROCUREMENT

TERRATHERM
 a Cascade Company
 151 SUFFOLK LANE
 GAITHERSBURG, MD 20878
 WWW.CASCADE-ENV.COM

IN SITU THERMAL REMEDIATION DESIGN
 BRISBANE, CALIFORNIA
 CONCRETE STACK PAD DETAIL 7.5 x 7.5

SCALE:	NTS
SHEET SIZE:	D
REV:	1
REFERENCE NO.:	
SHEET:	1 OF 1
DWG NO.:	M104

Prepared By: 	For:	Doc ID:	
3775 Bayshore Blvd. Brisbane, California		Thermal Oxidizer Stack Pad Detail	
		By	CHKD
		Revisions	
		Date	
		No.	
Project No.: C01959_2021			
Date Drawn:		09/2022	
Drawn By:		MDO	
Figure 14			

Reference:
 Figure based from TerraTherm Figure M104
 Concrete Stack Pad Detail 7.5x7.5, dated 9/9/2022