Torrance Black Beauty, LLC
Pier 1, Bay 1
San Francisco, CA 94111

January 10, 2025
File No. 01217339.00

Via email (Rebecca.orr@Waterboards.ca.gov)

Ms. Rebecca Orr
Los Angeles Regional Water Quality Control Board
Site Cleanup Program Unit V
320 West 4th Street, Suite 200
Los Angeles, CA 90013
(213) 576-6731

Subject: Submittal of Response Plan – North Posse Site, 3041 Del Amo Boulevard, Torrance, California (LARWQCB Case No. 1434 and Global ID T10000012263)

Dear Ms. Orr:

I, Brett Richer, certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Brett Richer

Brett Richer
VP, Global Environmental and Engineering

Enclosure: Response Plan

Response Plan

North Posse Site
3041 Del Amo Boulevard
Torrance, California 90503
Case No. 1434, Global ID # T10000012263

Torrance Black Beauty, LLC
Pier 1, Bay 1
San Francisco, California 94111

SCS ENGINEERS

Project No. 01217339.01| January 10, 2025

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This Response plan for the Property located at 3041 Del Amo Boulevard, Torrance, California, dated January 10, 2025, was prepared by Chad Jenkins and reviewed by the following:

Ashley P. Hutchens, REPA
Project Director
SCS ENGINEERS



Kenneth H Lister, Ph.D., C.E.G., C.Hg.
Senior Technical Advisor
SCS ENGINEERS

LIMITATIONS/DISCLAIMER

This Response Plan has been prepared for Torrance Black Beauty, LLC, with specific application to the property located at 3041 Del Amo Boulevard, Torrance, California.

The report has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, express or implied, is made as to the professional opinions presented herein. No other party, known or unknown to SCS Engineers, is intended as a beneficiary of this work product, its content or information embedded therein. Third parties use this report at their own risk.

Changes in site conditions may occur due to variation in rainfall, temperature, water usage, or other factors. Moreover, change in site use may alter the conclusions of this report. Additional information that was not available to the consultant at the time of this investigation or changes that may occur on the site or in the surrounding area may result in modification to the site that would impact the summary and recommendations presented herein. This report is not a legal opinion.

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1.0 INTRODUCTION

1.1 OVERVIEW

This Response Plan (Response Plan or Plan) was prepared by SCS Engineers (SCS) on behalf of Torrance Black Beauty, LLC (TBB) for investigation and remedial action for a site located at 3041 Del Amo Boulevard, in the City of Torrance, California (the "Property" or the "Site"). A map showing the general location of the Property and surrounding area is provided as **Figure 1**.

This Plan is being implemented under the lead oversight of the Los Angeles Regional Water Quality Control Board (RWQCB) in general accordance with the provisions of the California Land Reuse and Revitalization Act (CLRRA) of 2004. TBB entered into the CLRRA Agreement with the goal of redeveloping the Property for commercial use and will be responsible for implementing the Response Plan. Control and cleanup activities have been designed to allow redevelopment to proceed and to institute controls that are protective of human health (for the proposed land use) and that eliminate or reduce the potential for groundwater impacts.

TBB acquired the Site from the prior owner, Torrance Refining Company, LLC (TORC) on August 7, 2018. The purchase and sale agreement between TBB and TORC specified that TBB would be responsible for the remediation of impacts to the a depth of 60-feet above mean sea level ("Development Depth"). All groundwater encountered during past investigations at and in the neighborhood of the Property is located below the Development Depth, as is a portion of the vadose zone. TORC remains responsible for soil and/or groundwater impacts below the Development Depth, soil or groundwater impacts emanating from the adjacent Refinery, and for groundwater impacts at any depth caused by TORC on or after August 7, 2018. TORC is under Cleanup and Abatement Order (CAO) issued by the RWQCB associated with the impacts.

1.2 OBJECTIVES

This Plan describes the activities performed to date to assess the environmental impacts to the Property, the proposed remedy, and the implementation that will allow redevelopment and be protective of human health and the environment.

The objectives of this Plan are to:

- Summarize environmental conditions at the Property and identify a remedy that will be protective of human health and the environment given anticipated land use.
- Provide technical information to support the public participation activities that are part of the regulatory and administrative review and approval process.

Upon approval of the Plan by the RWQCB, TBB acknowledges that the RWQCB will retain oversight of the implementation and rights to approval of the completed response actions described herein. Pursuant to CLRRA, the Plan, and supplemental documents includes the following: identification of the releases or threatened releases; documentation that it is based on adequate site characterization; identification of Plan objectives; identification of the proposed remedy and cleanup goals; identification of current and anticipated future land uses of the Site; description of activities that will be implemented to control any endangerment that may occur during the implementation of the response action; description of land use controls that are part of the response action; description of wastes and how they will be managed in conjunction with the response action; and any other

controls that may be deemed necessary to protect human health and the environment, including but not limited to a long-term operation and maintenance plan for any mitigation measures.

1.3 REPORT ORGANIZATION

The remainder of this Plan is structured to address the regulatory requirements as follows:

- **Section 2: Site Background**, which summarizes Property history, background, usage, prior investigations/remediation, regulatory context, and proposed redevelopment plan.
- **Section 3: Nature and Extent of Impacts**, which describes the origin and extent of contaminants affecting the Property.
- **Section 4: Risk Evaluation,** which describes potential risks to human health and groundwater quality and potential safety issues.
- **Section 5: Response Action Evaluation**, which describes the remedial action objectives (RAOs) and the development and evaluation of response action alternatives.
- **Section 6: Response Plan Implementation**, which describes the general implementation procedures of the selected response action.
- **Section 7: Implementation Schedule,** which provides a brief summary of the anticipated implementation schedule**.**
- **Section 8: References** used in preparation of this Plan.

2.0 SITE BACKGROUND

2.1 SITE LOCATION AND GENERAL DESCRIPTION

The Property is roughly triangular and is located at 3041 Del Amo Boulevard on the northeast corner of West Del Amo Boulevard and Prairie Avenue (**Figure 2**). The Property consists of approximately 31 acres of predominately undeveloped vacant land with a former horse stable located on the southeastern 1.5 acres. Debris (such as bricks, concrete, piping, catalyst beads, petroleum coke) is scattered across the surface of the northwestern portion of the Property. An excavated soil borrow pit is located in the central area of the Property.

Railroad tracks are present adjacent to the eastern/northeastern Property boundary. Beyond the railroad tracks to the east and north is the Torrance Oil Refinery ("Refinery") located at 3700 West 190th Street, Torrance, California. Numerous groundwater monitoring wells associated with Refinery environmental investigations are present on the Property, primarily around the perimeter. The area to the south of the Property, beyond Del Amo Boulevard, includes an undeveloped lot and commercial buildings near the intersection of Maple Avenue and Del Amo Boulevard. Located to the southwest, across the intersection of Del Amo Boulevard and Prairie Avenue, are condominiums, and to the west, across Prairie Avenue, are commercial buildings, a hotel called Staybridge Suites, and a self-storage facility.

2.2 HISTORY OF SITE USES

Historically, the Property was an out-parcel ancillary to the Refinery that was used for the disposal of refinery waste and to supply soil for construction projects on the Refinery. Historical information obtained during a previous Phase I Environmental Site Assessment (SCS, 2018A) indicated that the northwest portion of the Property was used by the Refinery for the placement or disposal of refinery

wastes from at least 1947 until sometime between 1963 and 1970. This area is referred to as the "disposal area" and is designated on **Figure 2**. By 1970, it appeared that excavation/grading activities had been conducted in the central area of the Property known as the "borrow pit" (where soil was historically sourced for constructing berms at the Refinery). The eastern portion of the Property appeared to be used for agricultural purposes between at least 1952 and 1970. The Torrance Mounted Posse used the southeastern portion of the Property for horse stables from at least 1989 until recently. Other than oil pipelines observed on and adjacent to the Property, no oil production or petroleum processing activities were conducted on the Property. The Property is currently fenced and vacant.

2.3 FUTURE SITE USE AND DEVELOPMENT

TBB plans to redevelop the Property into a warehousing/logistics facility. The majority of the surface area of the Property will be covered with a concrete building foundation and paved parking and access areas. A few small landscaped areas will be located near the building and in parking areas. The conceptual plan for site redevelopment is presented as an overlay on **Figure 2**.

2.4 PHYSIOGRAPHY, GEOLOGY, AND HYDROGEOLOGY

The Property is situated on the eastern margins of the El Segundo Sand Hills, in the southern portion of the Torrance Plain, within the Coastal Plain of Los Angeles County. Elevation varies from a high of about 106 feet above mean sea level (amsl) along Del Amo Boulevard to a low of about 61 feet msl within the excavated borrow pit in the central portion of the Property. With the exception of the borrow pit, Property topography generally slopes to the northeast towards the Refinery. There are no surface water bodies within one mile of the Property. The Santa Monica Bay shoreline is located approximately 3 miles west and the Dominguez Channel approximately 2.5 miles northeast of the Property.

The surficial geologic unit in the area has been mapped as the unconsolidated Upper Pleistocene Older Dune Sand (California Department of Water Resources, 1961), which is underlain by the Upper Pleistocene Lakewood Formation consisting of unconsolidated sand, silty sand, silt, and clay. Refinery reports (AECOM, 2016, 2019) do not delineate a contact between the Older Dune Sand and the Lakewood Formation on cross-sections. likely because similarities in lithology makes distinguishing the two units difficult.

A recent report for the Refinery (AECOM, 2019) states that poorly graded fine sand constitutes the predominant lithology to depths ranging from 50 to 70 feet bgs (or approximately 35 feet msl) below which a lower permeability silt or clay unit is present across much of the area. The AECOM 2019 report indicates that, depending upon the location, this low permeability unit appears to function as the layer upon which perched groundwater may be found. Regionally, the low permeable layer thins southward and becomes discontinuous towards the southern boundary of the Property. AECOM identified this layer as a part of the Bellflower Aquitard and states that it is largely absent south of Del Amo Boulevard.

The Property is located in the southwestern portion of the West Coast Groundwater Basin and the two shallowest hydrogeological units present beneath most of the Property include the perched aquifer and the first regional water bearing unit, the Gage-Gardena aquifer. Groundwater in the West Coast Basin is designated for municipal and domestic supply, industrial process and service supply, and agricultural supply.

The Refinery Subsurface Cleanup Progress Report and Del Amo Area Soil Vapor and Groundwater Monitoring Report, June 2024 (AECOM, 2024), indicates that the potentiometric surface of the

perched aquifer ranges from 21.90 feet msl (well F-02) in the northwestern area of the Property to 37.29 feet msl (well C-29) in the southeastern area. The potentiometric surface of the Gage-Gardena aquifer ranges from 2.11 feet msl (well C-23R) located in the southeastern portion of the Property to 3.63 feet msl (well C-13RA) located in the southcentral area. Groundwater flow within the perched aquifer is generally westerly and within the Gage-Gardena aquifer is generally southeasterly.

3.0 NATURE AND EXTENT OF SITE IMPACTS

3.1 SUMMARY OF PREVIOUS SITE INVESTIGATIONS

3.1.1 Stantec – 2017

SCS was provided laboratory reports, and analytical data tables and maps for an investigation of soil and soil vapor on the Property, conducted by Stantec in September 2017. Apparently no investigation report was produced, and not all of the laboratory reports were available to document the data in the summary tables. The scope of Stantec's investigation apparently included the collection and analysis of 20 soil vapor samples for volatile organic compounds (VOCs) from 10 locations (GP-1 through GP-10), with probes set at depths of 5 and 15 feet bgs. In addition, Stantec collected soil samples from 8 hollow stem auger borings (HSA-1 through HSA-8), as well as the 10 vapor probe locations, generally at 5-foot intervals and at depths up to 25 feet bgs. The results of the soil vapor and soil sampling, most of which focused on the areas of the refinery disposal site and borrow pit, are discussed below. Tables summarizing available Stantec data are included in **Appendix A**. Sample locations are shown on **Figure 3**.

Soil Vapor Samples

Field monitoring for methane showed mostly low concentrations from the 20 probes/10 locations. However, four samples showed methane concentrations between 1 and 23 percent. Methane is explosive when it reaches a concentration of between 5 and 15 percent in air (5 percent thus the Lower Explosive Limit or LEL). Concentrations above 20% of the LEL (equal to 1 percent) were identified in 4 of 20 samples, GP-1-15', GP-2-15', GP-5-15', and GP-7-15', all located within or adjacent to the refinery disposal area. Twenty percent of the LEL is often used as a threshold by regulatory agencies to require protection of any buildings from the explosive hazards of subsurface methane.

A mobile laboratory was used to analyze vapor samples from all 20 probes for VOCs. Fifteen fuel-related constituents were detected; no chlorinated solvents were detected. The highest VOC concentrations were in the 15-foot vapor samples. Benzene, ethylbenzene, and naphthalene were detected at concentrations above their respective Department of Toxic Substances (DTSC) recommended screening levels (SLs) for future industrial/commercial buildings. The four samples with VOCs above SLs (GP-1-15', GP-5-15', GP-6-15', and GP-7-15') were all located on the western portion of the Property, within or adjacent to the refinery disposal area.

Soil Samples

Soil samples were selectively analyzed for total petroleum hydrocarbons (TPH, at various carbon chain ranges), VOCs, metals, soluble lead (as tested using the California WET Method and compared to the soluble threshold limit concentrations [STLC] and the toxicity characteristic leaching procedure [TCLP]), polychlorinated bipenyls (PCBs), and semi-volatile organic compounds (SVOCs).

PCBs were not detected in the 10 samples analyzed.

The summary tables for TPH show a wide range of hydrocarbons, including gasoline-range (C4-C12) up to 4,900 milligrams per kilogram (mg/kg), diesel-range (C13-C22) up to 130,000 mg/kg, light oil (C23-C32) up to 120,000 mg/kg, and heavy oil (C33-C40) up to 23,000 mg/kg. Numerous VOCs and SVOCs typical of various hydrocarbon products/wastes were also identified in soil. Metals results show concentrations above typical background values of arsenic (up to 54 mg/kg), total lead (up to 14,000 mg/kg [in one isolated sample]), chromium (up to 2,400 mg/kg), copper (up to 1,400 mg/kg), and mercury (up to 53 mg/kg) in one or more samples. The soluble analyses for lead show up to 1,000 milligrams per liter (mg/L) STLC lead and up to 21 mg/L TCLP lead.

In summary, these results indicated that soil in the disposal area on the Property contains TPH, SVOCs, petroleum-related (non-chlorinated) VOCs, and metals at concentrations above typical regulatory cleanup levels.

3.1.2 SCS – 2018

In June 2018, SCS conducted a Phase II site investigation that consisted of collection of soil samples from 9 trench locations and 19 boring locations, collection of 16 discrete and 11 composite surface soil samples, collection of 7 samples for asbestos, and collection of 3 catalyst bead samples (SCS, 2018B). Results of sample analysis are described below and summarized in **Tables 1** through **5**. Sample locations are shown on **Figure 3**. Cross sections providing information on subsurface sample concentrations for selected parameters are included as **Figures 4** through **31**. Summaries of sample concentrations for these parameters are included on **Figures 32** through **35**.

Subsurface Soil Samples

As shown in **Table 1**, a total of 94 samples were analyzed for TPH carbon-chain range. TPH as gasoline and light hydrocarbons (TPH-g [carbon-chain range C_4-C_{12}]) was detected in 27 soil samples, at concentrations ranging from 0.22 to 4,620 mg/kg. TPH as diesel (TPH-d [carbon-chain range C_{13}-C_{22}]) was detected in 20 soil samples, at concentrations ranging from 136 to 40,800 mg/kg. Heavy oil-range TPH (TPH-o [carbon-chain range C_{23}-C_{40}]) was detected in 21 soil samples at concentrations ranging from 46.1 to 10,700 mg/kg.

Analytical results for VOCs are summarized in **Table 1.** A total of 18 VOCs were detected as follows: benzene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, 4-isopropyltouluene, naphthalene, n-propylbenzene, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, toluene, tert-butyl alcohol, vinyl chloride, xylenes, 2-butanone, and methyl tert-butyl ether. With the exception of benzene in SB9-10' and SB9-15'; naphthalene in T1-9, S9-10', SB9-15', SB9-30', and SB9-40'; and xylenes in SB9-10' and SB9-15', all other VOCs were detected at concentrations below DTSC-recommended screening levels (SLs) for commercial/industrial sites.

Analytical results for SVOCs are also summarized in **Table 1.** A total of 20 SVOCs were detected as follows: naphthalene, 2-methylynapthalene, 2-methylphenol(O-cresol), 2,4-dimethylphenol, carbazole, phenanthrene, anthracene, fluoranthene, fluorine, pyrene, bis(2-ethylhexyl) phthalate, benzo(a)anthracene, benzoic acid, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-C,D)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene. With the exception of naphthalene in T1-9' and S9-10'; benzo(a)anthracene in B8-1'; benzo(a)pyrene in T1-9', B7-30', SB3-5', and SB9-10'; dibenz(a,h)anthracene in T1-9' and B8-1'; and xylenes in SB9-10' and SB9-15', all other SVOCs were detected at concentrations below DTSC-recommended SLs for commercial/industrial sites.

Thirteen samples were analyzed for PCBs. One sample (SB2-10) had a detection of PCB-1260 at a concentration of 651 micrograms per kilogram [µg/kg]. All other samples were non-detect for PCBs. PCBs results are also summarized on **Table 1.**

Analytical results for metals in soil samples are summarized in **Table 2.** The metals detected were arsenic, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, and zinc. With the exception of arsenic in samples T1-19.5', T4-14.5, SB5-10', SB6-5', SB7-5', SB7-20', SB8-35', SB9-15', and SB14-5', and lead in samples T1-9', T3-0.5', T6-0.5', B8-1', SB2-10', SB3-5', SB5-10', SB6-5', SB6-10', SB7-5', SB8-5', and SB9-15', all other metals were detected at, or below, concentrations typically found in native California soils.

To further characterize lead levels in soil, based on elevated concentrations and to provide representative results throughout the Property, select samples were also analyzed for soluble lead using the California Waste Extraction Test for comparison to the California Title 22 STLC, and using the TCLP for comparison to the federal TCLP limit. A total of 13 samples contained soluble lead concentrations above the STLC limit of 5 milligrams per liter (mg/L), ranging from 5.87 to 37.8 mg/L. None of the samples from this investigation exceeded the TCLP limit of 5 mg/L.

Eleven samples were analyzed for hexavalent chromium; eight samples had detections ranging from a trace concentration (below the laboratory practical quantitation limit or PQL ("J" flagged on the table) of 0.151 mg/kg to 3.54 mg/kg **(Table 2).** All hexavalent chromium concentrations were below DTSC-recommended SLs for commercial/industrial sites.

A summary of the results for the 12 samples analyzed for organochlorine pesticides (OCPs) is provided in **Table 2**. The OCPs detected in these samples included total chlordane, alpha-chlordane, gamma-chlordane, 4,4'-DDD, 4,4'-DDE, 4.4'-DDT, heptachlor, heptachlor epoxide, betta-BHC, toxaphene. All concentrations of OCPs were below DTSC-recommended SLs for commercial/industrial sites.

Discrete Surface Soil Samples

Analytical results of metals concentrations in the discrete surface soil samples are summarized in **Table 2**. The metals detected in samples collected were arsenic, barium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, and zinc. With the exception of arsenic in Surface 5, Surface 7, Surface 8, and Surface 10, and lead in Surface 5, Surface 8, Surface 10 through Surface 13, Surface 15, and Surface 16, all other metals were detected at, or below, concentrations typically found in native California soils.

Three discrete surface samples were analyzed for hexavalent chromium; one sample (Surface 5) had a trace concentration of 0.159 mg/kg **(Table 2)**, which is below the DTSC-recommended SLs for commercial/industrial sites.

Eight of the samples were analyzed for OCPs. Four OCPs were detected in the surface samples: total chlordane, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT. All concentrations of OCPs detected were below their respective DTSC-recommended SLs for commercial/industrial sites.

Surface Composite Soil Samples

Analytical results of metals concentrations in the surface composite soil samples are summarized in **Table 2**. The metals detected in these samples were arsenic, barium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, and zinc. All metals were detected at, or below, concentrations typically found in native California soils.

Four of the composite surface samples were analyzed for OCPs. Five OCPs were detected in the surface samples that included total chlordane, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin. All concentrations of OCPs detected were below the DTSC-recommended SLs for commercial/industrial sites.

Asbestos Samples

Analytical results for asbestos in building materials and soil samples are summarized in **Tables 3 and 4**, respectively. Seven building materials were sampled that included insulation, gasket wrap, miscellaneous wrap, woven insulation, tar paper, orange brick, and yellow brick. With the exception of the orange and yellow brick, all the samples contained asbestos greater than 1%, which would classify these materials as an asbestos-containing material (ACM).

Asbestos was detected in all eight soil samples that were analyzed at concentrations ranging from 0.25% to 5.0%.

Catalyst Samples

Analytical results for the three catalyst samples are summarized in **Table 5** (TPH and SVOCs) and **Table 6** (metals). The metals detected in samples collected were barium, chromium, copper, lead, mercury, nickel, silver, vanadium, and zinc. All metals were detected at, or below, concentrations typically found in native California soils.

TPH-g was not analyzed for the catalyst samples. TPH-d was detected only in the Catalyst-2 sample at a concentration of 4,770 mg/kg. TPH-o was detected in all three catalyst samples at concentrations ranging from 10.9 to 5,430 mg/kg, with the Catalyst-2 sample having the highest concentration. A total of 11 SVOCs were detected: benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene, and 2-methlynaphthalene. All concentrations of SVOCs detected were below the DTSC-recommended SLs for commercial/industrial sites

3.1.2 SCS – 2019

Soil Samples

During a March 2019 additional site investigation a total of 122 soil samples were collected from 22 soil borings and analyzed for TPH, VOCs, SVOCs, and metals (SCS 2019). Summaries of analytical results for TPH and VOCs, SVOCs, and metals in soil are provided on **Tables 7 through 9**. The tables provide analyte specific regulatory screening levels, referred to as "DTSC-Recommended Screening Levels or SLs", which are further explained and discussed in Section 5.0. Sample locations are shown on **Figure 3**. Cross sections providing information on subsurface sample concentrations for selected parameters are included as **Figures 4** through **31**. Summaries of sample concentrations for these parameters are included on **Figures 32** through **35**.

TPH in Soil

TPHg was detected in 12 borings at concentrations ranging from 0.402 to 10,400 mg/kg, however, only six borings had concentrations of TPHg that exceeded the SL. TPHd was detected in 20 borings at concentrations ranging from 12.2 to 124,000 mg/kg, however, only 13 borings had concentrations of TPHd that exceeded the SL. TPHo was detected in 17 borings at concentrations ranging from 67.4 to 47,300 mg/kg, however, only four borings had concentrations exceeding the SL.

VOCs in Soil

As shown in **Table 7**, a total of 14 VOCs were detected during this investigation. Twelve of these VOCs were detected only sporadically and/or at low concentrations. The following summarizes these sporadic and low level VOCs, none of which exceeded the commercial SLs:

- acetone was detected in four borings (up to 182 µg/kg)
- benzene was detected in one boring (at 66.5 µg/kg)
- n-butylbenzene was detected in two samples from one boring (at 6,900 and 33,800 µg/kg)
- tert-amyl methyl ether was detected in one boring (TAME, at 18.2 µg/kg)
- tert-butyl alcohol was detected in one boring (TBA, at 33.2 µg/kg)
- p-isopropyltoluene was detected in one boring (at 5,150 and 28,300 µg/kg)
- toluene was detected in four borings (up to 26,600 µg/kg)
- 1,1,2-trichloroethane was detected in one boring (at 19.1 µg/kg)
- 1,2,4-trimethylbenzene was detected in four borings (up to 255,000 µg/kg)
- 1,3,5-trimethylbenzene was detected in three borings (up to 71,400 µg/kg)
- m,p-xylene was detected in six borings (up to 157,000 µg/kg)
- o-xylenes was detected in five borings (up to 86,800 µg/kg)

Only two VOCs were detected more frequently and at higher concentrations. Ethylbenzene was detected in seven borings (up to 41,200 µg/kg), however, only two borings had concentrations of ethylbenzene that exceeded its commercial SL. Naphthalene was detected in nine borings (up to 126,000 µg/kg), however, only four borings had concentrations exceeding its commercial SL.

SVOCs in Soil

As shown in **Table 8**, a total of 20 SVOCs were detected during this investigation. Fourteen of the SVOCs were detected only sporadically and/or at low concentrations. The following summarizes these sporadic and low level SVOCs, none of which exceeded their respective commercial SLs:

- acenaphthene was detected in three borings (up to 10,500 µg/kg)
- anthracene was detected in five borings (up to 57,200 µg/kg)
- benzo(g,h,i)perylene was detected in five borings (up to 8,620 µg/kg)
- chrysene was detected in 12 borings (up to 308,000 µg/kg)
- 2,4-dimethylphenol was detected in two borings (up to 47,900 µg/kg)
- fluoranthene was detected in five borings (up to 15,900 µg/kg)
- fluorene was detected in two borings (up to 26,400 µg/kg)
- isophorone was detected in one boring (at 812 µg/kg)
- 2 methylnaphthalene was detected in 16 borings (up to 376,000 µg/kg)
- 2-methylphenol was detected in one boring (at 15,500 µg/kg)
- 3.4-methylphenol was detected in one boring (at 14,500 µg/kg)
- Phenanthrene was detected in 14 borings (up to 142,000 µg/kg)
- phenol was detected in one boring (at 5,470 µg/kg)
- pyrene was detected in nine borings (up to 130,000 µg/kg)

Six SVOCs were detected more frequently and/or at concentrations exceeding SLs. Benzo (a) anthracene was detected in one boring at a concentration of 189,000 µg/kg, which exceeded the SL. Benzo (a) pyrene was detected in nine borings at concentrations (up to 14,400 µg/kg) that exceeded the SL. Benzo (b) fluoranthene was detected in six borings (up to 13,200 µg/kg), however,

only two borings had samples with concentrations that exceeded the SL. Dibenzo (a,h) anthracene was detected in two borings at concentrations (up to 4,120 µg/kg) that exceeded its SL. 1-Methyl naphthalene was detected in 12 borings (up to 550,000 µg/kg), however, only four borings had samples with concentrations that exceeded the SL. Naphthalene was detected in eight borings at concentrations up to 387,000 µg/kg, however, only five borings had samples with concentrations of naphthalene that exceeded the SL.

Note that naphthalene was reported by both EPA Methods 8260B and 8270C. Each method produced an independent analytical result and, even though the same sample was analyzed, the naphthalene results did not commonly match. The following summarizes the explanation from Rojert Araghi of ASL (the laboratory that conducted the analyses): The variance in the naphthalene results could be a function of the size of sample that is used for the analysis. Method 8260B uses 5 grams of soil sample and 8270C uses 15 grams. This mass difference could introduce a variance if the soil sample lacks homogeneity. Another reason for this variance in results could be that Method 8260B uses methanol to extract the sample and, due to other constituents such as diesel and oil, the extraction may become viscous and this viscosity does not allow for the naphthalene to purge perfectly. Finally, naphthalene is volatile at higher temperatures and during the extraction for 8270C, the sample is heated and condensed and in this process it is possible that some naphthalene escapes.

Metals in Soil

Analytical results for metals in soil samples are summarized in **Table 9**. The metals detected above background levels included antimony, arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, and zinc. All other metals were detected at, or below, concentrations typically found in native California soils (Bradford, et al, 1996). Of these metals, only lead (in 11 borings) and arsenic (in 1 boring) were detected above their respective SLs.

Note that the reporting limit for selenium was 0.50 mg/kg, which exceeds the background level of 0.430 mg/kg, however, all selenium detections were far below screening levels as discussed later. Hexavalent chromium was detected in 16 borings, only 1 of which had one sample with a concentration above its SL. Note that there is no background level for hexavalent chromium since it is not considered naturally occurring.

Soil Vapor Samples

A total of 34 vapor samples (including three replicates) were collected from various depths between 5.5 and 30 feet bgs at 11 probe locations. As shown in **Table 10**, eight VOCs were detected in the soil vapor including benzene, toluene, ethylbenzene, m,p-xylene, o-xylene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, and n-propylbenzene. Of the 37 vapor samples collected, only six samples contained VOCs; these samples were collected from vapor probes at SB20, SB31, and SB36. The leak check compound (LCC) was detected in the 5.5- and 15-foot samples from SB33.

Methane was detected in 24 of the 36 vapor samples analyzed (SB36-5.5REP was not analyzed). Methane detections ranged from 13 to 65,000 parts per million per volume (ppmv).

3.1.3 SCS – 2020 and Terracon 2024

On May 8, 2020, SCS conducted a survey of the surface with the objective of assessing the Property for the possible presence and type of ACMs, in which asbestos content is greater than 1 percent (by weight), and asbestos-containing construction materials (ACCMs), in which asbestos content is greater than 0.1 percent, but less than 1% (by weight). Based on the visual survey, 41 bulk samples

were collected, all in or near the disposal area, and analyzed using polarized light microscopy (PLM) and dispersion staining in accordance with the USEPA Interim Method for the Determination of Asbestos in Bulk Samples (40 CFR 763, Subpart F, Appendix A). The findings, in regard to the homogeneous materials found at the Property are summarized in **Table 11**.

The laboratory results identified the following materials as containing asbestos above the threshold limit of greater than 1% (or require additional analysis to confirm they are less than 1%):

- Silver/black roofing mastic debris located throughout area 1
- Woven fabric insulation debris located throughout areas 1, 2 and 3
- Pipe gasket debris located throughout areas 1, 2, 3, 5 and 6
- Gray thin underlayment material debris located throughout areas 1, 2, 3, 5 and 6
- Green thin underlayment material debris located throughout area 2
- Black insulation debris located throughout area 1, 2, 3 and 5

All of the above materials were found to be in significantly damaged condition.

In September 2024, Terracon conducted an additional asbestos survey of debris in the refinery disposal area (Terracon, 2024a). Insulation material, roofing felt, textured and other paper, woven material, cementitious piping materials were sampled and found to contain various levels and types of asbestos. Based on this survey, Terracon prepared a Procedure 5 workplan that has been approved by the SCAQMD (Terracon, 2024b) and abatement activities are anticipated to occur in the near future, prior to initiation of any remediation activities.

3.1.4 SCS and AECOM – 2022

In response to requests by the RWQCB to provide additional subsurface sample data in specific areas of the disposal area, SCS and AECOM conducted a coordinated set of ("data gap") investigations in October 2022 with the SCS portion focused on the soil above the TBB Development Depth and the AECOM portion focused in soil below the Development Depth (SCS 2022 and AECOM 2022). In addition, there was limited grab sampling of groundwater encountered below the Development Depth. The scope of work for this investigation consisted of drilling of 12 borings, one of which extended as deep as 70 feet bgs. The laboratory analytical results for soil and groundwater are summarized below.

Soil Samples

During SCS portion of the data gap investigation a total of 35 soil samples were collected from 6 borings and selectively analyzed for TPH, VOCs, SVOCs, and lead (SCS 2022). Summaries of analytical results for TPH and VOCs, SVOCs, and metals in soil are provided on **Table 12**. During AECOM portion of the data gap investigation an additional 35 soil samples were collected from 7 borings (one of which represented a deepening of an SCS boring). The AECOM soil samples were selectively analyzed for TPH, VOCs, SVOCs, and lead (AECOM 2022) as summarized in **Table 13**. Sample locations are shown on **Figure 3**. Cross sections providing information on subsurface sample concentrations for selected parameters are included as **Figures 4 through 31**. Summaries of sample concentrations for these parameters are included on **Figures 32 through 35**.

TPH in Soil

TPHg was detected in 12 samples from one boring and 11 primary samples from 3 other borings at concentrations ranging from 0.21J to 6,180 mg/kg. Four samples from one boring (SB43) above the

Development Depth had concentrations of TPHg that exceeded the SL. TPHd was detected in 22 samples from 4 boring locations at concentrations ranging from 5.6 to 104,000 mg/kg; 6 above Development Depth samples from one boring (SB43), and one sample from another such boring, had concentrations of TPHd that exceeded the SL. TPHo was detected in 10 samples from 2 borings at concentrations ranging from 830 to 7,830 mg/kg, none of which exceeded the SL.

VOCs in Soil

Only 4 VOCs were detected during the data gap investigation. Two of these VOCs, ethylbenzene and 1,2,4-trimethylbenzene, were detected at low concentrations in one sample at 65 feet bgs (likely related to the groundwater capillary fringe). Acetone was also detected in several samples at relatively low concentrations; acetone is a common laboratory cross contaminant.

Only naphthalene was detected more frequently and at higher concentrations. Naphthalene was detected in 2 borings at relatively high concentrations in some samples and in 2 other borings at low concentrations. Naphthalene was detected in 3 samples from boring SB43 at 5,000 to 16,000 µg /kg (between 39 and 54 feet bgs) and in SB45 in 4 samples at 16.8 to 14,200 µg /kg (between 15 and 30 feet bgs). The commercial SL for naphthalene is 6,500 µg /kg.

SVOCs in Soil

Besides naphthalene, the only SVOC detected during the data gap investigation was benzo(a)pyrene, which was detected in 2 samples from boring SB46 at concentrations of 6.65 and 12.4 µg /kg. Both concentrations were well below the commercial SL of 1,300 µg /kg

Metals in Soil

Analytical results for soil indicate 16 samples with detections of lead in 6 borings with concentrations ranging from 2.02 to 8,720 mg/kg. Concentrations in 4 of these samples, from 3 borings (SB42, SB43, and SB46), exceeded the SL. All 4 of these exceedances were in samples from 20 feet bgs or shallower.

Groundwater Samples

A grab groundwater sample was also collected from each of borings BH-2 and BH-6. These samples were analyzed for total and dissolved lead to assess whether the lead detected in soil was posing a threat to the underlying groundwater (AECOM 2022). Lead was not detected in either of these water samples.

3.2 DATA ASSESSMENT

3.2.1 Soil Sample Data

The DTSC, Human and Ecological Risk Office (HERO) issued an updated Human Health Risk Assessment (HHRA) Note No. 3 in June 2020 – Revised May 2022. HERO Note No. 3 provides DTSC-modified Screening Levels for soil, tap water, and ambient air for use in evaluating human health risks at hazardous waste sites and permitted facilities. For the majority of regulated chemicals, HERO Note No. 3 recommends the use of the U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs; most recently updated in May 2022), except in cases where DTSC has calculated a more stringent screening level. Human health risks associated with contact with contaminated soil (dermal, ingestion, etc.) in California can be assessed by comparing concentrations detected at the Property to the most stringent (or conservative) of these values for each chemical, referred to by SCS as the DTSC recommended SLs. The commercial/industrial DTSC-

Recommended SLs are presented on the data tables, as appropriate. For petroleum hydrocarbons, the concentrations are compared to the Los Angeles RWQCB soil screening levels (SSLs) for soil between 20 and 150 feet above groundwater to assess soil based on the potential for impact to groundwater (LARWQCB, 1996).

The following constituents exceeded the SLs or SSLs in soil samples collected by SCS:

- Concentrations of TPHg exceeded the RWQCB SSL of 500 mg/kg in 7 borings at concentrations that ranged from 712 mg/kg (SB38 at 15 feet bgs) to 10,400 mg/kg (SB31 at 25 feet bgs). TPHd exceeded the screening level of 1,000 mg/kg in 15 borings and concentrations ranged from 1,140 mg/kg (SB36 at 30 feet bgs) to 124,000 mg/kg (SB35 at 15 feet bgs). TPH as oil exceeded the screening level of 10,000 mg/kg in 4 borings with concentrations ranging from 11,600 mg/kg (SB34 at 15 feet bgs) to 47,300 mg/kg (SB35 at 15 feet bgs).
- The DTSC-Recommended SL for naphthalene is 6,500 µg/kg. Using EPA Method 8270C, naphthalene concentrations exceeded its SL in 5 borings at concentrations ranging from 17,900 µg/kg (SB35 at 20 feet bgs) to 387,000 µg/kg (SB31 at 25 feet bgs). Using EPA Method 8260B, naphthalene exceeded its SL in 5 borings at concentrations ranging from 14,200 µg/kg (SB45 at 15 feet bgs) to 126,000 µg/kg (SB31 at 25 feet bgs).
- Ethylbenzene exceeded its DTSC-Recommended SL of 25,000 µg/kg in two samples, SB36 at 10 feet bgs at 26,000 µg/kg and SB31 at 25 feet bgs at 41,200 µg/kg. No other VOCs exceeded DTSC-Recommended SLs.
- Benzo(a)pyrene exceeded its DTSC-Recommended SL of 1,300 µg/kg in 9 borings at concentrations ranging from 1,330 µg/kg (SB24 at 8 feet bgs) to 14,400 µg/kg (SB31 at 25 feet bgs). 1-Methyl naphthalene exceeded its SL of 30,000 µg/kg in 4 borings at concentrations ranging from 41,200 µg/kg (SB35 at 25 feet bgs) to 550,000 µg/kg (SB35 at 15 feet bgs). Benzo(a)anthracene was detected above its SL of 12,000 µg/kg in one sample only, SB31 at 15 feet bgs at a concentration of 189,000 µg/kg. Benzo(b)fluoranthene was detected in two samples at or above its SL of 13,000 µg/kg: SB28 at 20 feet bgs at 13,000 µg/kg, and SB31 at 25 feet bgs at 13,200 µg/kg. Dibenzo(a,h)anthracene was detected in 2 samples above its SL of 310 µg/kg: SB28 at 20 feet bgs (4,120 µg/kg) and SB31 at 25 feet bgs (3,380 µg/kg). No other SVOCs were detected above their DTSC-Recommended SLs.
- Three metals were detected at concentrations above their respective risk-based SLs, lead, hexavalent chromium, and arsenic. Lead exceeded its DTSC-Recommended SL of 500 mg/kg in 14 borings at concentrations ranging from 516 mg/kg (SB35 at 5 feet bgs) to 14,600 mg/kg (SB28 at 23.45 feet bgs). Hexavalent chromium was detected in only one sample slightly above its SL of 6.2 mg/kg, sample SB30 at 5 feet bgs with a concentration of 7.20 mg/kg.
- Regarding arsenic, the US EPA has acknowledged that in some cases, the predictive risk-based models generate SLs that lie within or even below typical background. If natural background concentrations are higher than the risk-based SLs, an adjustment of the screening level is probably needed. US EPA uses naturally occurring arsenic in soils as an example. Further, the DTSC has acknowledged that the strict use of arsenic SLs are impractical and has set acceptable levels in soil up to 12 mg/kg for school sites in California. Two soil samples contained arsenic above 12 mg/kg during this investigation, sample SB36 at 10 feet bgs with 22.4 mg/kg, and SB36 at 15 feet bgs with 13.7 mg/kg.

In summary, although a few other constituents slightly exceed SLs in a limited number of samples, there are six primary constituents of potential concern (COPCs) that have been identified, including:

1. Total petroleum hydrocarbons (TPHg, TPHd, and/or TPHo);
2. Naphthalene;
3. Ethylbenzene;
4. Benzo(a)pyrene;
5. 1-Methyl naphthalene; and
6. Lead.

In addition, as indicated in Section 3.1.3 above, asbestos has been detected in building materials exposed on the surface of the Property and it is possible that ACMs also occur in the subsurface of the disposal area.

The locations of seven cross-sections (A-A' through G-G') transecting the Refinery disposal area are shown on **Figure 3**. Each cross section has been populated with the analytical data for these six primary COPCs, as shown in **Figures 4 through 31**. Those samples with COPC values exceeding their respective DTSC-Recommended SLs for commercial/industrial land use are shown in red font.

Using boring logs and analytical results, in conjunction with the analytical data generated during investigations on the Site, the extent of fill and soil containing COPCs above SLs in the Refinery disposal area has been delineated laterally and vertically. SCS used a combination of information to determine the approximate extent of fill associated with the Refinery disposal area including:

- Borings logs (lithology, presence of catalyst beads, debris, etc.).
- Elevated XRF readings of soil indicating elevated lead levels associated with the fill.
- Analytical results for lead, which indicate that native sediments typically contain less than 10 mg/kg of lead and that lead concentrations above 10 mg/kg are indicative of fill.

It should be noted that not all fill soils contain COPCs above SLs. Further, the presence of various TPH fractions, VOCs, and SVOCs in soil does not necessarily indicate fill, since elevated concentrations of these COPCs also appear in native soil in several borings/areas. A discussion of the extent of fill and soil with COPCs concentrations exceeding SLs in the Refinery waste area is provided in the following sections.

3.2.2 Extent of Fill Materials

As shown in **Figure 2**, the interpreted Refinery disposal area is roughly triangular in shape, bounded by the railroad tracks to the northeast, the Property line and Prairie Avenue to the west, and is delineated to the south and southeast by borings SB-20, SB21, SB-22, GP-6, and SB12. This Refinery disposal area generally corresponds with the excavations and disturbed areas observed in historical aerial photographs in the Phase I ESA report, and past interpretations of the Refinery disposal area.

As shown in the cross-sections (**Figures 4 through 31**), the fill soil in the Refinery disposal area is vertically delineated. In boring SB38, catalyst beads are present in the 30-foot sample. In boring SB36, the two deepest samples (25 and 30 feet bgs) contain lead at concentrations of about 50 mg/kg, which is below its SL but indicative of fill soil. Borings SB36 and SB38 are located in the north-central part of the Refinery disposal area and are shown on cross section A-A' (**Figures 4 to 7**) and on cross section C-C' (**Figures 12 to 15**).

3.2.3 Extent of COPCs in Soil

Lateral Extent

The majority of the COPCs in soil exceeding SLs were found to be coincident with the Refinery disposal fill, albeit within a smaller footprint than that of the fill area. **Figures 32 through 35** are maps showing the analytical data for TPH, naphthalene and ethylbenzene, benzo(a)pyrene and 1-methyl naphthalene, and lead in soil, respectively. These figures also show the estimated areal extent of soil (at any depth) with these COPCs that exceed SLs. **Figure 36** is a "combination" map of **Figures 32 through 35**, showing the extent of all primary COPCs in soil above SLs. As shown, there are isolated areas of a particular COPC, and then there are areas of multiple co-located COPCs. For example, in boring SB25 there is an isolated area of TPHd (**Figures 32 and 36**). In the area of SB38, there are overlapping and coincident occurrences of TPHg, TPHd, TPHo, naphthalene, benzo(a)pyrene, and lead (**Figures 32 through 36**). The spotty nature of the lateral extent of each COPC is consistent with the nature of a disposal site where wastes were dumped at different locations and times. It's also important to note that not all portions of the Refinery disposal area have COPCs above SLs. For example, the area of borings SB10 and SB11 appears to have no COPC impacts above screening criteria.

Vertical Extent

The vertical extent of fill and COPCs above SLs are shown in the cross-sections, **Figures 4 through 31**. Lead is relatively immobile in soil, and the vertical extent of lead is confined to the fill soils as shown in **Figures 7, 11, 15, 19, and 23**.

As shown in the cross-section figures, the other organic COPCs – various TPH fractions, naphthalene, benzo(a)pyrene, 1-methyl naphthalene, and ethylbenzene are mostly confined to the fill soils. However, isolated samples from borings SB9, SB31, SB35, and SB36 have one or more of the above organic COPCs at concentrations above SLs.

It should be noted that borings SB9, SB36, and SB38 are all clustered in the northern portion of the Refinery waste area where historical information indicates a large excavation was located. Boring SB31 is located in the southern portion of the Refinery waste area, where a smaller historical excavation was located.

3.2.4 Groundwater Data

The groundwater in the perched aquifer, which flows generally southwesterly, has been impacted by fuel releases from the above ground tank farm at the Refinery to the northeast of the Property. Groundwater has been reported to contain up to approximately a 2-foot layer of Light Non-aqueous Phase Liquid (LNAPL) when measured in monitoring wells (static thickness). TORC is under a CAO related to impacts to groundwater. The Gage-Gardena Aquifer flows generally easterly, and has also been impacted by fuel releases, with over 5 feet of LNAPL in some monitoring wells on the Property. Groundwater grab samples collected beneath the Disposal Area in 2022 indicated concentrations of lead below laboratory detection limits demonstrating no impacts to groundwater due to this metal and providing further evidence that leaching from the Disposal Area to groundwater has not occurred, as further discussed in Section 4.2 below.

4.0 RISK EVALUATION

4.1 HUMAN HEALTH RISK SCREENING EVALUATION

A human health risk screening evaluation (HHRSE) was conducted for the Property consistent with current DTSC risk guidance (DTSC, 2022a). The HHRSE assumed commercial or industrial use of the Property and no access to underlying groundwater as a drinking water supply. TBB has agreed to restrict future use to commercial/industrial via a land use covenant (LUC). The LUC will be prepared, with approval by the RWQCB, following completion of response activities. This HHRSE consisted of the following steps:

- Identify COPCs
- Determine maximum concentrations for each COPC
- Identify appropriate cancer and non-cancer risk-based screening levels
- Determine relevant exposure populations (receptors), land use, and exposure pathways
- Prepare conceptual site model (CSM)
- Calculate non-cancer hazard and cancer risks based on the screening level method described in DTSC (2022a).

4.1.1 Identification of Chemicals of Potential Concern

This HHRSE is based on soil and soil vapor data collected as described and summarized previously in this report. Soil analytes included the following groups:

- Metals
- Petroleum hydrocarbons (PH)
- Organochlorine pesticides (OCPs)
- Volatile organic compounds (VOCs)
- Semi-volatile organic compounds (SVOCs)
- Polychlorinated biphenyls (PCBs)

"Chemicals of Potential Concern", or COPCs, are the subset of chemicals at a site which may potentially present a health risk. In this HHRSE all detected chemicals (including chemicals with only "J" qualified detections) were included as COPCs and evaluated in this risk assessment. Metals were not screened based on comparison to background as no background soil samples were collected.

Unlike the case for a baseline health risk assessment, maximum detected concentrations of the COPCs are used to calculate health risks in a screening health risk assessment (DTSC, 2022a). Risks associated with direct contact with soil exposure pathways were calculated based on maximum soil concentrations between 0 and 10 feet bgs. Risks associated with vapor intrusion were based on the maximum soil vapor concentration between 0 and 5 feet bgs. The maximum concentrations of each chemical for each analyte group, as well as SLs for each chemical, are shown in **Tables 14** through **17** for soil and **Table 18** for soil vapor.

Commercial use risk-based screening levels for soil were obtained first from DTSC (2022b) if available, otherwise from USEPA (2022). The cancer risk-based screening level was used to calculate cancer risk and the non-cancer-based screening level was used to calculate non-cancer hazard. Soil screening levels are shown in **Tables 14** through **17** for each analyte group.

For soil vapor, soil vapor screening levels were derived from the ambient air screening level for commercial use. For soil vapor COPCs, the cancer risk-based screening level was used to calculate

cancer risk and the non-cancer-based screening level was used to calculate non-cancer hazard. Soil vapor screening levels were derived by dividing the appropriate ambient air screening level by a default (non-site specific) attenuation factor of 0.03 (DTSC, 2022c). Ambient air screening levels and the calculated soil vapor screening levels are shown in **Table 18**.

4.1.2 Description of Exposure Scenarios, Receptor Populations, and Exposure Pathways

In order to estimate health risks related to chemicals in the environment, assumptions must be made regarding what populations will be exposed (receptor populations) and the mechanisms by which they will be exposed (exposure pathways). These assumptions are collectively referred to as an "exposure scenario". The exposure scenario assumptions used depend on the current or future land use of the subject site. For example, if a site will, or may be, occupied by residential housing, then exposure assumptions consistent with a residential receptor population would be used to assess risk. Other land uses might include retail stores, business offices, or manufacturing facilities. Such uses are referred to as "commercial/industrial" land use. In the case of parks, a recreational land use is assumed. As noted previously, the current use of this Property is predominately undeveloped vacant land with a former horse stable and future use will be restricted to commercial/industrial via an LUC.

Commercial/industrial workers may be exposed to contaminants in soils periodically through direct dermal contact with soil and inadvertent ingestion of soil (through inadvertent hand-to-mouth contact). In addition, individuals may inhale soil contaminants resuspended in outdoor air as particulate by wind erosion or volatilized from soils.

There is also a potential for these receptors to inhale chemicals in indoor air due to vapor intrusion. Vapor intrusion may occur when chemicals in soil or groundwater volatilize and enter buildings through cracks in the building foundation.

Groundwater underlying the Property is not currently used as a drinking water source and therefore this represents an incomplete exposure pathway.

Based on the above rationales, the following exposure pathways were evaluated in this HHRSE for the commercial/industrial worker:

- Soil ingestion
- Dermal contact with soil
- Inhalation of outdoor air (as particulate and vapor)
- Inhalation of indoor air (vapor intrusion)

4.1.3 Risk Assessment Conceptual Site Model

A CSM was developed for this HHRSE based on the identified receptor population (commercial/industrial workers) and the exposure pathways described above (**Figure 38**). **Figure 38** shows the primary (initial) sources of contamination on the Property. Chemicals in these soils are released to the environment primarily through wind erosion (which resuspends soil-bound contaminants in air), volatilization, and leaching into groundwater. These release mechanisms result in contamination of additional secondary sources, including: outdoor air (particulates and vapors), indoor air (via vapor intrusion), and groundwater. Direct contact of the receptor population with either the primary contaminant source (contaminated soils), or the secondary sources (outdoor air, indoor air, and groundwater), through the various exposure pathways, results in chemical exposure and uptake.

4.1.4 Risk Characterization

Cancer risks were calculated using the maximum detected concentration of the COPC and the cancer risk-based screening level for each carcinogen as follows (DTSC, 2022a):

$$Cancer\ Risk = \left[\frac{Max\ Conc\ \left[\frac{mg}{kg}\right]}{Screening\ Level\ \left[\frac{mg}{kg}\right]}\right] x\ 10^{-6}$$

Cumulative cancer risk is calculated by summing the cancer risks calculated above for all carcinogenic COPCs. Cumulative cancer risk was calculated separately for soil exposure (soil ingestion, dermal contact with soil, and inhalation of resuspended soil) and vapor intrusion, then summed to obtain total cumulative cancer risk for all exposure pathways. A cumulative cancer risk value of 1E-06 (one in a million) or less indicates a cancer risk level considered acceptable by DTSC.

Non-cancer hazard, expressed as the Hazard Quotient (HQ) is calculated for both carcinogens and non-carcinogenic COPCs using the non-cancer-based screening level as follows:

$$HQ = \frac{Max\ Conc\ \left[\frac{mg}{kg}\right]}{Screening\ Level\ \left[\frac{mg}{kg}\right]}$$

The potential for cumulative non-cancer health effects is calculated by summing the HQ values for all COPCs to obtain a Hazard Index (HI). An HI was calculated separately for soil exposure (soil ingestion, dermal contact with soil, and inhalation of resuspended soil) and vapor intrusion, then summed to obtain a total cumulative HI for all exposure pathways. An HI of 1 or less indicates no significant risk of non-cancer health effects.

Table 14 shows the calculation of cancer risk and non-cancer hazard for metals. As noted previously, no metals were screened out based on background. Cumulative cancer risk was 1.5E-04, which significantly exceeds the negligible DTSC cancer risk threshold of 1E-06 (one in a million). Virtually all of the excess cancer risk was due to some high arsenic outliers that exceed typical background levels. The HI of 33 is much greater than the negligible threshold of 1 and indicates a significant potential for non-cancer health effects. The high HI is due primarily to arsenic, thallium, mercury, and cobalt.

Table 15 shows the calculation of cancer risk and non-cancer hazard for OCPs and PCBs in soil. Cumulative cancer risk was negligible (1E-06). The risk of non-cancer health effects was also negligible based on an HI much less than 1.

Table 16 shows the calculation of cancer risk and non-cancer hazard for VOCs in soil. Cumulative cancer risk was 3E-05, which significantly exceeds the DTSC cancer risk threshold of 1E-06 but is within the USEPA risk management range of 1E-06 to 1E-04 (USEPA, 1991). Virtually all of the excess cancer risk was due to naphthalene with a much lesser contribution from benzene. The risk of non-cancer health effects due to VOCs, however, was negligible based on an HI much less than 1 (0.54).

Table 17 shows the calculation of cancer risk and non-cancer hazard for SVOCs in soil. Cumulative cancer risk was 6E-05, which exceeds the DTSC negligible cancer risk threshold of 1E-06 but is within the USEPA risk management range of 1E-06 to 1E-04. This excess cancer risk is due to several polynuclear aromatic hydrocarbons (PAHs), including primarily naphthalene, dibenz(a,h)anthracene, and benzo(a)pyrene. The risk of non-cancer health effects due to SVOCs was negligible based on an HI much less than 1 (0.66).

Table 18 shows the calculation of cancer risk and non-cancer hazard for the vapor intrusion exposure pathway (soil vapor) using shallow (5-foot) soil vapor data only. Cumulative cancer risk was 3.8E-04, which exceeds the DTSC negligible cancer risk threshold of 1E-06. This excess cancer risk is due virtually entirely to ethylbenzene, followed by tetrachloroethene and chloroform. The HI of 15 is greater than the negligible threshold of 1 and indicates a significant potential for non-cancer health effects. The high HI is due virtually entirely to the xylenes

4.1.5 Cumulative Health Risks from all Exposure Pathways

Health risks from direct contact soil exposure (soil ingestion, dermal contact and inhalation of resuspended soil) and vapor intrusion were summed to obtain cumulative site health risks from all exposure pathways (Table 19). Table 19 shows that cancer risks were contributed primarily by vapor intrusion (ethylbenzene and tetrachloroethene) and metals (arsenic) in soil. With respect to non-cancer hazard, the primary contributors to risk were also vapor intrusion (xylenes) and metals in soil.

4.1.5.1 Lead

In California the potential for lead health risks is determined by comparing the 95 percent upper confidence limit of the mean (95UCLM) concentration of lead on the site to the appropriate DTSC lead screening level based on property use (DTSC, 2022a). For commercial/industrial use the screening level is 500 mg/kg (DTSC, 2022a). The 95UCLM was calculated based on 125 samples between 0 and 10 ft bgs using the USEPA statistical software *ProUCL* (USEPA, 2015). This analysis resulted in a recommended 95UCLM of 1027 mg/kg (Appendix B). Since this value significantly exceeds the commercial/industrial screening level there is a potential for lead-related health risks for commercial/industrial workers.

4.1.5.2 Petroleum Hydrocarbons

In California the potential for health risks related to petroleum hydrocarbons (PH) may be evaluated based on comparison of site levels to the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) (SFRWQCB, 2019). These values are 2,000, 1,200, and 180,000 mg/kg for TPH-g, TPH-d, and TPH-o, respectively. Similarly, Los Angeles RWQCB (1996) has developed soil screening levels (SSLs) for these substances of 500, 1000, and 10,000 mg/kg for TPH-g, TPH-d, and TPH-o, respectively for soil 20 to 150 feet above groundwater. The maximum site levels for these constituents are 6,790, 130,000, and 16,100 mg/kg, respectively. Thus, using either set of regulatory guidelines, site maximum levels of TPH-g and TPH-d significantly exceed their corresponding screening levels, indicating potential health risks related to these constituents.

4.1.6 Conclusions

A screening health risk evaluation was conducted for this commercial/industrial property consistent with current DTSC risk guidance. The risk assessment evaluated cancer risks and non-cancer hazard related to direct contact with soil and vapor intrusion. Cancer risks were the highest for the vapor intrusion exposure pathway (3.8E-04) and direct soil contact with metals (1.5E-04). Vapor intrusion risks significantly exceeded the negligible cancer risk level of 1E-06 and were due primarily to

ethylbenzene and tetrachloroethene. Cancer risk related to metals was due primarily to arsenic, which significantly exceeded typical background levels. Non-cancer hazard (the risk of non-cancer health effects) significantly exceeded the negligible threshold of 1 and was highest for the vapor intrusion pathway (HI = 15). Vapor intrusion hazard was due primarily to the xylenes. Direct soil contact with arsenic, thallium, mercury and cobalt were also significant contributors to non-cancer hazard. Finally, lead and petroleum hydrocarbon levels (TPHg and TPHd) also significantly exceeded their corresponding screening levels, indicating that these constituents also pose potential health risks at the site.

4.2 GROUNDWATER PROTECTION EVALUATION

4.2.1 Vertical Migration Modeling

Vadose zone migration modeling was conducted to assess the vertical mobility of the principal COPCs at the Property. The purpose was to determine if there was a significant chance that groundwater quality could be affected by downward migration of the COPCs. Modeling employed the U.S. Environmental Protection Agency (USEPA) approved SESOIL software. The SESOIL software was supplied by Environmental Software Consultants as part of the "Seview" package. The software includes pre- and post-processing modules to facilitate input and allow easier access to results.

SESOIL is a one-dimensional vertical transport screening-level model for the unsaturated (vadose) zone that simulates downward migration based on diffusion, adsorption, volatilization, biodegradation, cation exchange, and hydrolysis. SESOIL includes assumptions about environmental fate processes, the handling of temporal and spatial variations, and the applicability to different fate and transport scenarios. The user must specify climatic conditions and chemical specific information, both available from the published literature, and contaminant concentrations, based on site specific sample data.

The COPCs modeled were lead, TPH-d, naphthalene, and ethylbenzene. These substances were chosen because they were the most widespread contaminants in the disposal area of the Property, were generally detected in the highest concentrations relative to their individual screening levels (SLs), and were detected at various depths within the disposal area fill. Concentration data for the modeling was based on the findings of site investigations, as summarized in the SCS documents Phase II Investigation report, dated September 17, 2018, and Additional Site Characterization Report, dated July 8, 2019. For each of the COPCs modeled, a worst-case sampling location, in terms of soil concentrations and depths, was chosen for the modeling. The modeling conducted for each of these substances is discussed individually below. Printouts from SESOIL for each model are attached in **Appendix C**.

4.2.2 Lead

Concentration and lithologic data for lead was taken from boring SB-28, located in the south-central portion of the disposal area, which was drilled and sampled to a depth of 30 feet bgs. Based on examination of data from the log for SB-28, the soil column was divided into three layers for modeling purposes: (1) the upper layer, to 12 feet bgs, consisting predominantly of sand, (2) the middle layer, consisting predominantly of silt and clay from 12 to 22 feet bgs, and (3) the lower layer, consisting predominantly of sand, between approximately 22 feet bgs and the estimated top of groundwater used for the model at approximately 70 feet bgs. Based on SB-28 boring log data, the model U.S. Department of Agriculture (USDA) lithology assigned to the upper layer was sand, the lithology assigned to the middle layer was silt, and the lithology assigned to the lower layer was sand.

Other model input included bulk density, hydraulic conductivity, total and effective porosity, total organic carbon, and cation exchange capacity.

Climatic parameters were based on the Torrance weather station database and chemical data on lead was from the Seaview database. All SB-28 sample lead concentrations, and their corresponding depths, were used in the modeling. Lead concentrations in this boring ranged up to 14,600 mg/kg found in the sample collected at 23.5 feet bgs.

The results of SESOIL modeling indicate vertical migration of lead of less than one foot for the duration of the model run (99 years). The model calculated that it would take 5,914 years for any lead from the impacted soil zones to leach to a depth at which transfer to groundwater could occur. From these model results it can be concluded that there is minimal potential for lead in the soil zone in this area to affect groundwater quality.

4.2.3 Naphthalene

Concentration and lithologic data for naphthalene was taken from boring SB-36, located in the northeastern portion of the disposal area, which was drilled and sampled to a depth of 30 feet bgs. Based on examination of data from the log for SB-36, the soil column was divided into three layers for modeling purposes: (1) the upper layer, to 16 feet bgs, consisting predominantly of silty sand, (2) the middle layer, consisting predominantly of sand from 16 to 30 feet bgs, and (3) the lower layer, consisting predominantly of sand, between approximately 30 feet bgs and the estimated top of groundwater used for the model at approximately 70 feet bgs. Based on SB-36 boring log data, the model USDA lithology assigned to the upper layer was sandy loam, the lithology assigned to the middle layer was sand, and the lithology assigned to the lower layer was sand.

Climatic parameters were based on the Torrance database and chemical data on naphthalene was from the Seaview database. All SB-36 sample naphthalene concentrations, and their corresponding depths, were used in the modeling. Naphthalene concentrations in this boring ranged up to 155,000 µg /kg found in the sample collected at 10 feet bgs.

The results of SESOIL modeling indicate vertical migration of naphthalene of 7.7 feet for the duration of the model run (99 years). The model calculated that it would take 650 years for any naphthalene from the impacted soil zones to leach to a depth at which transfer to groundwater could occur. From these model results it can be concluded that there is minimal potential for naphthalene in the soil zone in this area to affect groundwater quality.

4.2.4 TPH as Diesel

TPH in the diesel range is the predominant petroleum hydrocarbon fraction present in soil at the Property. Lesser concentrations of TPH-o were detected in most areas and only minor amounts of TPH-g have been found. Since TPH-d was the predominant fraction detected, and because substances in this fraction are significantly more mobile than hydrocarbons in the TPH-o fraction, TPH-d was selected for vertical migration modeling.

Concentration and lithologic data for TPH-d was taken from boring SB-35, located in the northeastern portion of the disposal area, which was drilled and sampled to a depth of 30 feet bgs. Based on examination of data from the log for SB-28, the soil column was divided into three layers for modeling purposes: (1) the upper layer, to 13 feet bgs, consisting predominantly of silty sand, (2) the middle layer, consisting predominantly of silt and clay from 13 to 18 feet bgs, and (3) the lower layer, consisting predominantly of sand, between approximately 18 feet bgs and the estimated top of groundwater used for the model at approximately 70 feet bgs. Based on SB-35 boring log data, the

model USDA lithology assigned to the upper layer was sand, the lithology assigned to the middle layer was silty clay loam, and the lithology assigned to the lower layer was sand.

Climatic parameters were based on the Torrance database and chemical data on TPH-d was from the Seaview database. All SB-35 sample TPH-d concentrations, and their corresponding depths, were used in the modeling. TPH-d concentrations in this boring ranged up to 124,000 mg/kg found in the sample collected at 15 feet bgs.

The results of SESOIL modeling indicate vertical migration of TPH-d of approximately 13 inches for the duration of the model run (99 years). The model calculated that it would take 4,911 years for any TPH-d from the impacted soil zones to leach to a depth at which transfer to groundwater could occur. From these model results it can be concluded that there is minimal potential for TPH-d in the soil zone in this area to affect groundwater quality.

4.2.5 Ethylbenzene

Concentration and lithologic data for ethylbenzene was taken from boring SB-31, located in the southwestern portion of the disposal area, which was drilled and sampled to a depth of 30 feet bgs. Based on examination of data from the log for SB-31, the soil column was divided into three layers for modeling purposes: (1) the upper layer, to 24 feet bgs, consisting predominantly of silty sand, (2) the middle layer, consisting predominantly of sand from 24 to 30 feet bgs, and (3) the lower layer, consisting predominantly of sand, between approximately 30 feet bgs and the estimated top of groundwater used for the model at approximately 70 feet bgs. Based on SB-31 boring log data, the model USDA lithology assigned to the upper layer was sandy loam, the lithology assigned to the middle layer was sand, and the lithology assigned to the lower layer was sand.

Climatic parameters were based on the Torrance database and chemical data on ethylbenzene was from the Seaview database. All SB-31 sample ethylbenzene concentrations, and their corresponding depths, were used in the modeling. ethylbenzene concentrations in this boring ranged up to 41,200 µg /kg found in the sample collected at 25 feet bgs.

The results of SESOIL modeling indicate vertical migration of ethylbenzene of approximately 27.6 feet for the duration of the model run (99 years). The model calculated that it would take 1,506 years for any ethylbenzene from the impacted soil zones to leach to a depth at which transfer to groundwater could occur. From these model results it can be concluded that there is minimal potential for ethylbenzene in the soil zone in this area to affect groundwater quality.

4.2.6 Other COPCs

The other COPCs, benzo(a)pyrene and methylnaphthalene, were detected at lower concentrations than naphthalene and are expected to behave similarly in the subsurface due to their chemical similarity to naphthalene but with lower migration rates due to larger molecular size and other factors. For this reason, separate model runs were not conducted for these two COPCs.

4.3 METHANE HEALTH AND SAFETY RISK EVALUATION

Methane in soil beneath buildings is a concern for the health and safety of building occupants, because of the increased risk of fire or explosion. Underground vaults, electrical/utility rooms, and other first-floor rooms in enclosed buildings with a slab-on-grade foundation are at particular risk because of the potential for cracks in the building slab or utility penetrations to become conduits for methane seepage into an enclosed space within the first floor of a structure. Limited site

investigation data indicates that methane is present in the subsurface. Methane may also continue to be generated by the breakdown of petroleum hydrocarbons in subsurface soils.

Methane is explosive when it reaches a concentration of between 5 and 15 percent in air; 5 percent is also known as the Lower Explosive Limit (LEL). Regulatory agencies are generally concerned that methane will seep or migrate through soil and accumulate in structures. If the methane should permeate flooring materials or flow through cracks, accumulate in enclosed spaces (rooms, utility vaults, wall spaces) at concentrations above the LEL, and then be subject to an ignition source (e.g., pilot flame, electrical spark, cigarette), a fire or explosion could result. Although subsurface methane is present in large areas of Southern California, fires associated with such methane are extremely rare.

Methane concentrations can be expressed in terms of either percent by volume, percent of LEL, or parts per million by volume (ppmv). For reference, 5% methane in air is equivalent to 100% of the LEL or 50,000 ppmv; 1% methane in air is equivalent to 20% of the LEL or 10,000 ppmv; and 0.05% in air is equivalent to 1% LEL or 500 ppmv.

As shown in **Table 10**, methane was detected at concentrations ranging from 13 to 65,000 parts per million per volume (ppmv). At the majority of the 11 probe locations, methane either increases with depth or was only detected in the deepest probe which is indicative that the source is below the fill (potentially emanating from the Refinery-related free product on the groundwater). Action levels for methane in soil gas vary based on local standards. In southern California, methane action levels are typically in the range of 1,000 ppmv up to 15,000 ppmv, with 5,000 ppmv (10 percent of the LEL) a commonly used value. Eight of the 24 samples with methane contained greater than 5,000 ppmv. Two of the 24 vapor samples exceeded the LEL of 50,000 ppmv; these samples were collected in the 11.5-foot probe from SB31 (65,000 ppmv) and from the 30-foot probe from SB36 (56,000 ppmv).

4.4 ASBESTOS RISK EVALUATION

The principal risk from the ACMs that exist at the Property would result from the disturbance of these materials during grading or excavation activities. This could result in airborne asbestos fibers that could affect on-site workers or even potential receptors located off-site under certain atmospheric conditions. Risk can be mitigated by asbestos abatement conducted prior to grading or excavation of soil.

Previous asbestos survey reports (SCS, July 7, 2020 and Terracon, September 2024) identified asbestos containing materials at the surface/near surface and it is recommended that the identified ACM containing debris be removed by a registered asbestos abatement contractor prior to or concurrently with any planned clearing and grubbing and/or grading operations.

Terracon has prepared a Procedure 5 workplan that has been approved by the SCAQMD (Terracon, 2024b) and abatement activities are anticipated to occur in the near future, prior to and/or as part of remediation activities.

5.0 RESPONSE ACTION EVAULATION

5.1 RESPONSE ACTION OBJECTIVES

Remedial Action Objectives (RAOs) established for the Project are to protect human health and the environment from identified unacceptable risk. Selection of a response action involves determining

the most feasible and cost-effective remedial action(s) to mitigate potential risk resulting from impacted media currently existing at the Property. The first step in determining feasibility is to develop RAOs. In general, RAOs are statements that identify COPCs, exposure pathways and receptors, and acceptable contaminant levels in order to protect human health and the environment. The principal RAOs for the disposal area on the Property will be to:

- Protect human health through prevention of direct contact with impacted soil, which was considered to be the primary human health threat.
- Minimize migration of COPCs in soil to groundwater.
- Mitigate potential risks associated with methane or VOCs that could migrate upward and affect indoor air in buildings proposed for the Property.

Secondarily, to the extent practicable and cost effective, it will be an objective to reduce the concentrations of COPCs in soil to acceptable levels. In addition, an objective will be to eliminate the potential for release of asbestos to the environment during excavation and grading operations by abating surface or near-surface materials under an SCAQMD-approved Procedure 5 Plan prior to implementation of response actions and site redevelopment.

5.2 DEVELOPMENT AND SCREENING OF RESPONSE ACTION ALTERNATIVES

5.2.1 Development of Remedial Alternatives

The process of development and screening of corrective measures alternatives may be viewed conceptually as occurring in several phases:

- **Identification of Impacted Areas and Volumes** – Definition of areas and volumes to be remediated is necessary for full evaluation of alternatives.
- **Identification and Evaluation of Technologies** – Applicable technologies are identified and evaluated. Inappropriate technologies are screened out.
- **Assembly of Technologies into Alternatives** – Corrective measures alternatives are developed from applicable technologies.
- **Screening of Alternatives** – Simultaneous with assembly of technologies into alternatives, these scenarios are screened on a general basis to determine effectiveness, implementability, and cost. Those alternatives not screened out are selected for detailed analysis as described below. For the purpose of the Feasibility Study, identification and evaluation of technologies, assembly into alternatives, and screening of alternatives were combined.
- **Evaluation of Alternatives** – Alternatives are evaluated in more detail, as described below.

Identified corrective measures are evaluated based on effectiveness, implementability, and cost, as follows:

- **Effectiveness** – This criterion focuses on the degree to which a corrective measure action reduces toxicity, mobility, and volume; minimizes residual risk; affords long term protection of human health and the environment; minimizes short term impacts; and how

quickly it achieves protection. Effectiveness can be further evaluated by considering short-term and long-term effectiveness, as described below.

- Implementability – Corrective measure actions are evaluated with respect to technical and administrative applicability to site conditions. Implementability includes such items as regulatory approval, ability to obtain necessary permits, and availability of resources such as labor and equipment.
- Cost – Relative cost of alternatives, including capital and operations and maintenance expenses, are evaluated. Actual costs will be influenced by a number of factors, including labor and material cost, competitive market conditions, final project scope, and implementation schedule.

Alternatives can also be evaluated with regard to the following criteria:

- Short-term effectiveness, which evaluates the effects of the corrective measure alternative during the construction and implementation phases such as the risk of exposure of workers and community during remedial activities, and environmental impacts that result from implementing the action.
- Long-term effectiveness, which addresses issues related to management of residual risk remaining after the corrective measure has been performed. The primary focus is on controls that may be required to manage risk posed by treatment residuals and/or untreated wastes.
- Reduction of toxicity, mobility, or volume, which evaluates the alternatives ability to reduce these factors.
- Compliance with applicable Federal, State and local laws and regulations.
- Overall protectiveness of the remedy to provide adequate short and long term protection to human health and the environment.
- Regulatory acceptance, which considers the likelihood that the alternative will be acceptable to the regulatory agencies involved.
- Community acceptance, which considers the potential for agreement or opposition by members of the community to the corrective measure alternative.

5.2.2 State Water Board Resolution No. 92-49

In addition, the State Water Board Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* (Resolution 92-49), directs regional water boards to require complete cleanup of all waste discharged to background conditions to the extent feasible (i.e., the water quality that existed before the discharge). Resolution 92-49 ensures that dischargers shall have the opportunity to select cost-effective cleanup methods, and consider the effectiveness, feasibility, and relative costs of applicable alternative methods for cleanup and abatement. Resolution 92-49 also states that the regional water boards shall establish cleanup levels greater than the background conditions only if it is technologically or economically infeasible and will not pose a substantial present or potential hazard to human health or the environment; this exception is referenced under California Code of Regulations, Title 23, Section 2550.4.

5.2.3 Identification of Impacted Areas and Volumes

The data from the investigations conducted at the Property were used to develop volumes of soil that are estimated to contain COPCs at concentrations exceeding DTSC Note No. 3 Screening Levels (SLs). Volumes of soil containing COPCs exceeding background concentrations, which include concentrations below SLs, were also estimated, consistent with State Water Resources Control Board Containment Zone Policy (Resolution 92-49). Site investigations have indicated that essentially all of the subsurface soils that are impacted are located within the disposal area, where the neighboring refinery deposited wastes over a number of years. The disposal area is located in the northwestern portion of the Property.

A summary of the estimated volumes in the disposal area is as follows:

- The estimated in place volume of soil containing concentrations of COPCs exceeding SLs is approximately 51,500 cubic yards. In some areas these soils extend to the Development Depth, which separates the TBB portion from that retained by the TORC. As described in Section 1.1, the Development Depth is set at 60 feet amsl, which averages approximately 30 feet bgs.
- The estimated in place volume of soil containing concentrations of COPCs exceeding background levels is 360,000 cubic yards. This volume, which includes essentially all of the fill deposited by the refinery in the disposal area, was also cut off at the Development Depth of 60 feet amsl.

5.3 FEASIBILITY STUDY

Feasibility study details, including results of bench scale studies, are described in the Second Revised Feasibility Study Screening document (SCS, 2024) included as **Appendix D**, which has been reviewed by the RWQCB case manager, management team (including the Remediation Section Manager), and Executive Officer. The reviewing team agreed with the concept and cleanup approach proposed in the Feasibility Study as stated in an email from the RWQCB dated October 25, 2024, included in **Appendix D.**

5.4 SELECTED RESPONSE ACTION

The alternative response actions, including their descriptions and evaluation, as well as the selection of the preferred response action, are included in the Second Revised Feasibility Study Screening document (SCS, 2024) included as **Appendix D**. Based on the feasibility evaluation, the selected alternative consists of the following:

- Excavation and management/reuse of excavated soil in accordance with a soil management plan (SMP) that will be prepared and approved prior to implementation of site activities.
- Ex situ solidification/stabilization (ESS) of shallow soil exceeding SLs to 5 feet below final project grade with ESS treated soil placed 5 feet or more below final project grade within the disposal area.
- Additional excavation and ESS of shallow soil exceeding SLs up to 15 feet outside of areas where in situ solidification/stabilization (ISS) will occur for placement of ESS and swell/expansion material.
- ISS of intermediate soils to the development depth.

- Reuse of excavated soil with COPCs testing below SLs (along with clean imported soil) as geotechnical fill within the disposal area and/or as part of the 5-foot clean soil cover which will be covered with pavement.

Additional details and a description of elements of the implementation are included in Section 6.3 of this Plan.

6.0 RESPONSE PLAN IMPLEMENTATION

The activities discussed in this Section will be conducted to safely and effectively implement the selected response action at the Property given the estimated volume and character of the waste, onsite location, and its present condition. These activities constitute a remedial method that will solidify impacted soils in order to eliminate or greatly reduce the mobility of COPCs that may pose a threat to public health and safety or to groundwater quality. The treatment of impacted soil will prepare the currently vacant and blighted Property for post-remediation commercial development.

6.1 GENERAL IMPLEMENTATION PROCEDURES

6.1.1 Sequence of Work

The tasks are based on the characterization and site evaluations provided in Sections 2 through 5 of this Plan. The Scope of Work for remedial action at the Property includes the following significant milestones/activities, as described in the indicated subsections:

- Permitting – Section 6.2.1
- Site Mobilization – Section 6.1.2
- Well Protection and Abandonment Activities – Section 6.2.2
- Soil Sampling and Reuse Profiling – Section 6.3.1
- Excavation and Grading – Sections 6.3.3 through 6.3.8
- Field Pilot Testing – Section 6.4.2
- Work Pad Construction – Section 6.4.4
- Ex-Situ Solidification/Stabilization – Section 6.4.7
- In-Situ Solidification/Stabilization – Section 6.4.8
- ESS/ISS Performance Confirmation Sampling – Section 6.9.1
- Soil Cover Construction – Section 6.6.1
- Vapor Intrusion Mitigation System (VIMS) Section – 6.7.1
- Surface Drainage and Construction – Section 6.6.2
- Site Demobilization – Section 6.1.2
- Response Plan Implementation Report – Section 6.11
- VIMS Operation and Monitoring Program – Section 6.9.2
- Institutional Controls – Section 6.8

6.1.2 Site Mobilization and Demobilization

This activity includes mobilization of all personnel, equipment, and supplies to the Property that are needed to perform the various tasks described in this Plan. The contractor(s) will be responsible for providing a project office (if necessary) or base of operations and will establish area(s) at the Property for staging equipment/materials, stockpiling of soil/debris, and implementation of excavation, grading and remediation activities. The exact location of the staging, stockpiling, and

processing area(s), treatment area(s), as well as points of ingress/egress will be coordinated with the project manager to avoid conflict with neighboring businesses and property owners.

The contractor(s) will provide sufficient heavy equipment for:

- Abandonment of wells, as necessary.
- Excavation and grading of soil, including construction of the soil cover.
- Onsite transportation of the excavated soil to the processing and/or stockpile area(s).
- Material processing equipment to segregate soils from debris.
- ESS and ISS solidification/stabilization.
- Installation of the VIMS.
- Delivery of debris and/or waste materials to appropriately licensed disposal facilities.

Water trucks will also be required for dust suppression across the Property, and for adding moisture to mitigate fugitive VOCs, dust and noxious odor emissions (Section 6.5). Contractor(s) will include final cleanup and removal of all equipment and materials from the Property after the various tasks are completed.

6.1.3 Health and Safety Measures

An updated site-specific HASP will be prepared prior to implementation of field activities to address health and safety hazards, regulatory compliance, personnel protective and monitoring procedures and equipment, and descriptions of specific tasks that will be performed at the Property. All Site personnel, contractors and their subcontractors, and visitors must read and understand the HASP before entering the work area. Although details will be included in the HASP, a general description of personal dust monitoring, vapor monitoring, and other construction control requirements are discussed in Sections 6.1.4 and 6.5 of this Plan.

The HASP will outline procedures to minimize the health risk from exposure to potentially harmful materials such as air-borne vapors and fugitive dust. By establishing strict health and safety requirements (and construction controls; Section 6.5) the health risks to on-site workers, as well as nearby sites, will be conservatively mitigated. Potential exposure to hazards, as well as mitigation measures, will be communicated to Site workers as a component of planned site-specific health and safety training.

The HASP will be prepared under the supervision of a Certified Industrial Hygienist (CIH) who will assist in instituting recommendations to protect on-site workers and community members from potential health risks during remediation. The HASP will describe the expected and potential chemical and physical hazards, health and safety training requirements, specific personal hygiene protocols, monitoring equipment, and personal protective equipment that will be used during remediation work.

Most Site workers will be operating or driving equipment and will not likely come in direct contact with soil, and the potential exposure will generally be limited to air-borne vapors and fugitive dust. Workers who may potentially come in contact with impacted soil or exposed to air-borne vapors and fugitive dust, will be required to wear appropriate personal protective equipment (PPE) in compliance with OSHA standards.

6.1.4 Site Personnel Monitoring

Personnel air sampling will be conducted to test for airborne contaminants during the performance of specific remediation tasks, at a frequency as deemed appropriate by the safety officer. During each specific operation, representative crew members will wear battery powered sampling units, each outfitted with the sample filter collection media in the breathing zone. Representative initial air samples will be collected over an approximately eight-hour work period for selected crew members and will be analyzed by a stationary laboratory for metals (lead/arsenic) using the National Institute for Occupational Safety and Health (NIOSH) Test Method 7300 modified/ Occupational Safety and Health Administration (OSHA) ID-125G and asbestos using NIOSH Test Method 7400 (Asbestos). Additionally, VOCs in the breathing zone will be periodically monitored using photoionization detection (PID) monitoring.

6.1.5 Site Security and Access

During remediation activities, security and facilities to protect work areas from unauthorized entry, vandalism, or theft will be maintained. Chain-link type fencing with windscreen will be maintained along the perimeter of the Property to prevent unauthorized entry to any work areas during working and nonworking hours. Gates will be locked at all times when Site personnel are not in attendance.

Construction access to the Property will be through gates established during the implementation of the Traffic Management Plan (Section 6.5.5). Construction traffic must utilize these points of access throughout the duration of the work. Additionally, exclusion zones specific to remediation area(s) will be established to limit access to authorized workers.

In general, the proposed remedial action incorporates the following Site access controls:

- Site will be enclosed by chain-link fencing at all times;
- Access to the Property will be limited to the specific gates, which will be locked after work hours;
- Site access will be limited to authorized personnel;
- All visitors will be registered and must sign in upon entering the Property; and
- All personnel entering remediation exclusion zones will be required to have appropriate health and safety training and will sign the site-specific HASP each morning or upon entry;
- Access to the remediation exclusion zones, including excavation and stockpile areas with exposed impacted soils, will be restricted in accordance with the HASP.

Vehicles and equipment used in the handling of impacted soil will be decontaminated before leaving the remediation exclusion zone(s) and the Property.

6.1.6 Decontamination Procedures

All trucks will exit exclusion area(s) at the Property through established decontamination staging area(s). The staging area will use rumble grids and contain equipment (brooms, brushes, scrappers, washers, etc.) necessary to ensure all tires, truck trailers, dump beds, etc. are free of debris and loose materials prior to exiting the exclusion zone. Additionally, all trucks will exit the Property through established gates with additional rumble grids and equipment necessary to ensure all tires, truck trailers, dump beds, etc. are free of soil prior to exiting the Property.

Non-dedicated sampling equipment will be decontaminated after each use. Large drilling equipment will be decontaminated using a high-pressure steam cleaner between sampling locations. Smaller equipment will be decontaminated using a three-stage wash consisting of a non-phosphate detergent and potable water wash followed by potable and distilled water rinses. Soil confirmation samples collected directly from the soil surface using the sample container or disposable sample container will not require decontamination. The equipment will be allowed to air dry or will be wiped dry with paper towels. New equipment will be cleaned prior to use. Decontamination water will be used to hydrate waste soil stockpiles prior to offsite disposal at permitted facilities; if no stockpiles are anticipated for disposal, decontamination fluids will be placed into labeled, Department of Transportation (DOT)-compliant 55-gallon drums pending disposal.

Personnel decontamination procedures will be included in the site-specific HASP and will describe: the location and layout of decontamination stations, the decontamination equipment needed, appropriate decontamination methods and procedures, including how to prevent contamination of clean areas, and methods for disposing of clothing and equipment that are not completely decontaminated. The HASP will also include procedures for assessing the effectiveness of the decontamination practices and corrective measures to be applied as needed.

6.1.7 Surveying

Prior to mobilization for various tasks, a professional land surveyor (PLS) will establish control points using the appropriate City or County benchmark. The PLS will periodically visit the Property as the work progresses to survey remedial excavation limits, grading/excavation depths, or mark out and document other features as necessary. The surveyor will also layout the control points for various sample locations. The contractor's field team will survey the work pad surface for as-built elevations and provide final elevations for bottom of ISS columns/cells (Section 6.4.10). The remediation field personnel will also use a GPS unit with a minimum one-meter level of accuracy to document soil confirmation sample locations or other features for final project reporting.

6.1.8 Sampling Quality Assurance/Quality Control Procedures

Quality assurance/quality control (QA/QC) procedures will be used in the field to ensure that equipment is properly calibrated and/or decontaminated prior to use. Laboratory analytical QA/QC procedures to be used during sampling will include preparing and analyzing laboratory samples to assess the performance of the analytical laboratory and conducting data validation by the protocols described below. QA/QC samples prepared by the laboratory will include trip blanks, method blanks, matrix spike, and matrix spike duplicates, and laboratory control samples.

QA/QC procedures include:

- Daily calibration of all meters.
- Daily collection of equipment field blanks during soil sampling. The collection of field blanks involves the pouring of laboratory-prepared de-ionized water into sample containers during routine environmental sample collecting activity (e.g., soil sampling).
- Transporting of the samples to the laboratory at the end of each sampling day.
- Use of travel blanks for transportation of sample containers to the field and of samples from the field to the laboratory. Trip blanks consist of laboratory-prepared containers of de-ionized water that remain unopened during transportation from and to the laboratory.
- Utilization of trip/travel and temperature blanks to verify sample handling procedures.

Standard chain of custody protocol will be followed for all QA/QC samples selected for laboratory analysis. The chain of custody form will accompany the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis. Copies of the official chain of custody records will be provided in final project reporting.

6.1.9 Field Documentation and Record Keeping

All stages of response plan implementation will be documented to provide evidence of satisfactory work performance. The information will be recorded on standardized daily forms or in a bound field logbook.

Sample locations and depths will be described on the daily forms and locations indicated on field maps (including distance from landmarks, as appropriate). Location latitudes, longitudes, and elevations will also be recorded using survey equipment and/or GPS equipment with a minimum one-meter level of accuracy.

Field forms/logbooks will be maintained throughout the duration of the project and will be used to record details of sitework. Recorded data includes:

- Daily log of activities performed, including times when activities are initiated and ceased, location of each activity, and personnel.
- General weather conditions.
- Descriptions of any deviations from sampling and quality assurance plans.
- Description of any accident or other health and safety related incident and time, date, and list of personnel involved.
- Time, date, location, unique sample number, the analyses to be performed, and other details for all samples collected.
- Calibration records for field instruments.
- Photographs (including image location, orientation, date, and other relevant information), observations related to other aspects of the project than described above, and similar supplemental material.

Chain of custody forms will be completed in the field for all samples to be sent for laboratory analysis. Sample labels will be affixed to each sample container. In order to prevent misidentification of samples, each label will be completely and legibly filled out by the sampler using waterproof ink. Sample labels will include the following information:

- Project name and/or code
- Sample number
- Date and time of collection
- Name of person collecting sample
- Laboratory analyses to be performed

Excavation limits and depths and locations of ESS/ISS zones will also be described on field forms and will be recorded using survey and/or GPS equipment by the contractor. Tolerances for excavator mixing depths will be a maximum 0.2 ft and for auger mixing depths will be 0.1 ft.

Daily recordkeeping will be performed by SCS personnel or contractor field representative, as appropriate, to record treatment and excavation activities, including results of visual observations, laboratory/field test data, sampling, repairs, problems, solutions, and general field activity. The daily field inspection reports (if necessary) shall be reviewed by the Engineer or Project Manager/Director for submittal to TBB. One complete set of the daily reports shall be kept onsite by SCS personnel at all times. The contractor will be notified of the test results so that corrective action can be taken and retests completed, if necessary.

6.2 PRE-FIELD ACTIVITIES

6.2.1 Permitting

Necessary permits and approvals from other governmental agencies will also be obtained prior to the implementation of associated tasks. Additionally, as required by law, Underground Service Alert (USA) will be contacted at least 48 hours in advance of performing any field work. USA will mark and identify all the known locations of subsurface utilities in the proposed area of investigation.

Waste Discharge Requirements (WDR) Permitting

An application for an individual Waste Discharge Requirements (WDR) permit for the onsite placement of ESS/ISS stabilized soil will be submitted for approval. The required materials anticipated to be included in the application are an approval of this Response Plan, California Environmental Quality Act (CEQA) documents including Initial Study Part 1 and Part 2, a summary of the proposed mixing materials with Safety Data Sheet (SDS) with the compositions of the proposed materials, and a detailed analysis of the proposed remedial technology based on the following criteria.

- Effectiveness for remediating targeted contaminants.
- Minimum degradation of water quality that will not cause or contribute to exceedance of water quality objectives (WQOs).
- Protective of human health and safety.

South Coast Air Quality Management District Permitting

Procedures and permit for compliance with SCAQMD rules will also be developed. This will include a VOC Contaminated Soil Mitigation Plan (CSMP) to meet the requirements of Rule 1166 and an outline of procedures for compliance with Rule 1466, Control of Particulate Emissions from Soils with Toxic Air Contaminants. The Rule 1166 plan will include background information (including Site history and reasons for excavation), an estimate of the amount of VOC impacted soil to be disturbed during grading and other activities, a description of grading and other activities, anticipated schedule, and mitigation and monitoring measures to be employed.

At the time of preparation of this Plan, a Procedure 5 workplan has been prepared and approved by the SCAQMD. It is anticipated that near surface ACMs identified during previous surveys by SCS and Terracon will be abated prior to mobilization for remediation activities. Rule 1466 procedures will be in place during remediation activities and will include a description of the particulate air monitoring (with monitoring equipment and air sampling locations), protocols for minimizing fugitive dust emissions, stockpile management, loading, signage, and notification and record keeping requirements. In addition, the contractor will be required to register portable reagent silos under the Air Permit for Portable Equipment Registration Program (PERP) – California Air Resource Board (CARB).

Los Angeles County Department of Environmental Health (Well/Boring Permitting)

If groundwater monitoring wells need to be abandoned and/or replaced, or soil borings are advanced deeper than 10 feet and/or into groundwater, required permits will be obtained from the Los Angeles County Department of Environmental Health.

Additional Permitting

The contractor(s) will obtain all necessary permits prior to beginning work at the Property. These are anticipated to include

- A grading permit issued by the City of Torrance;
- Application for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit [CGP] Order 2009-0009-DWQ) issued by the State Water Resources Control Board (SWRCB);
- Other required City of Torrance or Los Angeles County Permits and/or approvals related to the VIMS and proposed development project.

6.2.2 Well Protection and Abandonment Activities

Groundwater monitoring wells exist on the Property and some of these may be impacted by remediation or redevelopment activities. Well protection and/or abandonment protocols will also be described in a subsequent Soils Management Plan (SMP) that will be prepared and approved prior to implementation of site activities. Further plans will include review of wells to be protected and/or abandoned. This process will also involve coordination with TORC as the responsible party for groundwater at the Property and approval by RWQCB.

Well Protection

To facilitate the response actions and grading activities, existing groundwater monitoring wells that are within or near excavation work areas will need to be protected. The soil in the area around each well will be excavated to an approximate depth of 2 feet below proposed excavation depths. Well casing will then be cut, the casing will be capped, and the well will be covered with a metal plate (for protection and to assist in finding the well location by geophysical means). The area of the plated well will be covered with a sufficient depth of soil to protect the remaining casing after the well location has been recorded in GIS.

Following the completion of response actions and grading activities, the previously protected wells will be located and rehabilitated. The casing at each well will be extended to just below the final development grade with material appropriate to the original well design. The annular space surrounding the new blank casing and connection will be filled with cement. The well will be topped with a gasket-fitted, locking well cap and protected with a flush-mounted traffic-rated well box set in concrete. The concrete surface seal will be sloped away from the well cover at the ground surface to limit any surface water intrusion.

Well Abandonment and Replacement

Existing soil vapor wells within excavation and ISS remediation zones, and groundwater monitoring wells located within ISS remediation zones or areas where excavation depths make protection/rehabilitation infeasible, will be properly abandoned prior to initiating remediation tasks. As previously mentioned, necessary permits will be obtained from Los Angeles County Department of Environmental Health and abandonment will be conducted per DWR standards (DWR Bulletins 74-81 and 74-90) by over drilling to remove the entire well casing and annular materials. The borehole

will then be filled using a tremie pipe from the bottom of the borehole upward. Portland cement hydrated with 5% or less bentonite gel or approved sealant will be placed in the borehole using the tremie, as the auger is slowly removed to prevent void space, freefall, bridging, and dilution of sealing materials, and/or prevent separation of aggregate from sealants collapsing.

Following the completion of response actions, and during site grading activities, previously abandoned groundwater monitoring wells will be replaced, if required by the RWQCB. The replacement or relocation of wells will be discussed with TORC and the RWQCB in advance of implementation. It is anticipated that additional/replacement soil vapor wells will be installed according to a VIMS Operation and Monitoring Program (Section 6.9.2) for the purpose of monitoring soil vapor concentrations following remediation activities and for comparison with sub-slab monitoring probes installed as part of the VIMS.

6.3 PREPARATORY AND EXCAVATION AND GRADING ACTIVTIES

Based on the feasibility evaluation (**Appendix C**), the selected alternative consists of (1) excavation and management/reuse of excavated soil in accordance with an SMP; (2) ex situ solidification/stabilization (ESS) of shallow soil exceeding SLs to 5 feet below final project grade with ESS treated soil placed 5 feet or more below final project grade within the disposal area; (3) additional excavation and ESS of shallow soil exceeding SLs up to 15 feet outside of areas where in situ solidification/stabilization (ISS) will occur for placement of ESS and swell/expansion material; (4) ISS of intermediate soils to the development depth; (5) reuse of excavated soil with COPCs testing below SLs (along with clean imported soil) as geotechnical fill within the upper part of the disposal area and/or as part of the 5-foot clean soil cover containment in the disposal area adding to a minimum of 5 feet of soil which will be encapsulated with pavement above. This section provides additional details on pre-profiling of the excavation areas and the management of excavated soil associated with these tasks, all of which will be further detailed in subsequent implementation documents following approval of the Response Plan.

6.3.1 Soil Sampling and Reuse Profiling

Soil sampling is proposed across the planned excavation areas prior to mobilization for soil remediation activities in order to further profile these materials. The purpose of this sampling is to identify soil for re-use and reduce the frequency of confirmation stockpile sampling. Identification of soil will involve collection and analysis of subsurface samples.

A total of approximately 9,000 cubic yards of soil is anticipated to be excavated in the former disposal area for re-grading of all waste fill. As detailed in Section 6.6, after grading all waste fill will be at a depth of at least 5 feet below the planned final project grade (**Figure 39**). Most of this soil is anticipated to require treatment. However, due to redevelopment grading an additional 13,000 to 28,000 cubic yards is proposed to be excavated up to 15 feet in depth, in an area expected to have minimal contaminant impacts, in order to construct a primary designated area for the subsequent placement of ESS and ISS swell/expansion materials (colored green on **Figure 38**) with the purpose of minimizing the need to remove soil for off-site disposal.

The DTSC's Information Advisory Clean Imported Fill Material Fact Sheet (DTSC, 2001) recommends the following sampling frequencies for imported soil stockpiles:

- Up to 1,000 cubic yards: 1 sample per 250 cubic yards
- 1,000 to 5,000 cubic yards: 4 samples for first 1,000 cubic yards +1 sample per each additional 500 cubic yards

- Greater than 5,000 cubic yards: 12 samples for first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards

Based on the DTSC guidance for volumes exceeding 5,000 cubic yards, a total of 35 samples would be recommended if 28,000 cubic yards of soil are excavated for placement of swell.

The area of the primary designated area for swell placement is approximately 71,000 square feet. If borings are located on a grid spacing of 75 feet (one boring per 5,625 square feet of area), there would be a total of 13 borings. At 3 soil samples per boring, this would yield 39 samples for analysis, sufficient to meet the DTSC guidance. Analysis would be for TPH with carbon chain breakdown, VOCs, SVOCs, and metals, thus encompassing all of the COPCs at the Property. Further details of this planned pre-excavation sampling will be included in the SMP.

6.3.2 Soil Management Plan and Soil Reuse

Excavation and management/reuse of excavated soil will be conducted in accordance with an SMP. For the purpose of determining soil reuse at the Property and segregation and/or ESS treatment during excavation activities, concentrations of COPCs in soil at the Property reported during reuse profiling (**Section 6.3.1**) will be compared to regulatory screening levels for the protection of human health and groundwater quality. Regulatory screening levels under a commercial/industrial land use scenario will be used for the protection of human health, including the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note No. 3 (revised May 2022), and the U.S. EPA RSLs (November 2024). For the protection of groundwater quality, the LARWQCB SSLs (Interim Site Assessment & Cleanup Guidebook, May 1996) will be used for comparison. The screening levels for COPCs will be further outlined in the SMP.

Shallow soil with COPCs exceeding SLs will be treated by ESS and placed in designated areas of the former disposal area (**Figure 38**); soils that are determined not likely to be impacted with COPCs exceeding SLs during the pre-excavation profiling will be segregated and stockpiled for reuse. The SMP will also provide guidance for all soil disturbance activities at the Property, outlining the regulatory framework and contingency measures to be taken in the event that visual or other indications of hazardous material/waste impacts and/or subsurface features (i.e., underground storage tanks [USTs], sumps, clarifiers, septic tanks, etc.) are encountered during excavation activities. The SMP will be forthcoming as a separate submittal for approval by the RWQCB.

As indicated in Section 6.2.1 above, South Coast Air Quality Management District (SCAQMD's) Rule 1166 and Rule 1466 will be implemented at the Property during redevelopment activities. Rule 1166 requires monitoring of soil during excavation or grading activities using a photo ionization detector (PID) to identify soil containing VOCs. Rule 1466 procedures will include particulate air monitoring, protocols for minimizing fugitive dust emissions, stockpile management, loading, signage, notification and record keeping. Soil handling under Rules 1166 and 1466 will be further discussed in the SMP. Untreated soil classified as VOC contaminated will NOT be reused at the Property.

6.3.3 Excavation Staging and Sequencing

The contractor(s) will excavate soil across the former disposal area, including that required to re-grade all waste fill to a depth of 5 feet below the planned final project grade, and up to 28,000 cubic yards to be excavated up to 15 feet to construct a primary designated area for the subsequent placement of ESS and ISS swell/expansion materials (**Figure 38**). During the excavation and grading, impacted and unimpacted soil (and debris) will be segregated in accordance with the SMP based on

the results of the reuse profile sampling described in **Section 6.3.1**, with impacted soil having COPCs exceeding SLs segregated for ESS treatment and subsequent placement in designated areas of the Property. Unimpacted soil will be reused in the clean soil cover construction (**Section 6.6.1**), or as geotechnical backfill within the former disposal areas, if it is demonstrated to meet the specified SMP criteria for reuse. If impacted soil is determined to be unsuitable for ESS, it may also be stockpiled for additional characterization for acceptance at a permitted disposal facility; if debris or other subsurface features are encountered, the materials will also be set aside for screening and/or disposal.

The excavated soil will be hauled to designated processing area(s), where it will be treated directly by ESS or stockpiled to await processing and sorting, including confirmation sampling prior to reuse. A water truck will be utilized to maintain dust control at the Property in the central processing area, material stockpiles, and haul routes. As the excavation progresses deeper into areas of the former disposal area, ramp(s) and/or shoring, laybacks, etc. may be installed and/or built into the excavated area to allow access for equipment. Ramps may be extended and/or built in different locations throughout the excavation process to allow access and egress to all areas as necessary. The work at the Property will continue in this manner until all soil has been directly treated using ESS and placed in designated areas or excavated and stockpiled in the designated processing area(s) for subsequent reuse after screening/sorting and additional confirmation sampling. Activities related to excavation, ESS treatment, screening, and material sorting and management will occur simultaneously until all excavation has been completed in the former disposal area. SCS field personnel, working under the direct supervision of a Professional Engineer or Geologist, will be present onsite to observe and document the excavation process and SMP implementation.

6.3.4 Material Segregation

All soil and material/debris will be stockpiled for reuse or appropriate offsite disposal, treatment, or recycling. It is anticipated that stockpiles may be established for:

- Inert solid waste debris (pipe, cable, tire remnants, plastic, metal, glass, paper, nontreated wood, etc.).
- Nonhazardous soil.
- ESS treated soils (not directly placed in designated areas).
- California hazardous waste soil.
- Other categories deemed necessary based on compatibility, analytical testing, and permitted landfill acceptance requirements.

If any hazardous waste constituents, including contaminated soil, are not suitable for ESS, these materials will be segregated from the remainder of the excavated materials, profiled, recorded, manifested, and disposed of at an appropriately permitted landfill. In the event containers are discovered with unknown contents, they will be segregated and stored based on physical characteristics and compatibility.

All impacted soil unsuitable for ESS will be segregated and stockpiled in volumes not to exceed 400 cubic yards in accordance with Rule 1166 and/or Rule 1466 for chemical analysis, characterization, and/or offsite disposal. The sample collection shall be at a frequency of one composite sample per stockpile. Impacted stockpiles for removal will be contained or covered in order to prevent release to the environment until they can be transported off-site to an approved disposal/treatment facility.

Activities involving the removal of impacted materials (soil, water, concrete, wood, etc.) would employ Best Management Practices (BMPs) to avoid releases of such materials outside the cleanup areas,

including during offsite transport. Specific BMPs may include activities such as direct load to transport trucks or sealed bins, transport of waste materials in covered trucks/bins, temporary barriers to demarcate and control access to impacted areas and any waste stockpiles, decontamination stations for equipment and personnel, and cover of exposed impacted soil during any extended break or non-excavation period.

6.3.5 Debris and Waste Disposal

As noted above, waste/debris-impacted soil unsuitable for ESS will be segregated and stockpiled in volumes not to exceed 400 cubic yards for chemical analysis, characterization, and offsite disposal. The waste soil sample collection shall be at a frequency of one sample per.

Specific analyses for materials going offsite will be based on the requirements of the receiving facility. Some or all of the following analytical methods are anticipated to be used as required for waste soil and/or material characterization:

- TPH-G using EPA Method 8015M.
- TPH-D/TPH-O, carbon chain identification for C13 to C44 using EPA Method 8015M;
- VOCs using EPA Method 8260B/5035.
- SVOCs including polynuclear aromatic hydrocarbons using EPA Method 8270C.
- Organochlorine pesticides and PCBs using EPA Method 8081/8082.
- CAM 17 metals using EPA Method 6000/7000.
- Soluble threshold limit concentration (STLC).
- Total Threshold Limit Concentration (TCLP).

Based on the results of waste profiling and classification, the waste materials will be transported to an appropriately permitted disposal facility.

6.3.6 Loading and Transportation

Although the main intent of the selected remedy is to stabilize soil on-site by ISS/ESS and to re-use clean soil for the 5-foot soil containment cover unless deemed otherwise unsuitable above the top of ISS zone, it is possible that limited amounts of soil may require off-site disposal. Tractor trailer end dumps and high side dumps, flatbed equipment trailer trucks, and other work vehicles exceeding 1 ton in weight will be utilized during this remediation project. Qualified transporters will be hired for hauling materials offsite. The hauling contractor(s) used to transport impacted material to the offsite disposal facilities will be fully licensed and permitted by the State of California and/or the EPA. Contractors shall comply with the County of Los Angeles Truck Route Ordinance and/or California Department of Transportation (Caltrans) approved truck routes.

Trucks used for the offsite transportation of materials will remain in the designated staging area(s) until called upon for loading by the remediation contractor. During loading, excessive noise, odor, and dust emissions will be minimized. Dust will be minimized by reducing the bucket height and drop distance of material during loading and by spraying material being loaded with water, if necessary.

All trucks will exit exclusion area(s) at the Property through established decontamination staging area(s), as discussed in Section 6.1.6. The staging area will use rumble grids and contain equipment (brooms, brushes, scrappers, washers, etc.) necessary to ensure all tires, truck trailers, dump beds, etc. are free of debris and loose materials prior to exiting the exclusion zone. Additionally, all trucks will exit the Property through established gates with additional rumble grids and equipment

necessary to ensure all tires, truck trailers, dump beds, etc. are free of soil prior to exiting the Property.

Haul trucks departing the Property will be visually inspected to ensure that no fluids are leaking, tires are clean, and material being hauled is six-inches below the dump trailer freeboard and properly secured and/or covered using tarps or other appropriate devices. No haul truck will be allowed to depart the Property without the proper manifest or bill of lading.

The selected transporters will be licensed and insured for hauling the excavated soil/material. For transportation of hazardous wastes, if any, the selected transporter will be a registered hazardous waste hauler. The remedial excavation contractor will verify that the selected transporter has a valid registration/license and insurance policy for transporting wastes offsite and verify that the transporter has not negligently released waste material/soil during transport.

The waste hauler will be required to have a contingency plan prepared to deal with the following conditions:

- When there are emergency situations (vehicle breakdown, accident, waste spill, waste leak, fire, etc.) during transportation of excavated materials/soil from the Property to the designated treatment/disposal facility;
- When the volumes of excavated soil change; or
- When waste characteristics change.

6.3.7 Unknown Wastes or Impacts

If, during excavation, unknown areas of impacts (or impacts inconsistent with documented contamination) are encountered, the RWQCB will be notified and the contractor will be directed to place the material in a separate stockpile for characterization testing following the protocol that will be outlined in the SMP.

In the event that a drum or container containing unknown waste content is encountered in any area of the Property, the contractor will stop work in this area and notify the SCS field manager per the SMP. The SCS field manager will perform the following:

- Visually assess the container from a safe distance.
- Evaluate atmospheric conditions in the work area/vicinity, using a PID and four gas meter.
- If the above conditions are determined to be safe, evaluate the container contents with a PID and four gas meter.
- If all conditions are determined to be safe, isolate the container to a staging location and place it on plastic and cover pending environmental characterization testing for appropriate disposal.

If suspected asbestos containing material (ACM), such as transite pipe, is discovered, work in the area will stop, the material will be wetted with water, and the area will remain undisturbed until assessed by a California Certified Asbestos Consultant or California Site Surveillance Technician.

6.4 SOLIDIFICATION/STABILIZATION

Based on the feasibility evaluation (**Appendix D**), the selected alternative consists of (1) excavation and management/reuse of excavated soil in accordance with an SMP; (2) ex situ solidification/stabilization (ESS) of shallow soil exceeding SLs to 5 feet below final project grade with ESS treated soil placed 5 feet or more below final project grade within the disposal area; (3) additional excavation and ESS of shallow soil exceeding SLs up to 15 feet outside of areas where in situ solidification/stabilization (ISS) will occur for placement of ESS and swell/expansion material; (4) ISS of intermediate soils to the development depth; (5) reuse of excavated soil testing below SLs (along with clean imported soil) as geotechnical fill within the upper part of the disposal area and/or containment in the disposal area adding to a minimum of 5 feet of soil with pavement above.

The ESS and ISS treatments will be performed by the addition of reagents consisting of recycled granular steel refinery slag and Type I/II Portland cement. In consideration of the technological and economic difficulties of addressing the multiple contaminants reported at the Property, including TPH, VOCs, SVOCs, and metals the feasibility evaluation indicated that solidification/stabilization is the most appropriate technology to address the associated risks in a cost-efficient manner. The feasibility evaluation also considered environmental impacts to the surrounding neighborhood and risks to potential receptors during implementation, in addition to the estimated carbon footprints from greenhouse gas emissions. The stabilization being considered will involve both ESS and ISS methodologies that will treat the impacted soil and essentially immobilize the contaminants, thus impeding the volatilization and preventing migration of contaminates to groundwater or other media where there could be contact with potential receptors.

The stabilization using ESS and ISS remedial technologies will be protective of groundwater as required by State Water Resources Control Board Resolution 92-49; Section III(E) of the resolution specifically recommends the consideration of stabilization as one of the potential cleanup and abatement methods. Per Section III(C), the effectiveness, feasibility, and relative costs of various cleanup and abatement technologies, including the cost effectiveness of those options, were evaluated. Due to the nature of the former disposal area, treatment to background conditions would require the removal and off-site disposal of all fill material, which is not cost effective, and would result in serious environmental consequences, including increased traffic to and from the Property, additional on-site soil moving operations leading to health risks from lead and other particulates potentially becoming airborne, and elevated greenhouse gas emissions due to increased truck and excavation equipment operations. Solidification/stabilization will stabilize the fill so that there is no potential for contaminants to leach to groundwater and therefore, would be consistent with the spirit of Resolution 92-49.

6.4.1 Performance Criteria

Performance criteria for the ISS/ESS material during full-scale implementation include a monolithic mass containing:

- An average unconfined compressive strength (UCS) greater than 25 pounds per square inch (psi).
- An average hydraulic conductivity of less than 1×10^{-6} centimeters per second (cm/sec) with no single sample higher than 5×10^{-6} cm/sec.
- No visible presence of free product observed during field implementation after mixing is complete.

Performance criteria as described above are expected to be achieved by a cure duration of 14 days; however, performance criteria will be allowed to be met after a longer cure duration.

6.4.2 Pilot Testing

Following the preparatory excavation and grading activities, a field scale pilot test will be performed for the ISS/ESS to evaluate the effectiveness of the remediation technology, confirm performance criteria results under field conditions, and determine the optimal dosing of Type I/II Portland Cement (PC) or PC plus Ground Granulated Blast Furnace Slag (BFS). Prior bench testing results by Contractor (ENTACT) indicated the following regarding additives for disposal area materials:

- ESS - Amendment with 10% total reagent dosage or greater, using 100% PC for treatment of material with relatively high concentrations of COPCs; or 25% PC and 75% BFS, or greater, for treatment of material with approximately average concentrations of COPCs.
- ISS - Amendment with 10% total reagent dosage, using 100% PC in all cases.

It is anticipated that the field scale pilot test will be performed in multiple areas in the field representing a range of magnitudes of impacted soil and include the following testing:

- Unconfined Compressive Strength (UCS) by ASTM D1633.
- Hydraulic Conductivity by ASTM D5084.

The results will be compared to prior bench scale testing results and will be used to confirm the optimal reagent dosing of PC or PC plus BFS for final implementation at the project.

6.4.3 Materials

The batch plant will be established for the ISS work at the location identified in **Figure 40**. Materials will be delivered to the Property via pneumatic truck and placed in their respective storage silos in the batch plant area. Certificates of compliance and truck delivery weight tickets will be submitted on a periodic basis. The daily amounts of reagents received and used will be recorded in the Daily Field Quality Control Report, as work progresses.

- Water for cement grout will be from an existing hydrant in proximity to the ISS Areas. Water will be stored in a 21,000-gallon frac tank at the batch plant location. A usable level will be maintained in the tank during ISS.
- Contractor will use Type IL Portland Cement (per ASTM C585 and ASTM C150) from Cemex. The material will be delivered in bulk pneumatic trailers and pneumatically pumped into bulk material storage silos.

6.4.4 Work Pad Construction

Prior to implementation of ISS, a workpad surface will be created to match the elevations of five feet below the proposed final development grade of the Property. Contaminated material above the proposed ISS work pad surface will be mixed ex-situ via a hydraulic excavator and then placed in the designated ESS consolidation areas. **Figure 40** presents the existing grade within the ISS Areas and **Figure 41** presents the proposed ISS workpad surface grades.

In areas where ISS is to occur along slopes with a grade greater than 2%, the workpad will be constructed to maintain the slope necessary for equipment stability and perform ISS from the workpad grade. Solidified material left within the 5 ft below the proposed final grade will be removed and placed in the designated consolidation areas.

6.4.5 Mixing Equipment

In preparation for ISS activities, delivery of ISS reagents will be scheduled. A stable working platform will be established in the ISS Areas.

The Contractor (ENTACT) will perform the specified ISS column installation work utilizing a drill rig with a maximum rotary head torque of 280,000 lbf-ft equipped with an 8-foot diameter auger and an electronic grout and drilling monitoring system. An 8-ft diameter auger was selected based on the boring log information provided by SCS. This drill rig can mix in-situ columns to a depth of over 50 feet. The maximum depth of auger ISS is approximately 30 ft below work pad surface with a minimum elevation of 60 ft amsl (Development Depth).

Bucket mixing and ESS will be performed with a CAT 336 excavator or equivalent using the hydraulic bucket with digging teeth. The maximum depth of bucket ISS will not exceed 20 feet below work pad surface.

6.4.6 Batch Plant Operations

Water for grout preparation will be supplied from a frac tank that will feed into the grout mixing tanks. The amount of water to be pumped to the plant's mixing tanks will be controlled using pre-determined water volume markers within each tank. Dry reagent will be blended with frac tank water within each mixing tank per the final approved mix design requirements. Upon water addition and blending, grout will be checked for density compliance using a Mud-Balance. The amount of grout to be pumped from the batch plant to the drill rig for each ISS column or to the treatment grid for hydraulic excavator bucket mixing will be measured using a grout flow meter.

6.4.7 Ex-Situ Solidification/Stabilization (ESS)

The selected alternative consists of removing and re-grading of all waste fill in the disposal area to a depth of 5 feet below the planned final project grade, with additional excavation up to 15 feet below the planned final project grade in an additional area designated for the subsequent placement of ESS and ISS swell/expansion materials as shown on detailed maps in **Appendix D**. All excavated soil would either be subject to ESS (if exceeding SLs) or, if identified below SLs, reused as geotechnical fill or as part of the 5-foot soil containment cover across the disposal area; all excavated soil treated by ESS or reused as fill would remain within the disposal area. Soil exceeding SLs and subject to ESS treatment will be placed within designated areas at least 5 feet below the planned final project grade, but no deeper than the Development Depth of approximately 30 feet bgs (60 feet amsl). These areas for treated soil placement are also a minimum of 25 feet from the proposed building footprint.

The estimated volume of ESS material is approximately 5,000 CY based on COPCs exceeding SLs in shallow soil, although a total of approximately 9,000 CY of soil is anticipated to be excavated in the former disposal area for re-grading of all waste fill to a depth of 5 feet below the planned final project grade (**Figure 39**). An additional 13,000 to 23,000 CY will be excavated up to 15 feet to construct a primary designated area for the subsequent placement of ESS and ISS swell/expansion materials. A secondary placement area designated for additional ESS and ISS swell/expansion materials, if

necessary, is estimated to have a capacity of approximately 5,000 CY (providing space for up to 28,000 CY of swell/expansion materials).

Reagent dosage will be measured based on the approximate volume of the cut material and mixed above grade. The mixed material will then be placed immediately in the designated areas to cure.

6.4.8 In-Situ Solidification/Stabilization (ISS)

The remaining impacts below excavated areas (generally greater than 5 feet below final grade, but no greater than the development depth) reported with concentrations of COPCs exceeding SLs will be addressed by ISS using soil mixing equipment. ISS areas greater than 5 feet bgs and less than 20 ft bgs will bucket mixed using a hydraulic excavator. ISS areas greater than 20 ft bgs, but less than the development depth will be auger mixed using a drill rig. **Figure 42** presents the estimated depths of ISS in the ISS areas to identify areas that will be bucket mixed and those that will be auger mixed.

The estimated ISS volume to address COPCs exceeding SLs in deeper soil was estimated at approximately 88,000 CY in the Second Revised Feasibility Screening Evaluation (SCS, August 23, 2024). More recent contractor estimates puts the total at 75,200 CY. The anticipated swell volume, due to soil amendments, is expected to add approximately 20 to 25% to the total volume. Based on these total ISS volume estimates there would thus be an additional 15,040 to 22,000 CY of ISS material generated during the ISS remediation activities. Therefore, there is an estimated total of up to 27,000 CY of ESS/ISS material that will be generated during the remediation activities needing placement in the designated areas, up to 5 feet below the planned final project grade (as described above), which have an estimated capacity of up to 28,000 CY. Actual quantities will be subject to designing the ISS work pad surface to accommodate equipment stability during implementation.

Bucket Mixing

An ISS Cell is the term used to define an approximately 20 FT X 15 FT area that will contain one ISS mixing area. Cell size may be adjusted to account for accurate distribution of grout and irregular shapes of the delineated ISS variable depth zones. These cells will be designed in AutoCAD to ensure 100% coverage of the Treatment Zone with a minimum overlap of 3 inches, and the corners of the cells will be located in the field with GPS equipment. Once the limits of the cell are defined, the Contractor will begin to remove the soil to the designed treatment depth. During the soil excavation, grout will be added to the cell via an HDPE pipe from the batch plant and mixed with the soil in-situ via a hydraulic excavator. The previously excavated soil will be reintroduced to the excavated cell and continue to be mixed until a thorough soil-cement mixture is achieved.

Contractor's mixing excavators will be equipped with GPS that will allow for the verification of mixing depth as well as cell limits to ensure total soil encapsulation by the cement grout.

Once ISS mixing is completed in that cell, the excavator will perform rough grading of the swell to promote positive drainage. The excavator and grout hose will then be repositioned to the adjacent cell to continue mixing. The ISS cells will be sequenced in a primary/secondary cell progression such that ISS cells only overlap untreated areas or previously treated areas that have cured for at least 1 day.

Auger Mixing

The ISS treatment will be performed by constructing a series of 8-foot diameter overlapping soil-cement columns in deep (i.e., greater than 20 ft bgs) ISS Areas. Sequencing of ISS will be implemented in a mass mixing approach to optimize drill rig movement. Column construction will

start from the top of the prepared work platform to the bottom of column elevations per **Figure 42**. The specified depth will be measured from top of work platform; however, pre-excavation of the soil will be required to provide a berm to contain swell material during mixing.

Grout will be pumped through the drill rig's hollow stem, which is connected to the auger. The auger is equipped with injection ports to facilitate grout dispersion into the soil. As the auger rotates, grout will be pumped and mixed with the in-situ soil using pre-determined quantities in accordance with the mix design requirements. The auger's continued rotation and downward movement will provide homogeneously mixed columns to the desired depth. The degree of mixing will be determined in the field during initial drilling operations and upon observing the quality of the mixture created. However, a minimum of 2 mixing passes (a mixing pass is a completion of travel from the top to the bottom of the column and back to the starting elevation) will be made for each column. The mixing auger's speed (revolutions per minute [RPM]) will be adjusted to accommodate a constant rate of mixing and penetration based on the degree of drilling difficulty. Grout injection rate per vertical foot of column will be adjusted accordingly to accommodate drilling as well as mix design injection requirements. As such, the grout injection rate will be strictly a function of drilling and design requirements. Typically, the grout application rate can be successfully controlled by experienced operators once the pattern of operation is established. Inevitably, some variations of the column "grout take" will occur due to field conditions. However, the overall application rate to each column can be monitored and controlled.

Any obstructions (i.e. subsurface manmade or natural object that impedes auger advancement) encountered during auger mixing will be investigated with the support excavator to a maximum depth of 20 feet bgs. Refusal will be met if the obstruction cannot be removed within 15 minutes with Engineer notification or less than 6-inches of advance in 5 minutes.

The drill rig will be equipped with a Jean Lutz monitoring instrumentation system that will monitor in real-time the ISS mixing implementation. Monitoring parameters will include depth, mixing time, mixing passes, rotation speed, rotation torque, pull down pressure, grout pressure, and grout flow and volume (continuous and step by step).

6.4.9 Swell Management

ISS swell material will be graded in-place across the entire ISS limits or placed in the ESS consolidation areas in order to maintain the five feet of clean fill above the ISS work pad surface for the final development grades. The ISS swell subbase surface will be graded to promote positive drainage for the duration of earthwork activities.

6.4.10 ESS/ISS Surveying

The center point of each proposed treatment column or corners of each mixing grid will be field located prior to proceeding with the in-situ mixing work. This will be completed by Contractor's Field Engineer utilizing a survey GPS with pre-established X and Y coordinates for each numbered column center point or grid corner. To ensure targeted depths are achieved, Contractor's mixing excavators will be equipped with a TRIMBLE Excavator Grade Control System. The as-built bottom elevation of each mixing cell will be determined by placing the mixing bucket at the corner of the cells and recording the coordinates. The Contractor Field Engineer will use an RTK-GPS receiver to locate and stakeout column centers. The mobile receiver will connect to Contractor's base station. Survey site calibration control for the base station and receiver will be provided by an independent California Licensed Surveyor.

The onboard grout software system for the drill rig will provide the depth penetration of the auger which can in turn be translated to the as-built elevation of the bottom of the column compared to the top elevation captured during location of a column center point. Upon designating the center point of a given column, the auger of the in-situ mixing rig will then be positioned over the established point for drilling. Once the auger is positioned over the top of a given column, the drill rig's hollow stem will be checked for verticality. The in-situ vertical auger mixing rig's hollow stem will be checked for verticality prior to proceeding with in-situ treatment of each column. This will be accomplished by the drill rig's computerized self-leveling system once activated by the drill rig's operator. Column treatment depths will be measured during in-situ mixing operations from top of work platform elevation to design bottom of column elevations. This is accomplished by the drill rig's electronic depth indicator once "zeroed" at the top of column design elevation prior to drilling.

Contractor will be responsible for performing site surveys as needed to confirm existing conditions, layout work areas, document work is performed in accordance with design and specified requirements and as needed to prepare final as-built drawings.

6.5 CONTROLS DURING CONSTRUCTION

6.5.1 Soil Erosion and Sediment Controls (SESC)

A Storm Water Pollution Prevention Plan (SWPPP) will be prepared for all construction activities for the proposed site redevelopment, including soil removal associated with the proposed response plan activities. The SWPPP will include a schedule of activities, projected direction of water flow during storm events, inspection requirements, points of discharge and sampling requirements, nearby municipal storm drain inlets, areas where soil is to be exposed and areas of other construction activity, equipment storage and maintenance areas, and a description of best management practices (BMPs) to prevent storm water impacts. BMPs will, at a minimum, include methods for soil stabilization and sediment control, wind erosion control, methods to prevent off-site tracking of soil, items related to non-storm water management, and stockpile/waste management.

6.5.2 Odor Control

The Property is situated in a Mediterranean climate zone, experiencing mild winters and warm to hot dry summers. The prevailing wind directions during the dry season/summer months are predominantly from the west/southwest and are related to onshore flows. In winter the winds are more variable and include onshore winds from the west as well as strong winds from the southeast and north northwest (Los Angeles Airport).

An Odor Control Plan will be prepared by the contractor(s) which will identify potential odor and VOC emission sources and receptors, monitoring methods, provide worker protection criteria, and provide mitigation methods. This Plan anticipates a Rule 1166 Contaminated Soil Mitigation Plan (Excavation Plan) will apply to Site activities.

This Excavation Plan is required:

- Prior to commencing excavation of any soil where petroleum impacted soil may be exposed to the atmosphere.
- Where an underground storage tank or piping was used to store or transfer VOCs.
- During excavation, handling and storage of VOC contaminated soils.

Minimum requirements for the Excavation Plan are as follows:

- Monitoring of wind direction and speed.
- Maintain moisture of excavated material and road surfaces to minimize dust and emissions.
- Removal of loose material from haul truck exteriors.
- Cover material in haul truck dump beds to prevent spillage.
- Cover inactive stockpiles to minimize dust and emissions.
- Description of mitigation measures for dust, odors, and VOCs.
- Description of monitoring equipment and techniques.

6.5.3 Dust Control

Response plan activities would employ BMPs to (1) suppress dust arising from these activities; (2) eliminate/reduce the movement of silt or sediment from excavation areas into storm water runoff through the use of controls such as silt fences, sandbag berms, hay bales, and/or grading (specific BMPs to be identified during the design process); and (3) manage soil stockpiles built during construction to prevent the movement of silt into stormwater runoff by employing standard construction BMPs such as diversion of drainage from the stockpile areas, placement of sandbags and silt fencing, and/or sloping of stockpiles to encourage sheet flow (specific BMPs to be identified during the design process).

Contractor(s) will comply with SCAQMD dust and odor control requirements contained in Rules 402, 403 and 1466 as described in the SMP. The SMP serves as the Excavation Management Plan and will be submitted to the SCAQMD for approval. The SMP will be available onsite throughout the remedial action. The SCAQMD requirements for an SMP include the following:

- Provide information regarding the quantity and characteristics of the material to be excavated and transported (see Section 6.3).
- Identify mitigation measures to be activated as necessary to ensure a public nuisance condition does not occur.

Provisions for immediate cessation of excavation activities if the Contractor is notified that a public nuisance has occurred.

Dust Control Supervisor

As required by Rule 1466 a Dust Control Supervisor who has successfully completed the 3-hour SCAQMD Fugitive Dust Control Compliance Training Class. The Dust Control Supervisor will maintain compliance with Rule 1466 and call for immediate cessation of excavation if a public nuisance has occurred or if notified to do so by the SCAQMD.

Best Available Control Measures

Best Available Control Measures to be employed by the Contractor to minimize visible emissions, public nuisances, and fugitive dust will include the following, as appropriate:

- Clearing and Grubbing: Maintain stability of soil through pre-watering of the Property prior, during, and immediately after clearing and grubbing. Maintain perennial vegetation where possible. Apply water in sufficient quantity to prevent dust plumes.

- Cut and Fill: Pre-water soil prior to cut and fill activities and stabilize soil during and after cut and fill activities. Using water trucks/pulls or sprinklers, pre-water soil then allow time for penetration to depth of subsequent cut.
- Disturbed Soil: Stabilize disturbed soil throughout the construction area. Limit vehicular traffic and disturbances on soil, where possible. Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes.
- Earth-Moving: Pre-apply water to depth of proposed cuts and re-apply water as necessary to maintain soils in a damp condition and ensure that visible emissions do not exceed 100 feet in any direction or extend offsite. Stabilize soil once earth-moving activities are complete. Consider the use of upwind fencing to prevent material movement onsite.
- Truck Loading and Importing/Exporting of Bulk Materials: Empty loader bucket close to the truck, and in such a manner that no visible dust plumes are created. Stabilize material while loading, transporting, and unloading to reduce fugitive dust emissions. Maintain at least 6 inches of freeboard on haul vehicles. Comply with Vehicle Code Section 23114. Use tarps or other suitable enclosures on haul trucks. Check belly-dump seals and remove rocks to prevent spillage. Comply with track-out prevention/mitigation requirements. Use water while loading and unloading to reduce visible dust plumes.
- Screening: Pre-water material prior to screening. Limit fugitive dust emissions to opacity and plume length standards. Stabilize material immediately after screening. Dedicate water truck or high-capacity hose to screening operation. Drop material through screen slowly and minimize drop height.
- Crushing: Stabilize surface soils prior to operation of support equipment, follow permit conditions for crushing equipment, pre-water material prior to loading in crusher, monitor emissions, and stabilize and water material after crushing.
- Staging Areas: Stabilize staging areas during use, and at project completion.
- Stockpiles/Bulk Material Handing: Stabilize stockpiled materials and add or remove materials from the downwind portion of the storage pile. Stockpiles within 100 feet of offsite occupied buildings must: (1) not be greater than 8 feet in height, or (2) have a road bladed to the top to allow water truck access, or (3) have an operational water irrigation system that is capable of complete stockpile coverage. Avoid steep sides or faces on storage piles.

Large-Scale Operations

If the project qualifies as a Large Operation (>5,000 cy of material moved per day, for 3 or more days), a Large Operation Notification (Form 403) will be filed with the SCAQMD within 7 days of qualifying as a large operation. In addition to the abovementioned measure, the following dust control measures will be employed for large operations:

- Earth Moving, Construction Fill Areas: Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method D-1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted

during the first 3 hours of active operations during a calendar day, and two such evaluations during each subsequent 4-hour period of active operations.

- Earth Moving, Construction Cut Areas: Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
- Disturbed Surface Areas, Except Completed Grading Areas:
    - Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface.
    - Any areas which cannot be stabilized, as evidenced by wind-driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the un-stabilized area.
- Completed Grading, Disturbed Surface Areas: Apply chemical stabilizers within 5 working days of grading completion; or take actions specified for inactive disturbed surface areas.
- Inactive Disturbed Surface Areas:
    - Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind-driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
    - Apply dust suppressants if sufficient quantity and frequency to maintain a stabilized surface; OR
    - Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of un-stabilized ground within 90 days of planting, and at all times thereafter; OR
    - Utilize any combination of control actions (a), (b), and (c) such that, in total, these actions apply to all inactive disturbed surface areas.
- Unpaved Roads:
    - Water all roads used for any vehicular traffic at least once per every 2 hours of active operations (3 times per normal 8-hour workday); OR
    - Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
    - Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.

6.5.4 Noise Control

Construction and Transportation equipment noise levels (e.g., portable air compressors, generators, and heavy equipment), process equipment noise levels and noise levels at the Property boundaries will be monitored to adhere to applicable regulatory requirements.

6.5.5 Traffic Management Plan

Cleanup activities will generally be performed on standard workdays (Monday through Friday) during daylight hours, and the daily work period would be between the hours of 7:00 a.m. to 7:00 p.m.

Vehicles associated with the work would be required to follow all applicable speed limits and traffic laws.

Traffic and engineering controls (i.e., fences, barricades, signs, and caution marking) would be put in place, as necessary. These measures would be implemented to protect the public from cleanup activities and cleanup equipment. Traffic controls may apply to vehicles, bicycles, and/or pedestrians. The duration of traffic and engineering controls would not exceed the duration of the project and no permanent alterations in the layout of fences, roads, sidewalks, or other pathways are anticipated.

Traffic control for the Property will conform to the ordinances and regulations of the jurisdictional agency having authority over traffic control and will conform to the latest edition of the Work Area Traffic Control Handbook (WATCH), 2006 (BNI Publications, 2006). The necessary permits for traffic control will be obtained. Truck traffic will be regulated during hauling operations and as necessary to prevent haul trucks from stopping or parking along the paved adjacent roads.

6.5.6 Other Controls

Standard project controls will be applied as needed during implementation of cleanup activities to reduce the potential for impacts to (1) site workers or nearby site occupants due to impaired air or water quality, hazards, noise, and traffic; and (2) the environment in general, including air quality, biological habitats, plants and animals in the site vicinity, surface soils (i.e., prevention of erosion), surface water, groundwater quality, and cultural resources. The following project components are assumed for Response Plan implementation:

- Field activities will be governed by Health and Safety Plans specifying practices that would be employed by workers to avoid physical and chemical exposures during corrective action activities. These plans would include protocols for air monitoring, as applicable.
- Site controls will be implemented to prevent unauthorized persons from entering portions of the Property where such entry could pose a threat to themselves or others, or where such entry could interfere with the investigation or corrective action activities.
- No materials or equipment will be stored where they could interfere with the free and safe passage of facility personnel and tenants.

6.6 SURFACE COVER

6.6.1 Soil Cover Construction

A 5-foot layer of clean imported fill and/or on-site meeting soil re-use criteria of an approved SMP, overlain by pavement (as part of redevelopment activities), will be constructed to prevent direct contact with ESS and ISS treated soils and to mitigate infiltration of water to the subsurface. A paved area, including vehicle parking areas, and a portion of the planned building will be constructed over the entire disposal area after solidification/stabilization has been completed and after the placement of the clean soil cover over the stabilized material. The parking area surface will be designed to minimize infiltration of precipitation. Features to minimize infiltration are expected to include the following features: drainage to allow rapid removal of water from the parking area to a containment basin located away from the disposal area; low permeability asphaltic or other pavement; and minimal/low water use landscaping or landscaping in hard bottom planters.

As discussed in Section 4.2 of this document, vertical migration modeling indicated low mobility of the principal COPCs at the Property even under current conditions. Placement of low water infiltration hardscape and building foundation at the surface will further minimize the potential for migration of COPCs and essentially eliminate the potential for impact to groundwater.

6.6.2 Surface Drainage and Construction

A stormwater drainage system will be designed and constructed as part of the redevelopment with specific measures to prevent water from infiltrating into the soil, particularly in areas where the soil has been treated in the former disposal area, preventing contamination from leaching to groundwater. Storm drain systems are also critical for managing surface water runoff, preventing flooding, and protecting water quality. The system is anticipated to include a combination of structures designed to capture, convey, and discharge stormwater in a safe and controlled manner to the municipal storm drain system. The proposed system will include detention basins, drains, culverts, and conveyance piping.

6.6.3 Subsurface Utilities and Corridors

The proposed utilities at the Property will be generally located in areas and depths to reduce direct interaction with treated soil. These utilities, such as water lines, gas pipes, and electrical conduits, will be generally installed at depths of less than 5 feet in the former disposal area, within the "clean soil cover". This shallow depth ensures that the utilities remain above the stabilized ESS/ISS areas, preventing potential exposure or disruption to the contaminants following remediation activities.

To further minimize any future risk, the development design will have deeper utilities in distinct corridors where when necessary. In these areas, the utilities will be carefully placed at greater depths but within controlled zones that limit direct contact with the contaminated soil, and backfilled with clean soil surrounding the utilities; it is anticipated these corridors will be limited to select portions of storm drain conveyance piping. This strategy not only helps prevent contamination from migrating into the utility lines but also facilitates monitoring and maintenance of the utilities in the future without disrupting contaminated soil, as their placement above the contaminated zone will allow for clearer identification and safer access for inspections and repairs.

6.7 BUILDING ENGINEERING CONTROLS

The proposed site building will be designed to include a Vapor Intrusion Mitigation System (VIMS) with a sub-slab ventilation system and sealing of the underside of the floor slab. This will mitigate the potential buildup of VOCs and/or methane beneath the building slab from subsurface soil vapor and prevent intrusion into overlying building spaces. The system will be designed with sampling points to allow for the periodic monitoring of VOCs/methane and comparison with concentrations in indoor air to ensure efficacy of the VIMS. The system will also be designed to allow for conversion to an actively ventilated sub-slab system if significant concentrations of VOCs/methane were detected; in this configuration, if needed, extracted air will be treated by passing over activated carbon to remove VOCs prior to discharge to the atmosphere.

6.7.1 Vapor Intrusion Mitigation System (VIMS)

The following text describes a passive sub-slab venting system that will allow soil vapor and/or methane to be safely discharged to the atmosphere by means of vertical vent risers terminating at the building roof line. The actual VIMS that is designed and installed is expected to be similar but may differ in detail from that described below. The design will be based on final building and

contractor recommendations regarding installation timeframe and cost and will be subject to approval by the RWQCB.

The venting system will consist of a sub-slab gravel layer beneath the entire footprint of the building that contains low-profile, 1-inch sub-slab Geovent (or equivalent) collection pipes, which will transition to 3-inch rigid polyvinyl chloride pipe where penetration though building footers occurs. The collection pipes will be connected to carbon steel (or equivalent) vertical risers along the building exterior that terminate above the roof line. Venting system components will likely include the following:

- Impervious Membrane Barrier - The horizontal membrane barrier will be installed above the sub-slab passive venting system and beneath the entire extent of the building footprint. The horizontal membrane barrier will consist of a minimum cured thickness of 60 mil (0.06 inches) Liquid Boot Plus VI-20 geomembrane or comparable product. Air-tight seals will be designed at all pipe or conduit penetrations through the sub-slab liner. Utility perforations through the membrane liner will be sealed in accordance with the membrane manufacturer's recommendations. Air-tight seals should be provided where the sub-slab liner attaches to interior and perimeter footings.
- Sub-Slab Monitoring Probes - Monitoring probes will be placed within the gravel layer (below the membrane) and terminate in monitoring vaults outside the building perimeter wall. Sub-slab soil vapor monitoring probes will be used to monitor soil vapor concentrations under the slab.
- Utility Trench Dams and Electrical Conduit Seals - Utility trench dams constructed of a bentonite-concrete slurry are required for all utility trenches that extend beneath and/or through the building foundation from outside areas, and will be placed immediately adjacent to the exterior perimeter of the building foundation. Utility trench dams will extend a minimum of 3 feet from the perimeter of the building and at least 6 inches around all conduits and pipes. Electrical conduit seals, either end seals or EYS seals, will be installed approximately 18 inches above the location where the conduit penetrates the building floor slab. Electrical conduit seals consisting of a sealing compound with fiber dams will be installed to fill the void space and to prevent the infiltration of subsurface gases into interior spaces.
- Signage - Upon completion of construction, warning signs will be posted at prominent locations that incorporate the following language: "WARNING: A membrane is installed beneath the building floor slab to prevent vapor intrusion from the soil. Any proposed penetration or alteration of the floor slab requires prior written notification to the owner. It is illegal to remove this sign." In addition, soil vapor notification labels that provide information regarding the vent designation and purpose will be attached to all vent risers.

As indicated, the VIMS will be designed so that it can be converted to an actively ventilated system should the need arise.

6.8 INSTITUTIONAL CONTROLS

TBB will seek an LUC for the Property. The LUC is expected to cover (1) overall use of the Property restricted to commercial or industrial with no sensitive receptors, (2) prohibition of the use of groundwater for domestic purposes, (3) requirement for building protection from potential vapor intrusion, and (4) recording the location of subsurface areas where contaminants were left in place and providing protocols if soil in these areas needs to be disturbed in the future. It is anticipated that

the LUC will generally limit access for contractors digging below 5 feet within the disposal area to minimize potential contact with ISS/ESS treated soils.

6.9 PERFORMANCE MONITORING PROGRAM AND CLOSURE CRITERIA

6.9.1 ESS/ISS Performance Confirmation Sampling

A confirmation sampling program will be implemented to verify the effectiveness of the ESS/ISS stabilization. This program will ensure that the treatment has achieved the desired performance in terms of improving soil properties (e.g., strength and permeability) and reducing the mobility of potential environmental impacts (e.g., leaching of contaminants). The goal is to verify the successful remediation of contaminated soil through cement stabilization. The sampling program will:

- Confirm that the treated soil meets the required UCS thresholds.
- Assess the Hydraulic Conductivity to ensure that the permeability of the stabilized soil is within acceptable limits.
- Evaluate the Leachability of contaminants using the SPLP to ensure that hazardous materials (VOCs, SVOCs, TPH, metals) are not leaching into the environment.

The ESS sampling plan will consist of the following:

- The Contractor Field Engineers will be responsible for conducting the quality control (QC) sampling and field testing for the ISS work in conjunction with the excavator and drill rig operators.
- During the grout preparation, the batch plant operator will be provided with the volume of water and amount of reagent needed to meet the mix design for each column by the Contractor Field Engineer. Dry cement addition control from each silo will be metered using the individual silo scales to each mixing tank and will be accomplished using each respective silo's auger feed system to provide the required reagent ratios, and water to combined cementitious reagents ratio (W:C) multiplied by unit weight of soil, per the mix design requirements. Volume of grout injected in the column will be based on the flow meter at the drill rig. Grout density will be recorded twice per day at the batch plant to ensure the cement addition meets the mix design specifications.
- Column samples of freshly treated soil will be collected over discrete depth intervals using an in-situ trap door wet sampler. The trap door discrete sampler is affixed to the auger stem. As the auger is advanced downward, the door remains open and closes based on gravity when the auger is pulled upward at the target sample depth. The door remains shut as the auger is removed from the column. The sample is released by removing the bolt holding the door in place. A 5-gallon bucket under the door catches the released sample. The ISS column will be divided into thirds where samples can be retrieved from the top, middle, and/or bottom at random. Contractor will alternate which section of the column a given location is sampled. For bucket mixing, a fresh soil-cement sample will be collected via excavator bucket. ESS samples will be collected immediately after mixing is completed via the excavator bucket.
- Extracted fresh soil-cement samples from a column/cell will be evaluated for color, homogeneity, and free liquids. If the samples pass the visual evaluation, samples from a column/cell will be composited, screened using a 3/8-inch sieve, and molded into 3x6-inch sized molds. The molded samples will then be maintained in a climate-controlled space for curing conditions.

- Once the samples have met a minimum curing timeframe of 72 hours, the molds will be transported to an independent geotechnical laboratory to test for UCS using ASTM D1633 testing methods and for Hydraulic Conductivity using ASTM D5084 testing methods at 28-days of cure. One sample per 500 CY of mixing or a minimum of 1 sample per rig or excavator per day will be collected. If the mix design changes in a given day, a second sample will be taken for that Drill Rig/excavator.

6.9.2 VIMS Operation and Monitoring Program

The VIMS design will include an operation and monitoring (O&M) program that will be implemented to ensure that vapor intrusion risks are effectively managed to protect building occupants. The monitoring program will be initiated after the installation of a VIMS and will focus on verifying the system's ongoing efficacy in preventing the migration of hazardous vapors into indoor spaces. The VIMS O&M is likely to initially include quarterly monitoring, progressing to semi-annual and/or annual monitoring once performance goals are adequately confirmed. The VIMS O&M program is anticipated to consist of the following:

- Sub-slab Probes: These probes will be installed beneath the building's foundation as part of the VIMS to measure vapor/gas levels below the slab. This probes will be used for comparison with indoor air concentrations to confirm that the VIMS is preventing vapors from entering the building.
- Indoor Air Quality Testing: Pre-occupancy indoor air samples will be collected from key areas within the building, particularly in spaces to be occupied, to monitor for any elevated levels of hazardous vapors.
- System Performance Monitoring: Regular checks of the mitigation system components will be conducted to ensure they are functioning as designed.
- VIMS Repair Requirements: Required repair measures/notifications will be included should the barrier be disturbed by tenant improvement or other activities that penetrate the building slab and barrier.
- Reporting to LARWQCB: Data from the monitoring activities will be regularly reported submitted to the LARWQCB to confirm compliance with environmental protection standards and to demonstrate that the VIMS is protecting human health and the environment.

6.10 CONTINGENCY PLAN

6.10.1 ESS/ISS Contingency Measures

A contingency plan to address potential failures in both ISS and ESS remediation components will be included in the SMP. In the event that field scale testing and/or confirmation sampling indicates performance failures, the plan would outline alternative strategies for achieving treatment goals, such as adjusting the cement mixture or incorporating additional stabilizing agents, or additional remediation technologies/activities to achieve desired results. If field pilot testing reveals the need for modifications to the remediation technology, the contingency plan would allow for prompt adaptation of the approach, ensuring continued effectiveness and compliance with remedial objectives.

6.10.2 VIMS Contingency Measures

The contingency plan will be included in the VIMS O&M Plan to cover unexpected outcomes. It will include, for instance, procedures to be followed if operational data indicates that the vapor intrusion mitigation system, initially designed as passive, needs to be converted to an active system. The contingency plan will ensure that the project can quickly adjust to these challenges, minimize delays, maintain safety standards, and ensure the long-term success of mitigation measures.

6.11 RESPONSE PLAN IMPLEMENTATION REPORT

The activities completed under this Response Plan will be documented in a Response Action Completion Report to be prepared by the project geologist or engineer. The report will include a description of field activities, figures, tables, official laboratory test results, manifests, and discussion of typical procedures. Interim reports may also be prepared if circumstances warrant.

7.0 IMPLEMENTATION SCHEDULE

A table with the anticipated implementation schedule is provided below:

Task	Days	Start Date	End Date
Finalize and Submit Response Plan based on Feasibility Study			Friday, January 10, 2025
LARWQCB Response Plan Review (30 Calendar Days)	21	Friday, January 10, 2025	Sunday, February 9, 2025
Initiate WDR/AQMD Permitting	41	Friday, January 10, 2025	Friday, March 7, 2025
Response Plan Revisions and Respond to Comments (30 Calendar Days)	20	Sunday, February 9, 2025	Friday, March 7, 2025
RWQCB Response Plan Review & Final Approval (30 Calendar Days)	21	Friday, March 7, 2025	Sunday, April 6, 2025
Public Comment Period & Respond to Comments (30 Calendar Days)	22	Sunday, April 6, 2025	Tuesday, May 6, 2025
Finalize Remediation Design Documents and Contractor Bidding	14	Tuesday, May 6, 2025	Sunday, May 25, 2025
Finalize Remedial Action Team and WDR/AQMD Permits, Mobilize	25	Sunday, May 25, 2025	Monday, June 30, 2025
Implement Remedial Action (200 Calendar Days)	139	Monday, June 30, 2025	Friday, January 16, 2026

8.0 REFERENCES

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Terracon 2024a. Limited Asbestos Survey Report, 3041 Del Amo Boulevard, Torrance, California 91325. September 24, 2024.

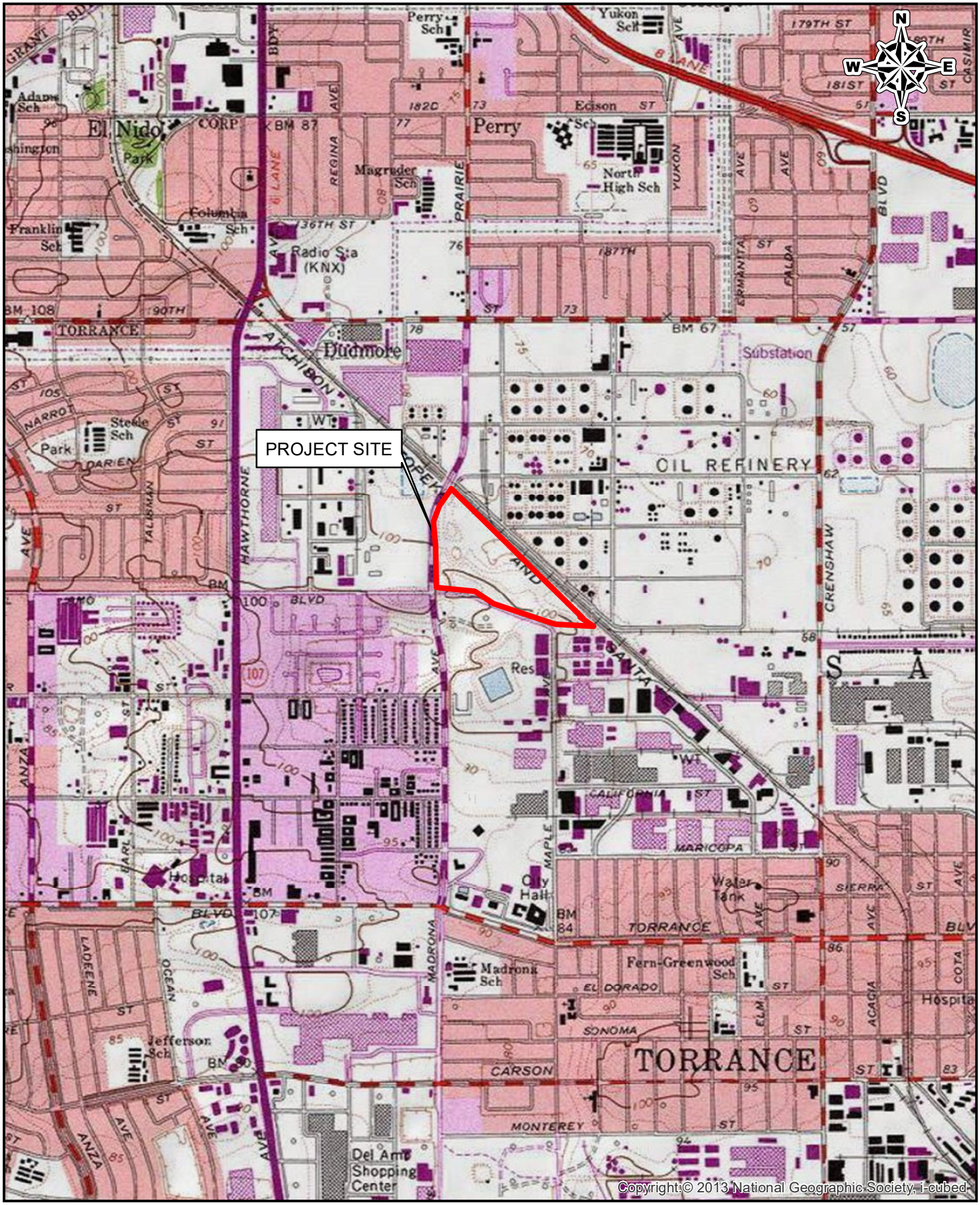
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USEPA 1991. Memorandum. Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions. April 22, 1991. Office of Solid Waste and Emergency Response. Washington, D.C.

USEPA 2015. ProUCL Version 5.1. Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. EPA/600/R-07/041. Washington, D.C.

USEPA 2022. Regional Screening Levels. May 2022. Accessed via the Internet at: https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables

Figures



SCS ENGINEERS 3900 KILROY AIRPORT WAY, STE 100 LONG BEACH, CALIFORNIA 90806-6816	SITE: North Posse Site 3041 Del Amo Blvd. Torrance, California 90503	Job No.: 01217339.00 T2 Title: SITE LOCATION MAP	FIGURE 1

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\New Building Plan\Figures 2024 (with new building overlay).dwg Dec 19, 2024 - 1:12pm By: 2178aph

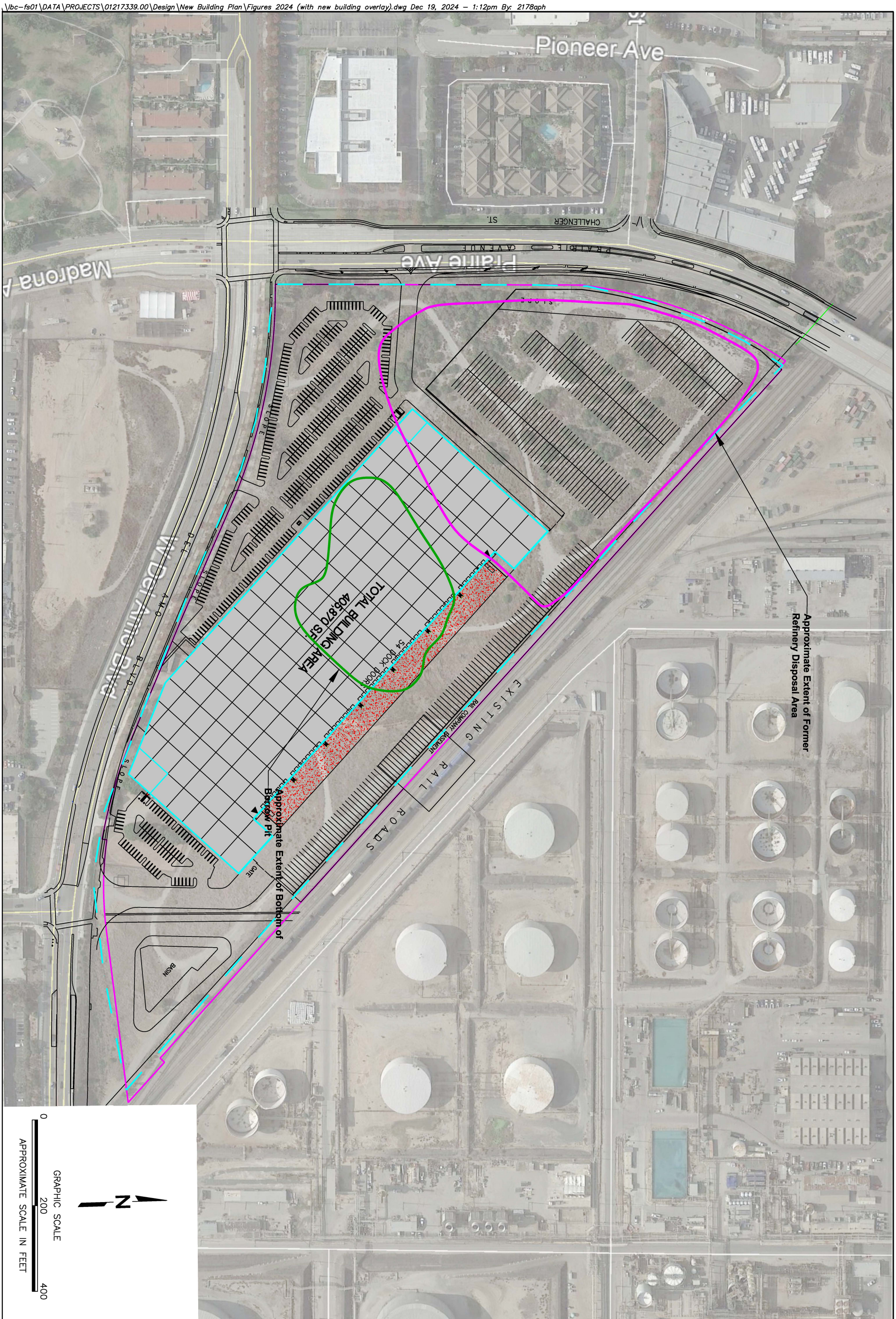


FIGURE NO. 2	SCALE: 1" = 200'	DATE: DECEMBER 2024	

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	DWN. BY:	ACAD FILE:
01217339.00	APH	LOCATION
DSN. BY:	CHK. BY:	APP. BY:
DESIGN	KWG	KWG

CLIENT:

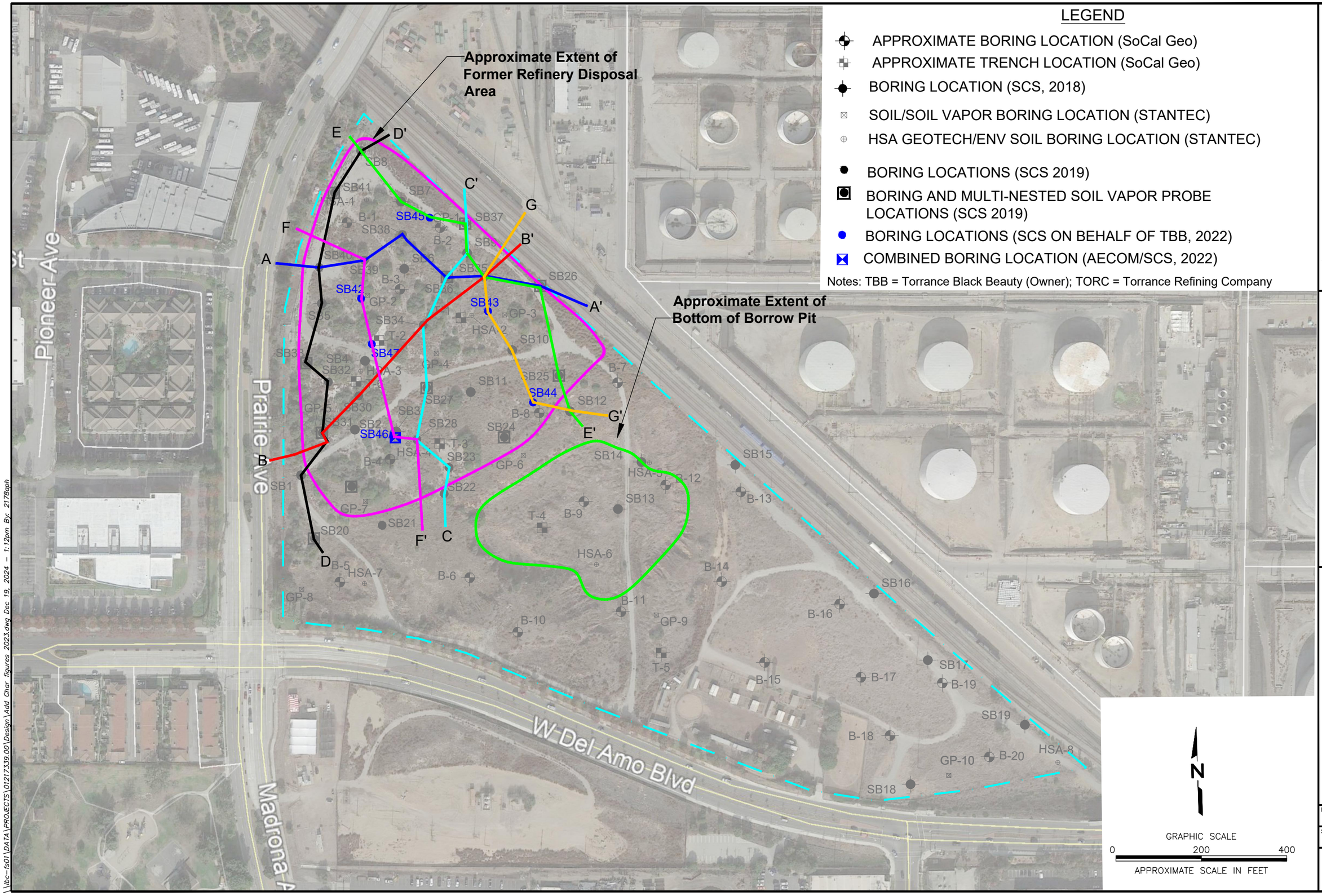
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SHEET TITLE:

SITE MAP WITH REDEVELOPMENT PLAN OVERLAY

PROJECT TITLE:

NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503



LEGEND

- APPROXIMATE BORING LOCATION (SoCal Geo)
- APPROXIMATE TRENCH LOCATION (SoCal Geo)
- BORING LOCATION (SCS, 2018)
- SOIL/SOIL VAPOR BORING LOCATION (STANTEC)
- HSA GEOTECH/ENV SOIL BORING LOCATION (STANTEC)
- BORING LOCATIONS (SCS 2019)
- BORING AND MULTI-NESTED SOIL VAPOR PROBE LOCATIONS (SCS 2019)
- BORING LOCATIONS (SCS ON BEHALF OF TBB, 2022)
- COMBINED BORING LOCATION (AECOM/SCS, 2022)

Notes: TBB = Torrance Black Beauty (Owner); TORC = Torrance Refining Company

GRAPHIC SCALE
0 200 400
APPROXIMATE SCALE IN FEET

SHEET TITLE:
SITE MAP SHOWING SAMPLE LOCATIONS AND CROSS SECTIONS

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

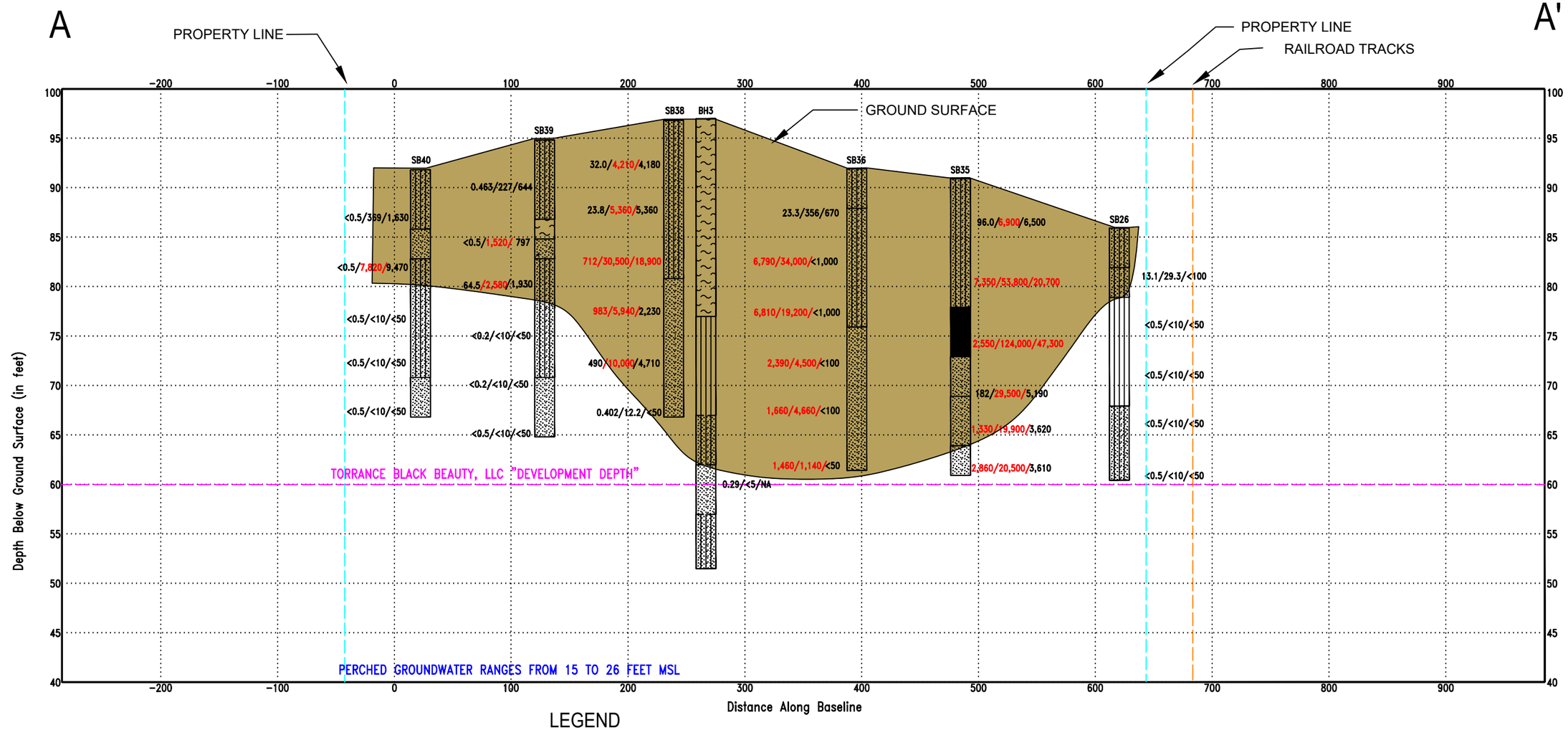
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DSN. BY:	DESIGN
DWN. BY:	APH
CHK. BY:	KWG
AZ/ACI FILE	LOCATION
APP. BY:	KWG

DATE: DECEMBER 2024

SCALE: 1" = 200'

FIGURE NO. 3

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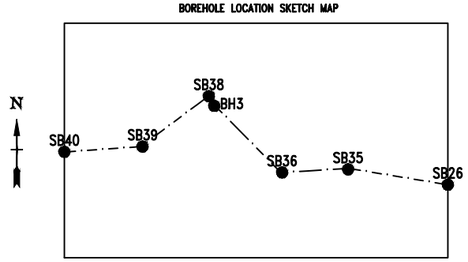


Borehole	North	East	Elev.	Depth
BH3	1768424	6457207	97.0	45.5
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB36	1768335	6457298	92.0	30.5
SB38	1768438	6457200	97.0	30.0
SB39	1768370	6457110	95.0	30.0
SB40	1768363	6457005	92.0	25.0

LEGEND

SB40	BORING ID
(2,860/20,500/3,610)	TOTAL PETROLEUM HYDROCARBONS CONCENTRATIONS (2,860/20,500/3,610 = GASOLINE/ DIESEL/ HEAVY RANGES)
7,820	EXCEEDS CLEAN-UP STANDARDS
9,470	CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
(<0.5 / <10 / <50)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
PETROLEUM HYDROCARBON CONCENTRATIONS ON CROSS SECTION A-A'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

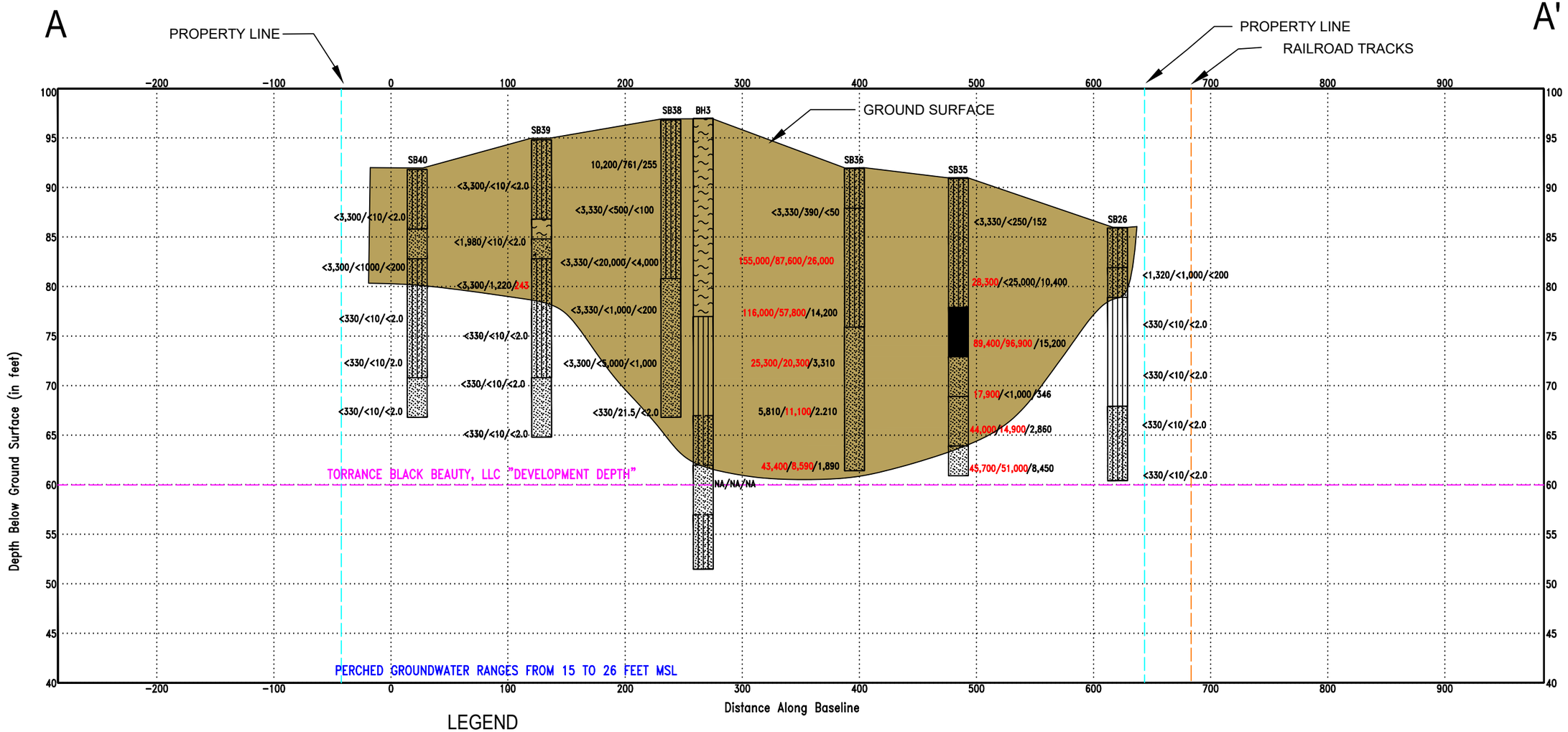
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DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 4

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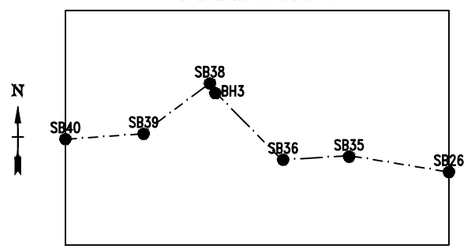


LEGEND

SB40	BORING ID
(45,700/51,000/8,450)	VOLATILE ORGANIC COMPOUNDS (45,700/51,000/8,450 = (NAPTHALENE 8270C/ NAPTHALENE 8260B/ ETHYLBENZENE 8260B)
45,700	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
45,400	EXCEEDS CLEAN-UP STANDARDS
(<330/<10/<2.0)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
	APPROXIMATE LIMITS OF FILL

Borehole	North	East	Elev.	Depth
BH3	1768424	6457207	97.0	45.5
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB36	1768335	6457298	92.0	30.5
SB38	1768438	6457200	97.0	30.0
SB39	1768370	6457110	95.0	30.0
SB40	1768363	6457005	92.0	25.0

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION A-A'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

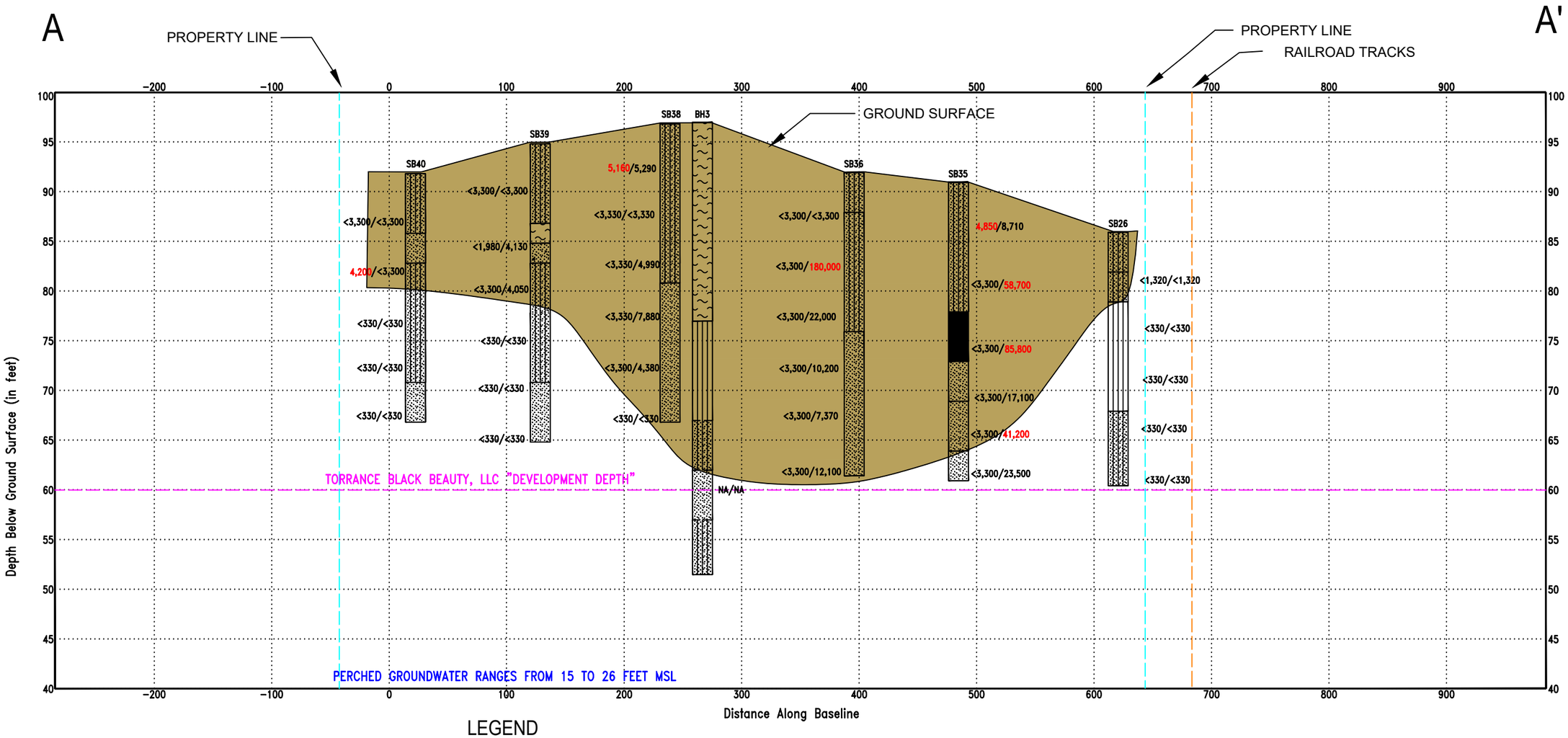
CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	01217339.00
DSN. BY:	DESIGN
DRN. BY:	AH
CHK. BY:	CJ
APP. BY:	KHL
ACAD FILE:	LOCATION

DATE: APRIL 2023
SCALE: AS SHOWN
FIGURE NO. 5

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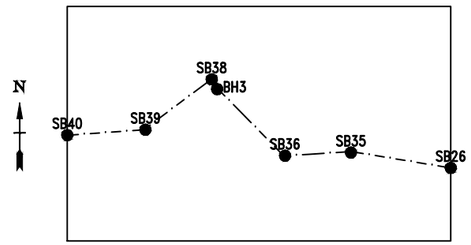


LEGEND

SB40	BORING ID
(5,160/5,290)	BENZO(A)PYRENE, 1-METHYLNAPTHALENE
5,160	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
4,200	EXCEEDS CLEAN-UP STANDARDS
(<330/<330)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
	APPROXIMATE LIMITS OF FILL

Borehole	North	East	Elev.	Depth
BH3	1768424	6457207	97.0	45.5
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB36	1768335	6457298	92.0	30.5
SB38	1768438	6457200	97.0	30.0
SB39	1768370	6457110	95.0	30.0
SB40	1768363	6457005	92.0	25.0

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION A-A'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

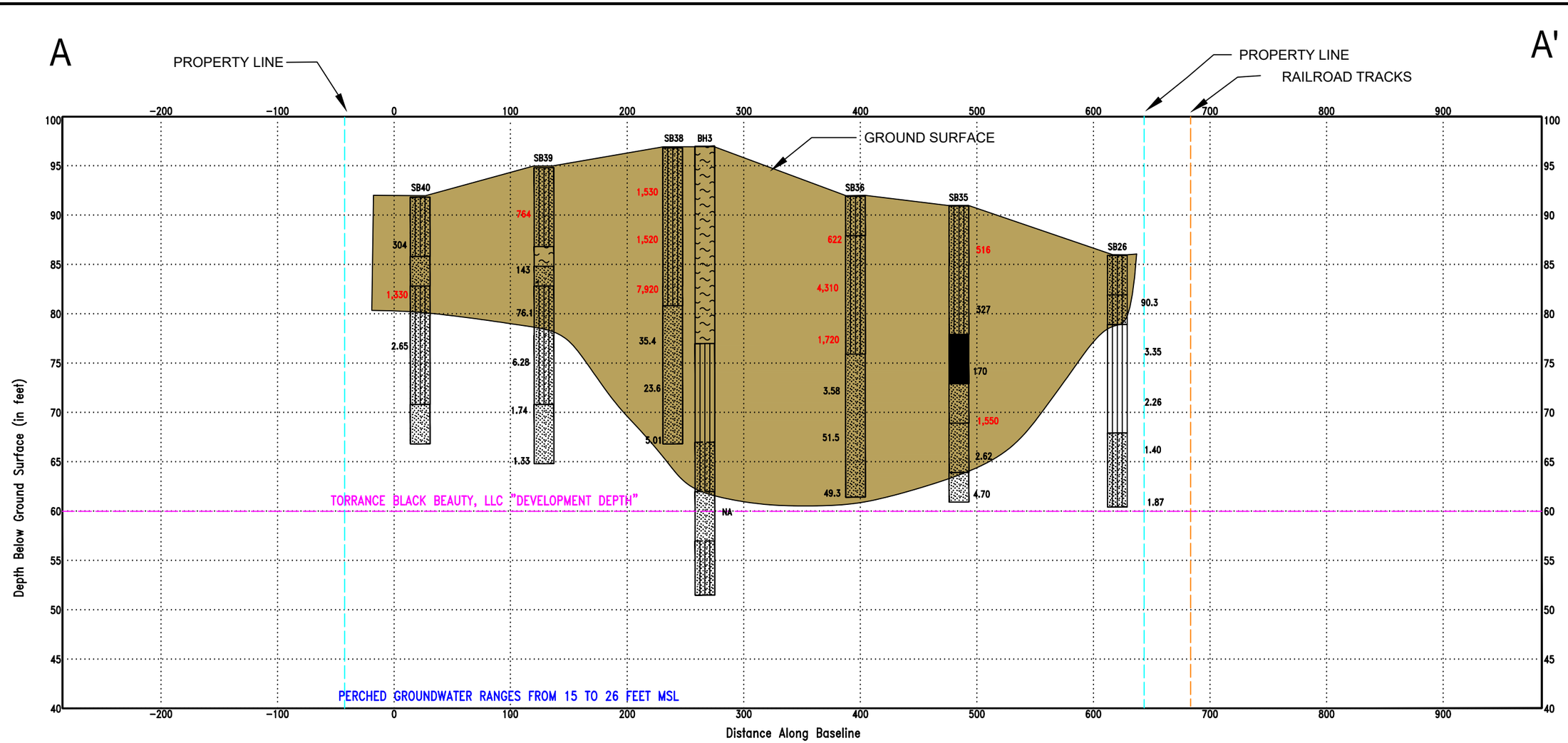
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DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 6

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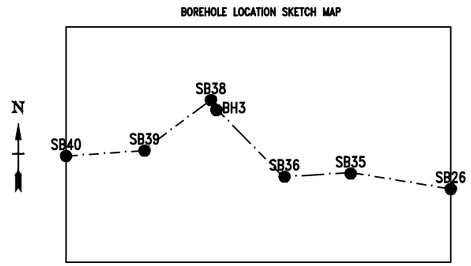


Borehole	North	East	Elev.	Depth
BH3	1768424	6457207	97.0	45.5
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB36	1768335	6457298	92.0	30.5
SB38	1768438	6457200	97.0	30.0
SB39	1768370	6457110	95.0	30.0
SB40	1768363	6457005	92.0	25.0

LEGEND

SB40	BORING ID
1.77	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
764	EXCEEDS CLEAN-UP STANDARDS
NA	NOT ANALYZED
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTION A-A'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

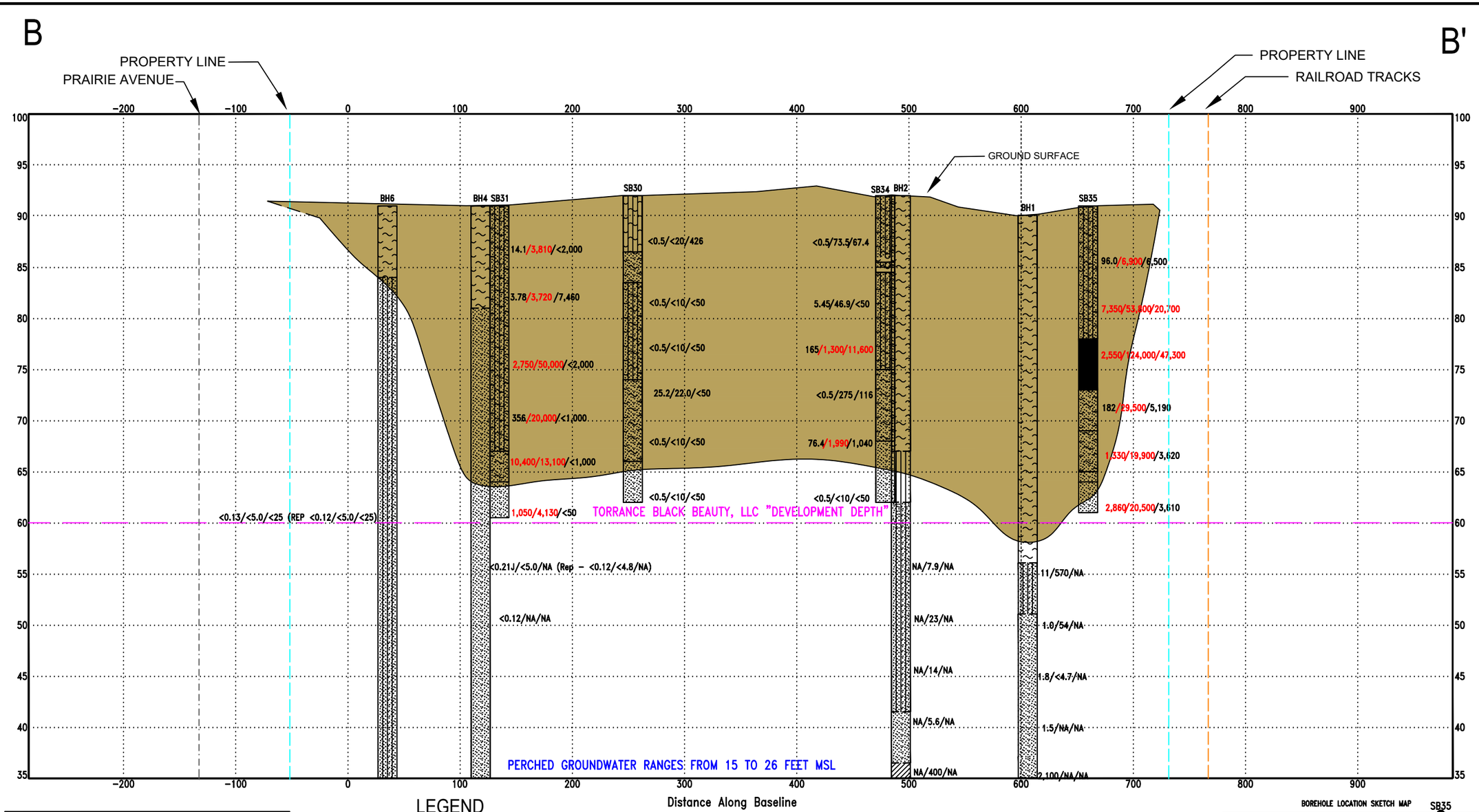
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DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 7

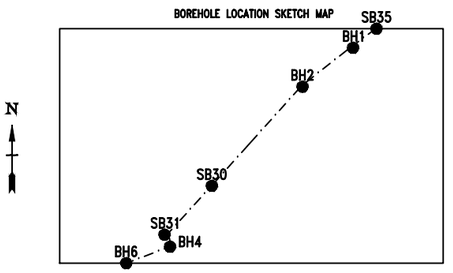
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Borehole	North	East	Elev.	Depth
BH1	1768305	6457345	88.0	70.5
BH2	1768236	6457256	94.0	70.0
BH4	1767952	6457020	91.0	70.0
BH6	1767922	6456943	91.0	81.5
SB30	1768060	6457095	92.0	30.0
SB31	1767973	6457010	91.0	30.5
SB35	1768339	6457387	91.0	30.0

LEGEND

SB31	BORING ID
(1,050/4,130/<50)	TOTAL PETROLEUM HYDROCARBONS CONCENTRATIONS (1,050/4,130/<50 = GASOLINE/ DIESEL/ HEAVY RANGES)
1,050	EXCEEDS CLEAN-UP STANDARDS
3.78	CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
(<0.5/<10/<50)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
REP	FIELD REPLICATE SAMPLE
	APPROXIMATE LIMITS OF FILL



SHEET TITLE:
PETROLEUM HYDROCARBON CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
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LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

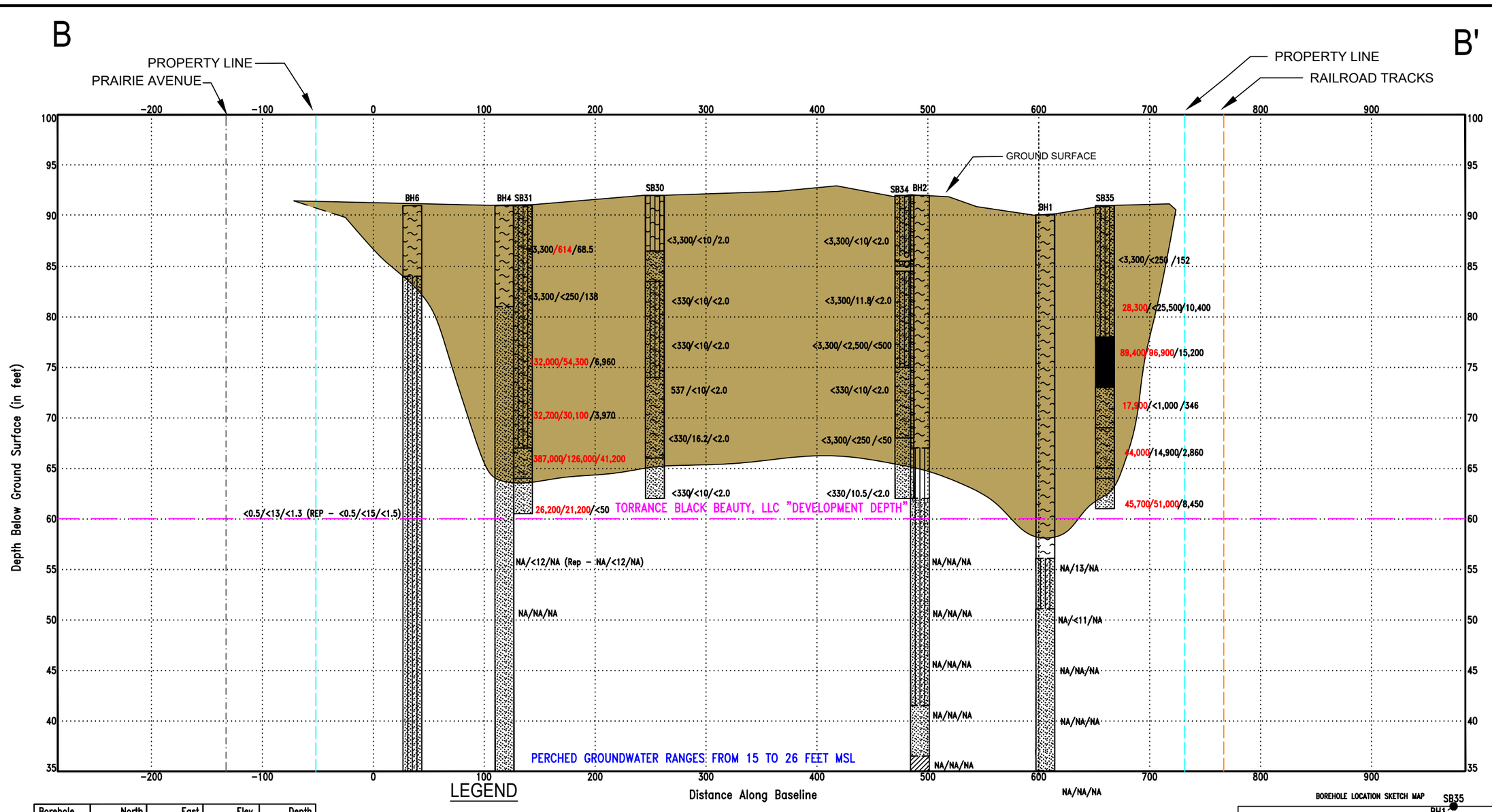
PROJ. NO.	01217339.00
DSN. BY:	DESIGN
DRN. BY:	AH
CHK. BY:	CJ
APP. BY:	KHL
ACAD FILE:	LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 8

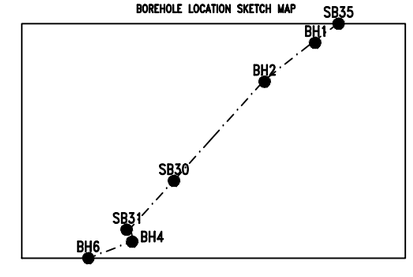
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Borehole	North	East	Elev.	Depth
BH1	1768305	6457345	88.0	70.5
BH2	1768236	6457256	94.0	70.0
BH4	1767952	6457020	91.0	70.0
BH6	1767922	6456943	91.0	81.5
SB30	1768060	6457095	92.0	30.0
SB31	1767973	6457010	91.0	30.5
SB35	1768339	6457387	91.0	30.0

LEGEND

SB31	BORING ID
(387,000/125,000/41,200)	VOLATILE ORGANIC COMPOUNDS (387,000/125,000/41,200 = (NAPTHALENE 8270C/ NAPTHALENE 8260B/ ETHYLBENZENE 8260B)
26,200	EXCEEDS CLEAN-UP STANDARDS
3,970	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
(<330/<10/<2.0)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
REP	FIELD REPLICATE SAMPLE
	APPROXIMATE LIMITS OF FILL



SHEET TITLE:
VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806 FAX. (562) 427-0805
PH. (562) 426-9544

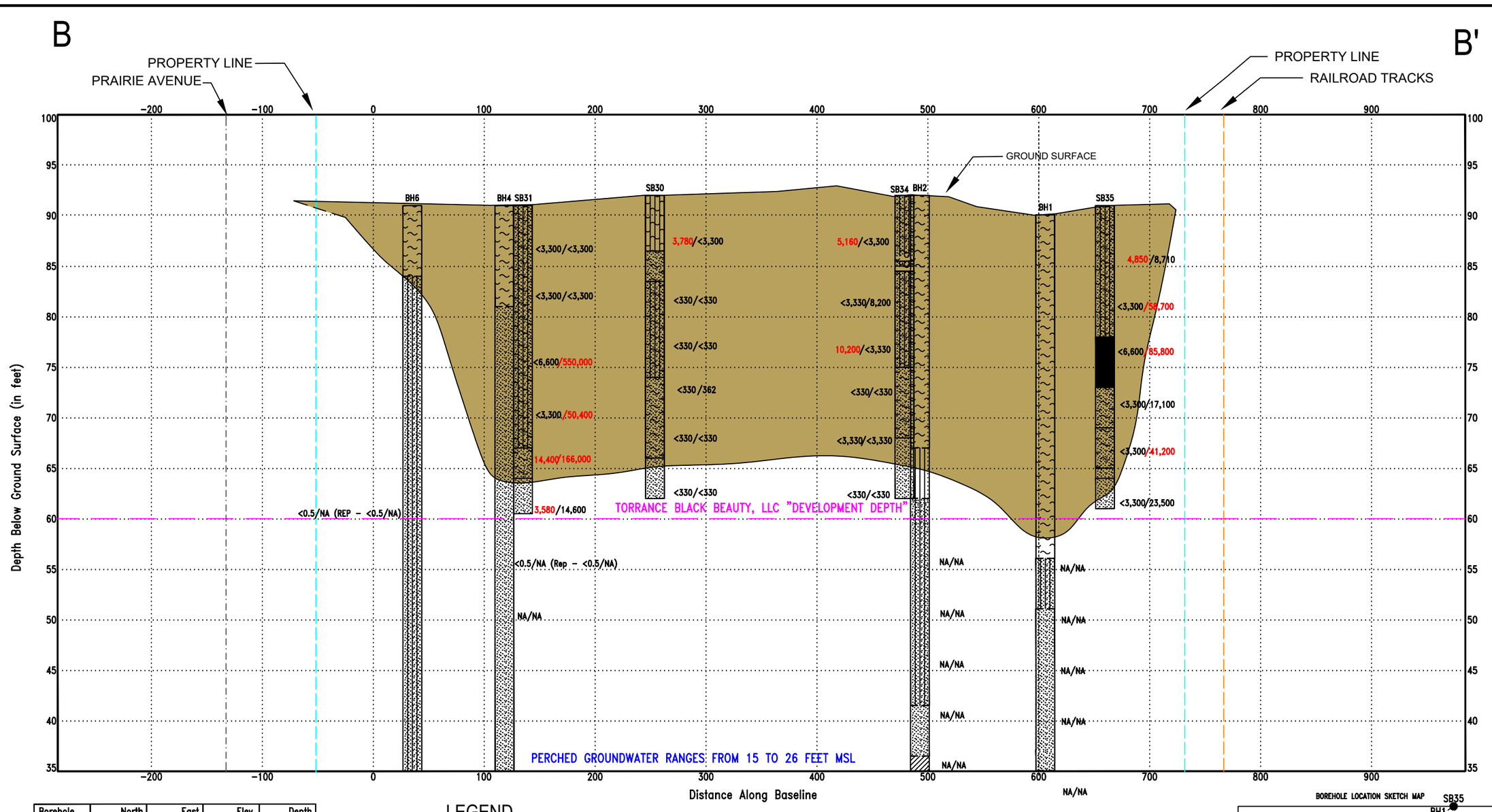
PROJ. NO.	01217339.00
DSN. BY:	AH
CHK. BY:	CJ
DSN. BY:	DESIGN
APP. BY:	KHL
ADD FILE:	LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 9

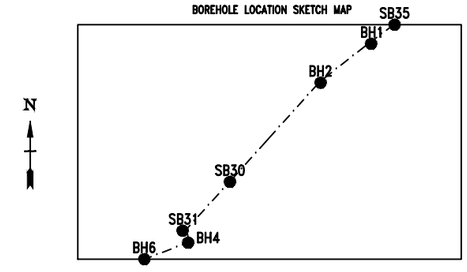
\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\Fence B-B'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
BH1	1768305	6457345	88.0	70.5
BH2	1768236	6457256	94.0	70.0
BH4	1767952	6457020	91.0	70.0
BH6	1767922	6456943	91.0	81.5
SB30	1768060	6457095	92.0	30.0
SB31	1767973	6457010	91.0	30.5
SB35	1768339	6457387	91.0	30.0

LEGEND

SB31	BORING ID
(14,600/166,000)	BENZO(A)PYRENE, 1-METHYLNAPTHALENE
8,710	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
3,580	EXCEEDS CLEAN-UP STANDARDS
(<330/<330)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
	APPROXIMATE LIMITS OF FILL



SHEET TITLE:
SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRAIONS CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806 FAX. (562) 427-0805
PH. (562) 426-9544

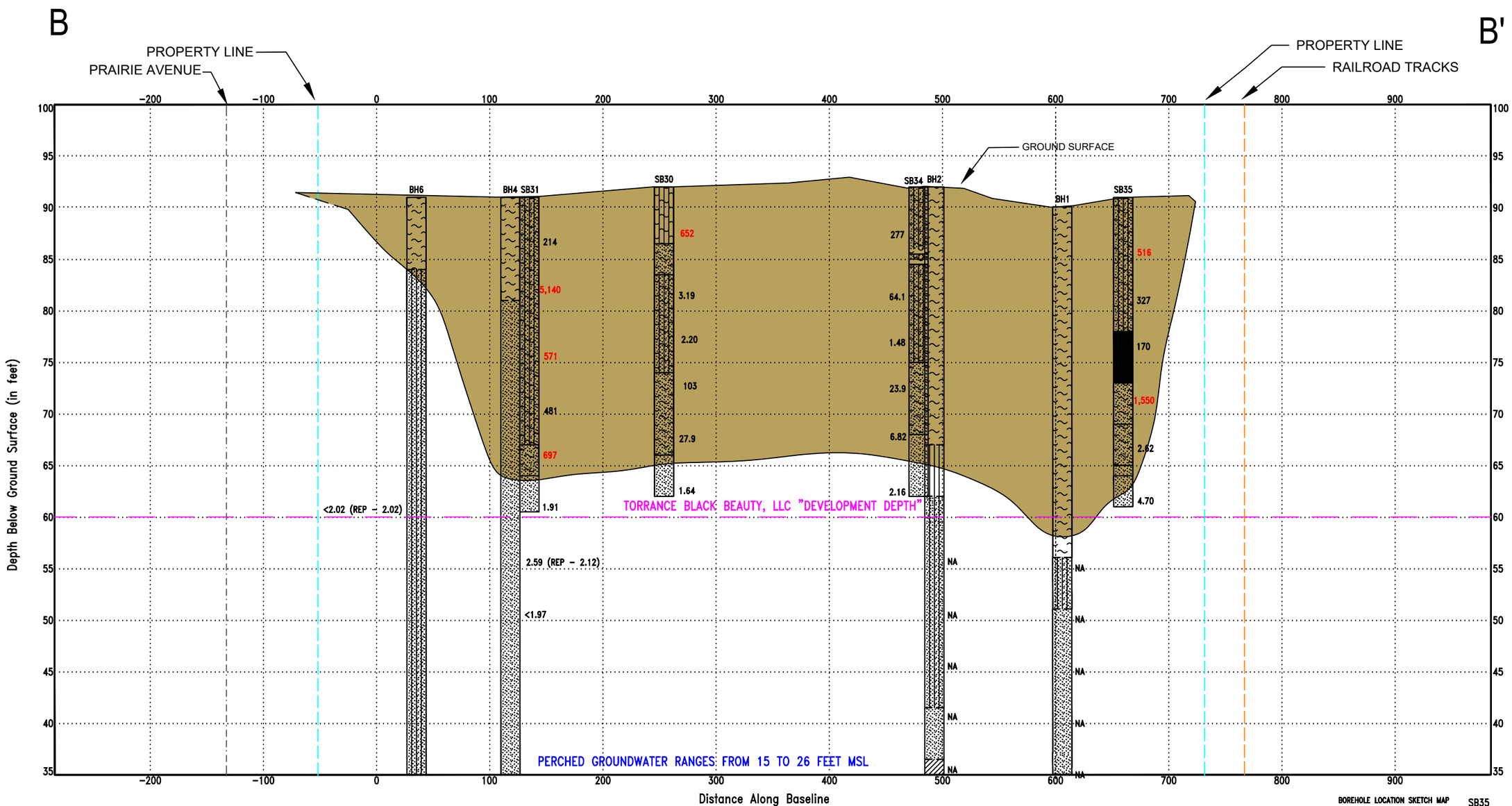
PROJ. NO.	01217339.00
DSN. BY:	AH
CHK. BY:	CJ
DSN. BY:	DESIGN
APP. BY:	KHL
ACAD FILE:	LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 10

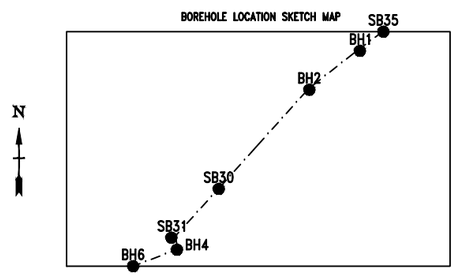
\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\Fence B-B'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
BH1	1768305	6457345	88.0	70.5
BH2	1768236	6457256	94.0	70.0
BH4	1767952	6457020	91.0	70.0
BH6	1767922	6456943	91.0	81.5
SB30	1768060	6457095	92.0	30.0
SB31	1767973	6457010	91.0	30.5
SB35	1768339	6457387	91.0	30.0

LEGEND

SB31	BORING ID
1.91	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
327	EXCEEDS CLEAN-UP STANDARDS
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

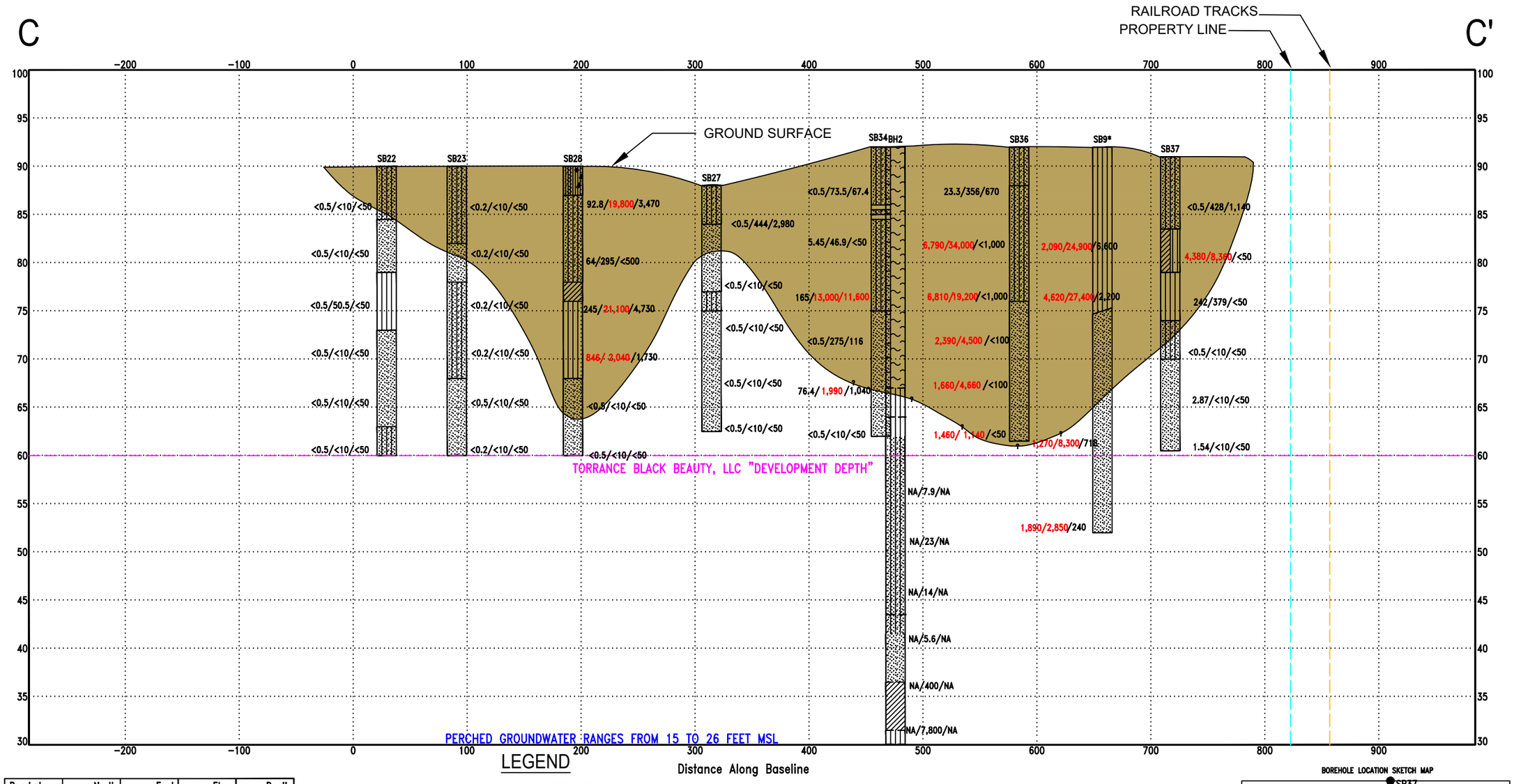
SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO. 02127339.00 | DSN. BY: DESIGN | DWN. BY: AH | CHK. BY: CJ | ACAD FILE: LOCATION | APP. BY: KHL

DATE: APRIL 2023

SCALE: AS SHOWN

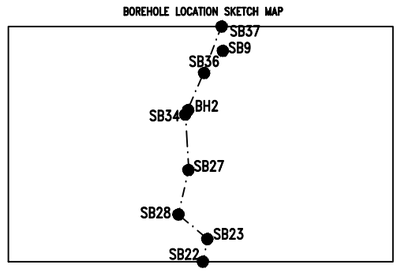
FIGURE NO. 11



Borehole	North	East	Elev.	Depth
BH2	1768236	6457256	94.0	70.0
SB22	1767831	6457295	90.0	30.0
SB23	1767892	6457307	90.0	30.0
SB27	1768076	6457256	88.0	25.5
SB28	1767957	6457230	90.0	30.0
SB34	1768224	6457248	92.0	30.0
SB36	1768335	6457298	92.0	30.5
SB37	1768459	6457345	91.0	30.5
SB9	1768394	6457348	92.0	40.0

LEGEND

SB9	BORING ID
(76.4/1,990/1,040)	TOTAL PETROLEUM HYDROCARBONS CONCENTRATIONS (76.4/1,990/1,040 = GASOLINE/ DIESEL/ HEAVY RANGES)
245	CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
1,460	EXCEEDS CLEAN-UP STANDARDS
(<0.5/<10/<50)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE:
PETROLEUM HYDROCARBONS CONCENTRATIONS ON CROSS SECTION C-C'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

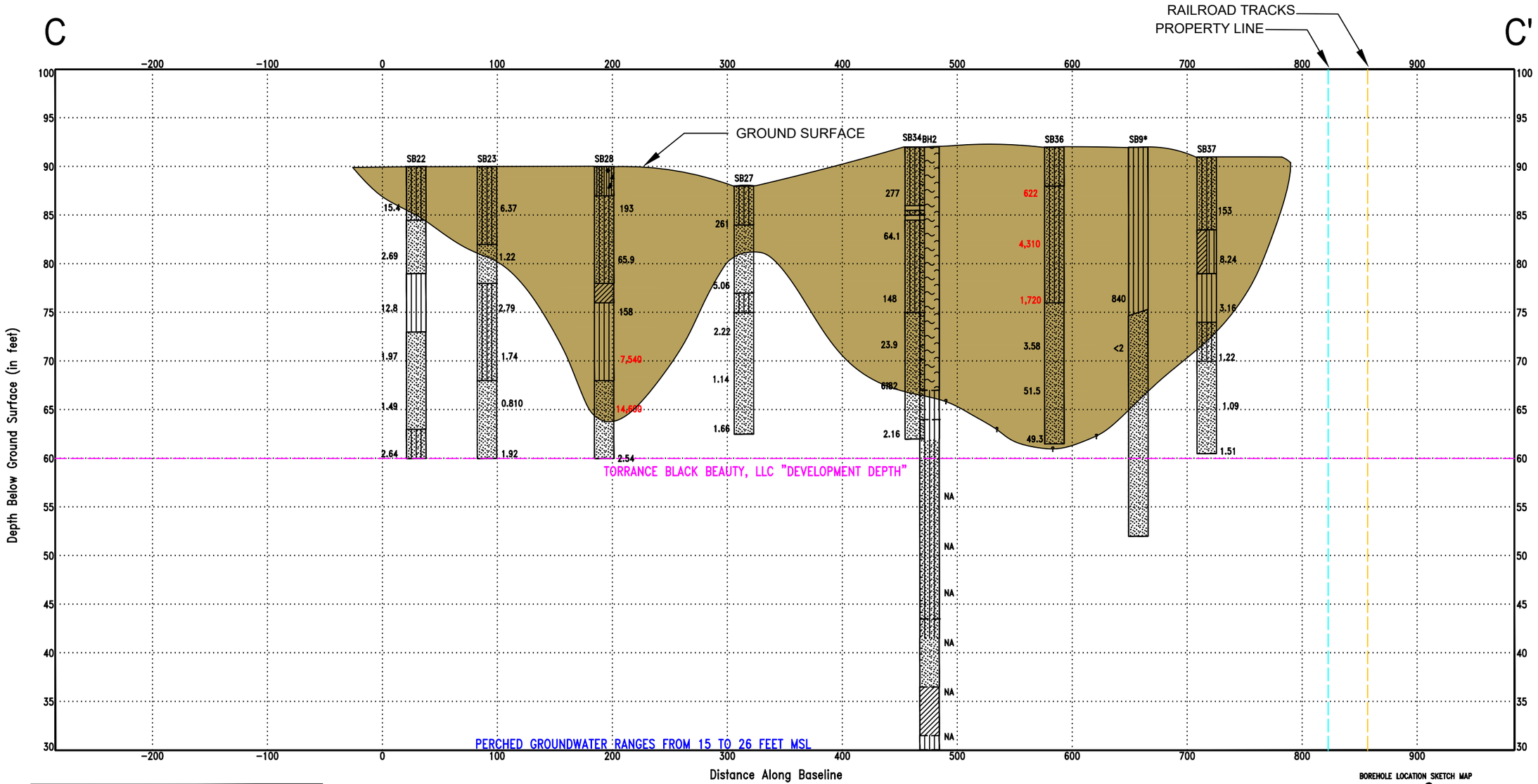
PROJ. NO.	01217339.00
DSN. BY:	AH
CHK. BY:	CJ
APP. BY:	KHL
ACAD FILE:	LOCATION
DESIGN	

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 12

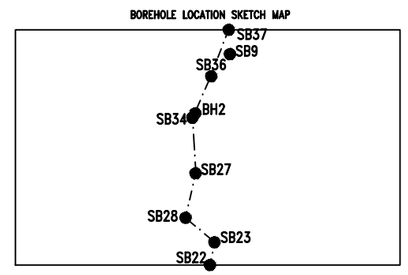
\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\Fence C-C'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
BH2	1768236	6457256	94.0	70.0
SB22	1767831	6457295	90.0	30.0
SB23	1767892	6457307	90.0	30.0
SB27	1768076	6457256	88.0	25.5
SB28	1767957	6457230	90.0	30.0
SB34	1768224	6457248	92.0	30.0
SB36	1768335	6457298	92.0	30.5
SB37	1768459	6457345	91.0	30.5
SB9	1768394	6457348	92.0	40.0

LEGEND

SB27	BORING ID
2.54	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
622	EXCEEDS CLEAN-UP STANDARDS
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTIONS C-C'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

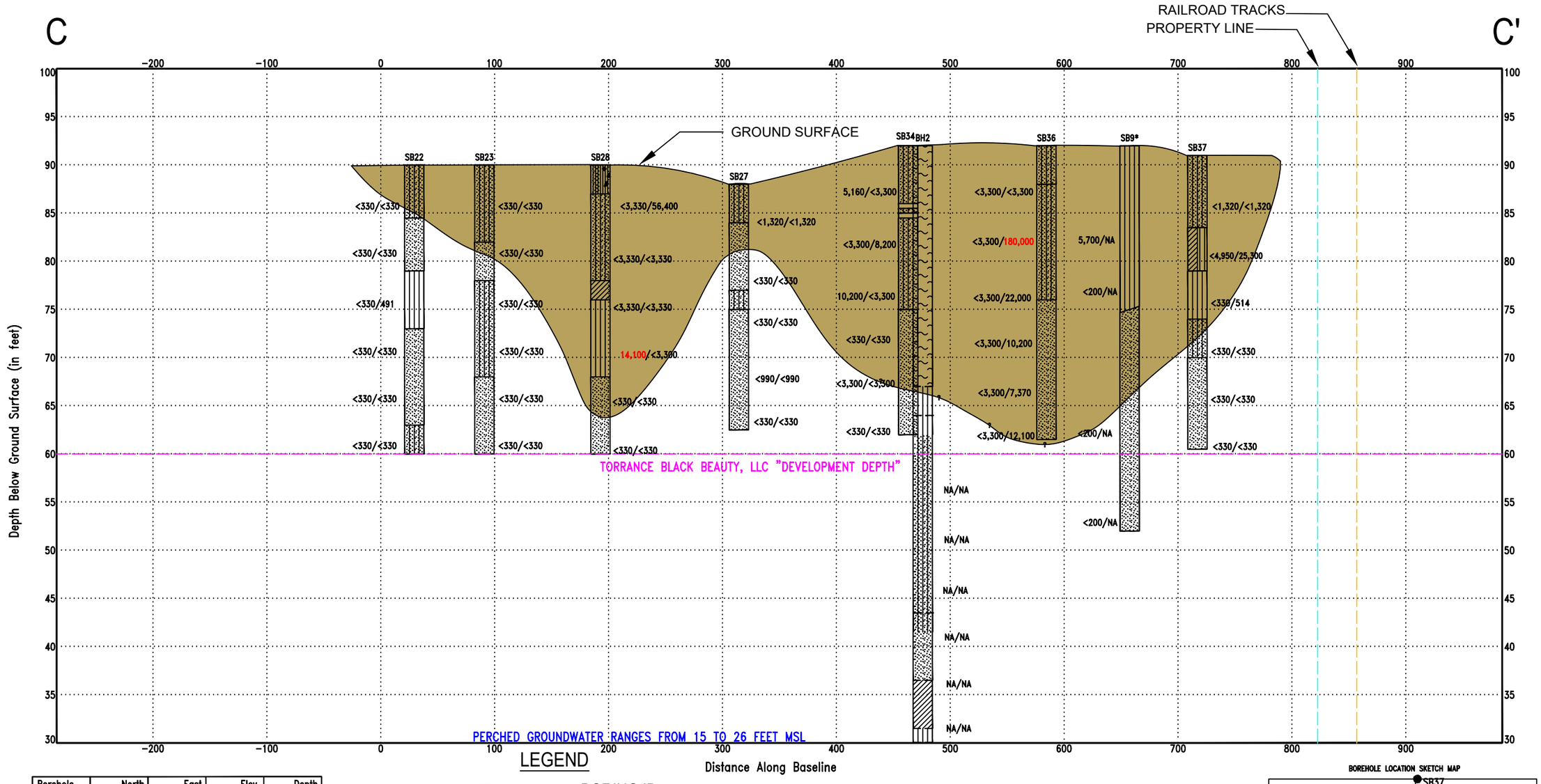
PROJ. NO. 01217339.00 | DSN. BY: DESIGN | DWN. BY: AH | CHK. BY: CJ | APP. BY: KHL | ACAD FILE: LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 15

\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\Fence C-C'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

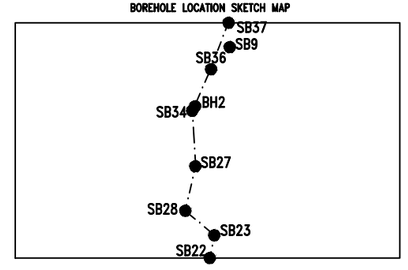


Borehole	North	East	Elev.	Depth
BH2	1768236	6457256	94.0	70.0
SB22	1767831	6457295	90.0	30.0
SB23	1767892	6457307	90.0	30.0
SB27	1768076	6457256	88.0	25.5
SB28	1767957	6457230	90.0	30.0
SB34	1768224	6457248	92.0	30.0
SB36	1768335	6457298	92.0	30.5
SB37	1768459	6457345	91.0	30.5
SB9	1768394	6457348	92.0	40.0

LEGEND

SB27	BORING ID
(10,200/19,800)	BENZO(A)PYRENE, 1-METHYLNAPTHALENE
10,200	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
14,100	EXCEEDS CLEAN-UP STANDARDS
NA	NOT ANALYZED
(<330/<330)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION C-C'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806 FAX. (562) 427-0805
PH. (562) 426-9544

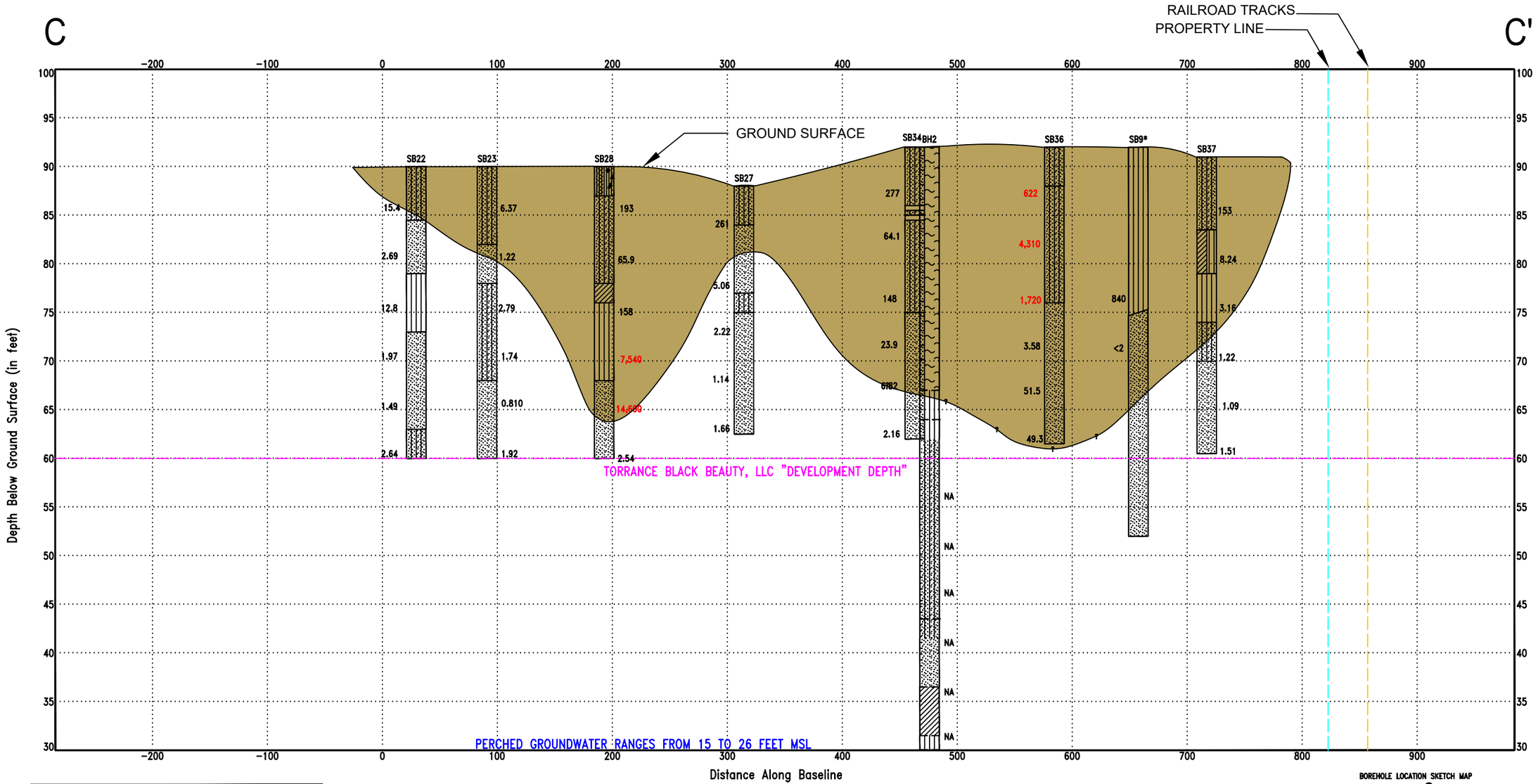
PROJ. NO. 01217339.00 | DSN. BY: DESIGN | DRN. BY: AH | CHK. BY: CJ | APP. BY: KHL | ACAD FILE: LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 14

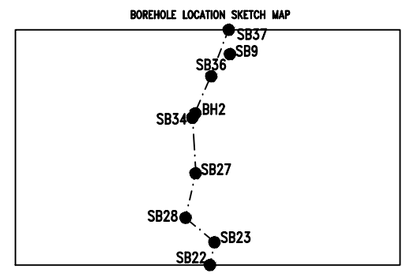
\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\Fence C-C'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
BH2	1768236	6457256	94.0	70.0
SB22	1767831	6457295	90.0	30.0
SB23	1767892	6457307	90.0	30.0
SB27	1768076	6457256	88.0	25.5
SB28	1767957	6457230	90.0	30.0
SB34	1768224	6457248	92.0	30.0
SB36	1768335	6457298	92.0	30.5
SB37	1768459	6457345	91.0	30.5
SB9	1768394	6457348	92.0	40.0

LEGEND

SB27	BORING ID
2.54	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
622	EXCEEDS CLEAN-UP STANDARDS
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTIONS C-C'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO. 01217339.00 | DSN. BY: DESIGN | DWN. BY: AH | CHK. BY: CJ | APP. BY: KHL | ACAD FILE: LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 15

\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\Fence C-C'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

D

D'

PROPERTY LINE

GROUND SURFACE

Depth Below Ground Surface (in feet)

Distance Along Baseline

SB20 SB1 BH4 SB31 SB32 SB33 SB5 SB40 SB41 SB8*

<0.5/<10/<50
<0.5/<10/<50
<0.5/<10/<50
<0.5/<10/<50
<0.5/127/<50
<0.5/<10/<50

<0.2/<5/<10
<0.2/<5/<10

<0.5/2,740/1,430
<0.5/<10/<50
<0.5/<10/<50
<0.5/<10/<50
<0.5/<10/<50
<0.5/<10/<50

<0.5/<10/
<10
<0.2/<5/<10

<0.5/<10/
<0.5/40/<50
<0.5/<10/<50

<0.5/<10/<50
<0.5/<10/<50

0.25/<5/<10

/13,100/<1,000
1,050/4,130/<50

<0.21J/<5.0/NA (Rep – <0.12/<4.8/NA)
<0.12/NA/NA

<0.2/<5/<10

TORRANCE BLACK BEAUTY, LLC "DEVELOPMENT DEPTH"

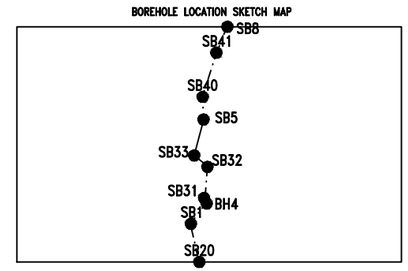
PERCHED GROUNDWATER RANGES FROM 15 TO 26 FEET MSL

Borehole	North	East	Elev.	Depth
BH4	1767952	6457020	91.0	70.0
SB1	1767873	6456960	91.0	22.0
SB20	1767726	6456992	90.0	30.5
SB31	1767973	6457010	91.0	30.5
SB32	1768093	6457023	92.0	25.0
SB33	1768137	6456972	93.0	30.5
SB40	1768363	6457005	92.0	25.0
SB41	1768533	6457058	96.0	30.5
SB5	1768276	6457008	91.0	25.0
SB8	1768633	6457100	95.0	45.0

LEGEND

SB20	BORING ID
(3.78/3,720/7,460)	TOTAL PETROLEUM HYDROCARBONS CONCENTRATIONS (3.78/3,720/7,460 = GASOLINE/ DIESEL/ HEAVY RANGES)
3.78	CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
4,130	EXCEEDS CLEAN-UP STANDARDS
(<0.5/<10/<50)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



N

SHEET TITLE:
PETROLEUM HYDROCARBON CONCENTRATIONS ON CROSS SECTION D-D'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

ACAD FILE: LOCATION
APP'D. BY: KHL
DRWN. BY: AH
CHK. BY: CJ
PROJ. NO. 01217339.00
DSN. BY: DESIGN

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 16

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\d-d'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

D

D'

PROPERTY LINE

GROUND SURFACE

Depth Below Ground Surface (in feet)

Distance Along Baseline

SB20 SB1 BH4 SB31 SB32 SB33 SB5 SB40 SB41 SB8*

<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
417/<10/<2.0
<330/<10/<2.0

NA/<1.1/<1.1

<3,300/610/68.5
<3,300/<250/138
132,000/54,000/6,960
32,700/30,100/3,970
387,000/126,000/
26,500/21,200/3,330

NA/<12/NA (Rep – NA/<12/NA)
NA/NA/NA

<3,300/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0

<990/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0

<200/<1.3/6.74
NA/<1/<1

<330/<10/<2.0
<3,300/<1,000/<200
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0

<1,320/<1,000/<200
<990/<1,000/<200
<1,320/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0
<330/<10/<2.0

252/<1.2/<1.2
<200/<1/<1
<200/<1/<1

TORRANCE BLACK BEAUTY, LLC "DEVELOPMENT DEPTH"

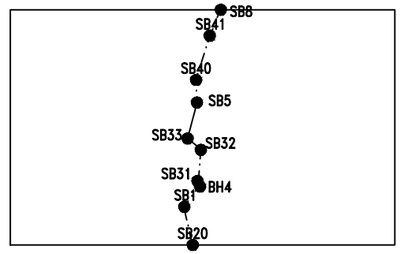
PERCHED GROUNDWATER RANGES FROM 15 TO 26 FEET MSL

Borehole	North	East	Elev.	Depth
BH4	1767952	6457020	91.0	70.0
SB1	1767873	6456960	91.0	22.0
SB20	1767726	6456992	90.0	30.5
SB31	1767973	6457010	91.0	30.5
SB32	1768093	6457023	92.0	25.0
SB33	1768137	6456972	93.0	30.5
SB40	1768363	6457005	92.0	25.0
SB41	1768533	6457058	96.0	30.5
SB5	1768276	6457008	91.0	25.0
SB8	1768633	6457100	95.0	45.0

LEGEND

SB20	BORING ID
(5,810/11,100/2,210)	VOLATILE ORGANIC COMPOUNDS (5,810/11,100/2,210) = (NAPTHALENE 8270C/ NAPTHALENE 8260B/ ETHYLBENZENE 8260B)
5,810	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
26,500	EXCEEDS CLEAN-UP STANDARDS
NA	NOT ANALYZED
(<330/<10/<2.0)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION D-D'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

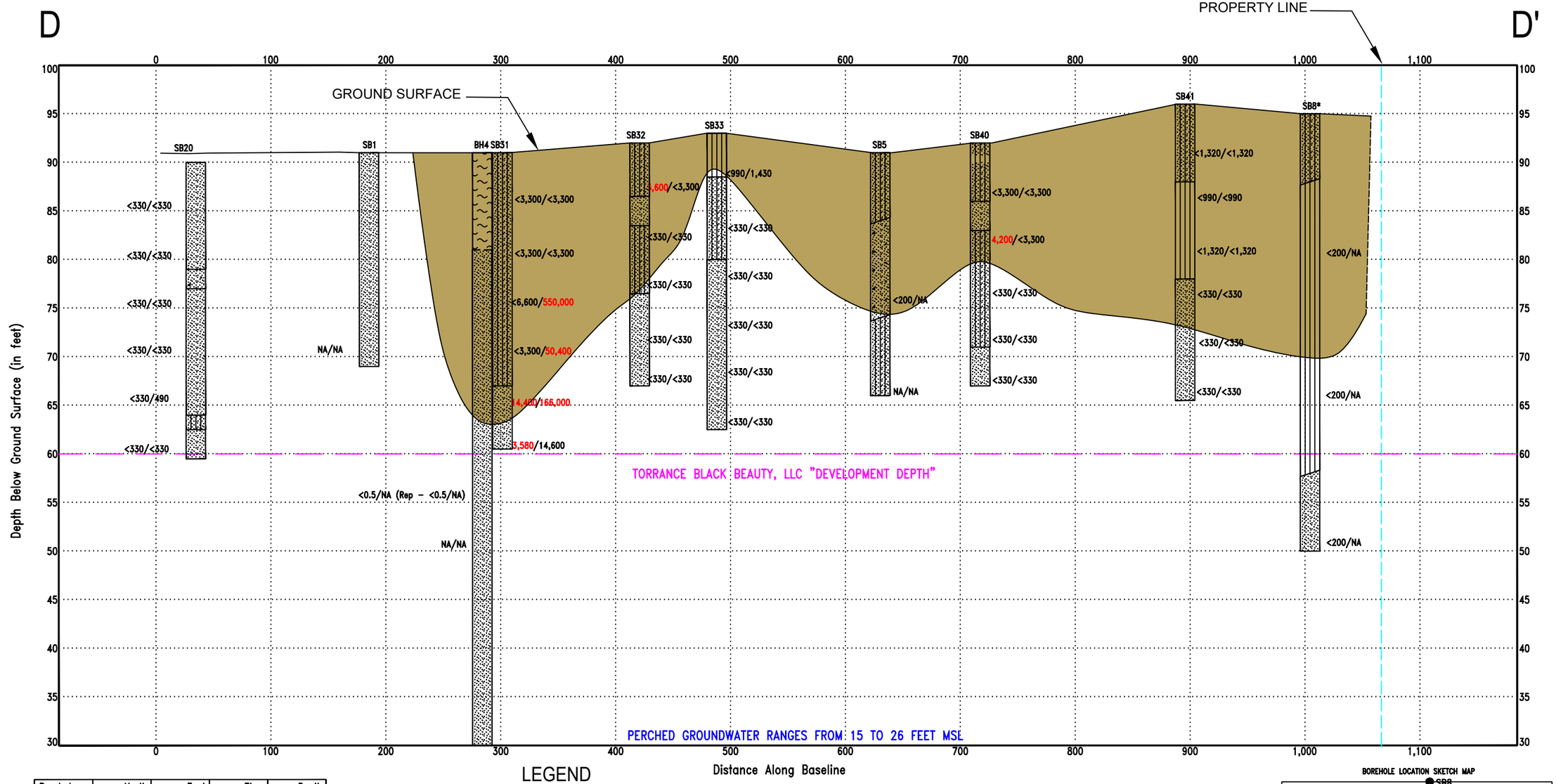
PROJ. NO. 01217339.00 | DSN. BY: DESIGN | DRN. BY: AH | CHK. BY: CJ | ACAD FILE: LOCATION | APP'. BY: KHL

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 17

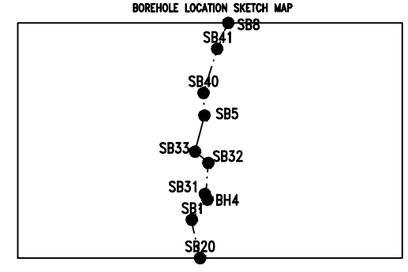
\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\d-d'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
BH4	1767952	6457020	91.0	70.0
SB1	1767873	6456960	91.0	22.0
SB20	1767726	6456992	90.0	30.5
SB31	1767973	6457010	91.0	30.5
SB32	1768093	6457023	92.0	25.0
SB33	1768137	6456972	93.0	30.5
SB40	1768363	6457005	92.0	25.0
SB41	1768533	6457058	96.0	30.5
SB5	1768276	6457008	91.0	25.0
SB8	1768633	6457100	95.0	45.0

LEGEND

SB20	BORING ID
(3,580/14,600)	BENZO(A)PYRENE, 1-METHYLNAPTHALENE
5,610	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
14,400	EXCEEDS CLEAN-UP STANDARDS
NA	NOT ANALYZED
(<330/<330)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE:
SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION D-D'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

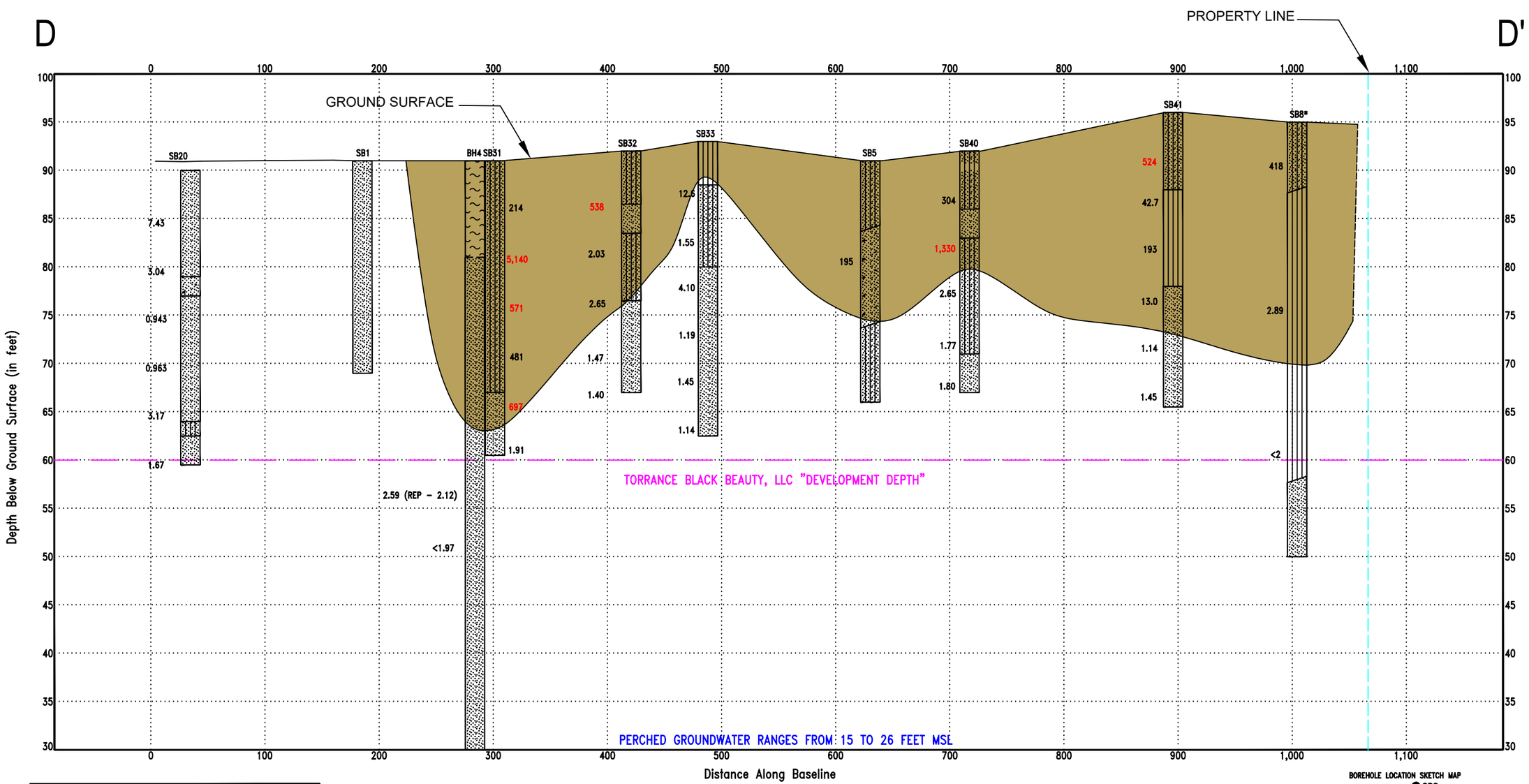
CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO. 01217339.00
DSN. BY: DESIGN
DWN. BY: AH
CHK. BY: CJ
AGAD FILE: LOCATION
APP. BY: KHL

DATE: APRIL 2023
SCALE: AS SHOWN
FIGURE NO. 18

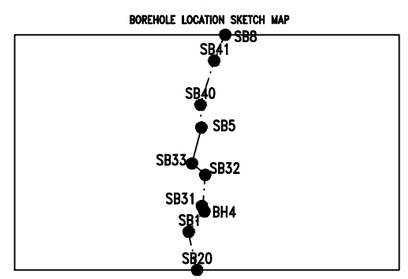
\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\d-d'.dwg Jun 07, 2023 - 5:6pm By: 2178gph



Borehole	North	East	Elev.	Depth
BH4	1767952	6457020	91.0	70.0
SB1	1767873	6456960	91.0	22.0
SB20	1767726	6456992	90.0	30.5
SB31	1767973	6457010	91.0	30.5
SB32	1768093	6457023	92.0	25.0
SB33	1768137	6456972	93.0	30.5
SB40	1768363	6457005	92.0	25.0
SB41	1768533	6457058	96.0	30.5
SB5	1768276	6457008	91.0	25.0
SB8	1768633	6457100	95.0	45.0

LEGEND

SB20	BORING ID
1.91	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
5,140	EXCEEDS CLEAN-UP STANDARDS
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTION D-D'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

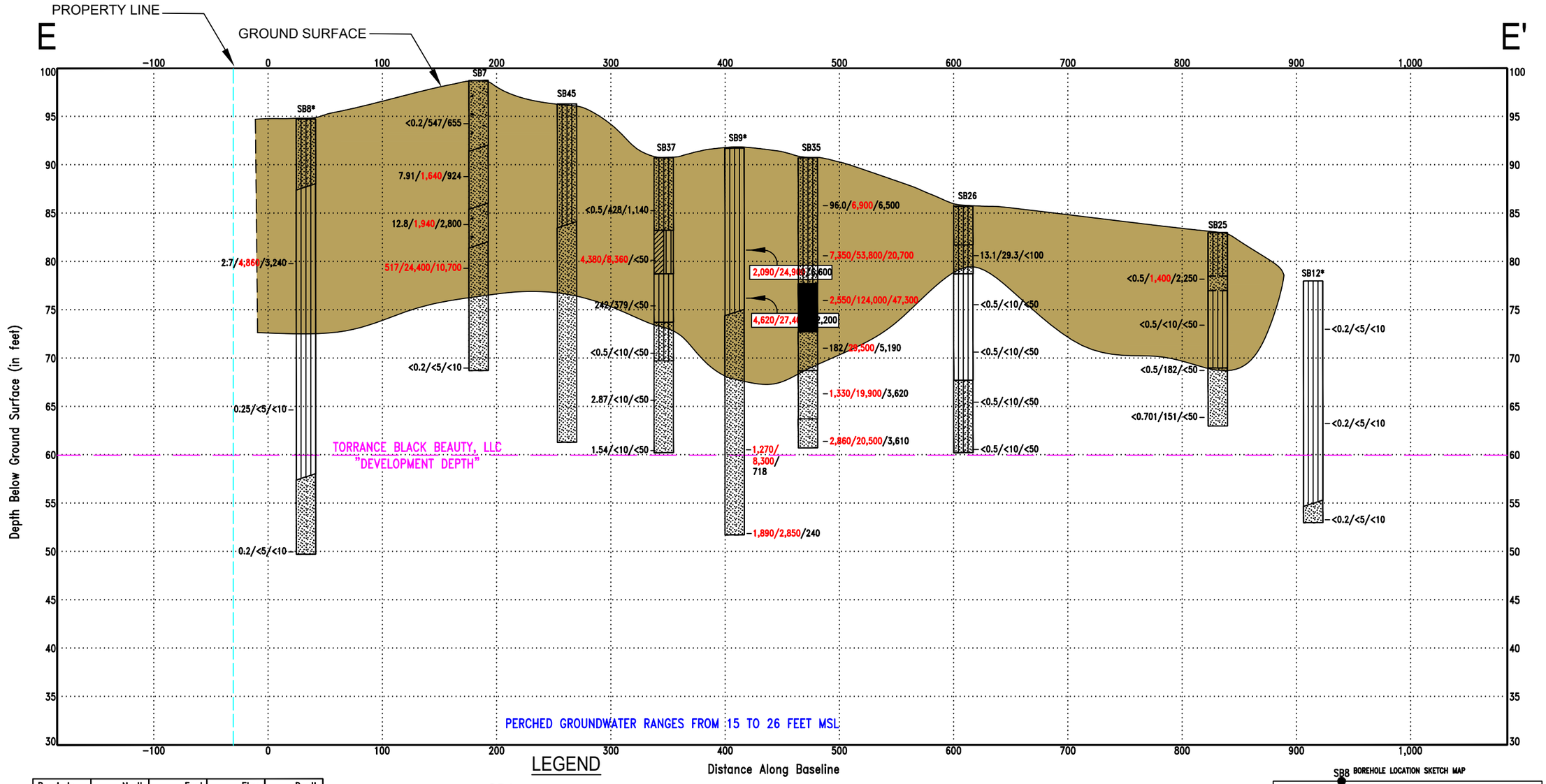
PROJ. NO.	01217339.00
DSN. BY:	DESIGN
DRWN. BY:	AH
CHK. BY:	CJ
ACAD FILE:	LOCATION
APP. BY:	KHL

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 19

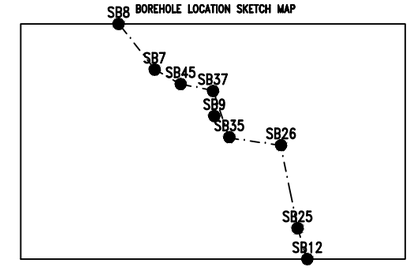
\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\d-d'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB25	1768103	6457564	83.0	20.0
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB37	1768459	6457345	91.0	30.5
SB45	1768477	6457261	93.8	35.0
SB7	1768514	6457194	99.0	30.0
SB8	1768633	6457100	95.0	45.0
SB9	1768394	6457348	92.0	40.0

LEGEND

SB9	BORING ID
(76.4/1,990/1,040)	TOTAL PETROLEUM HYDROCARBONS CONCENTRATIONS (76.4/1,990/1,040 = GASOLINE/ DIESEL/ HEAVY RANGES)
96.0	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
4,860	EXCEEDS CLEAN-UP STANDARDS
(<0.5/<10/<50)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: PETROLEUM HYDROCARBONS CONCENTRATIONS ON CROSS SECTION E-E'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

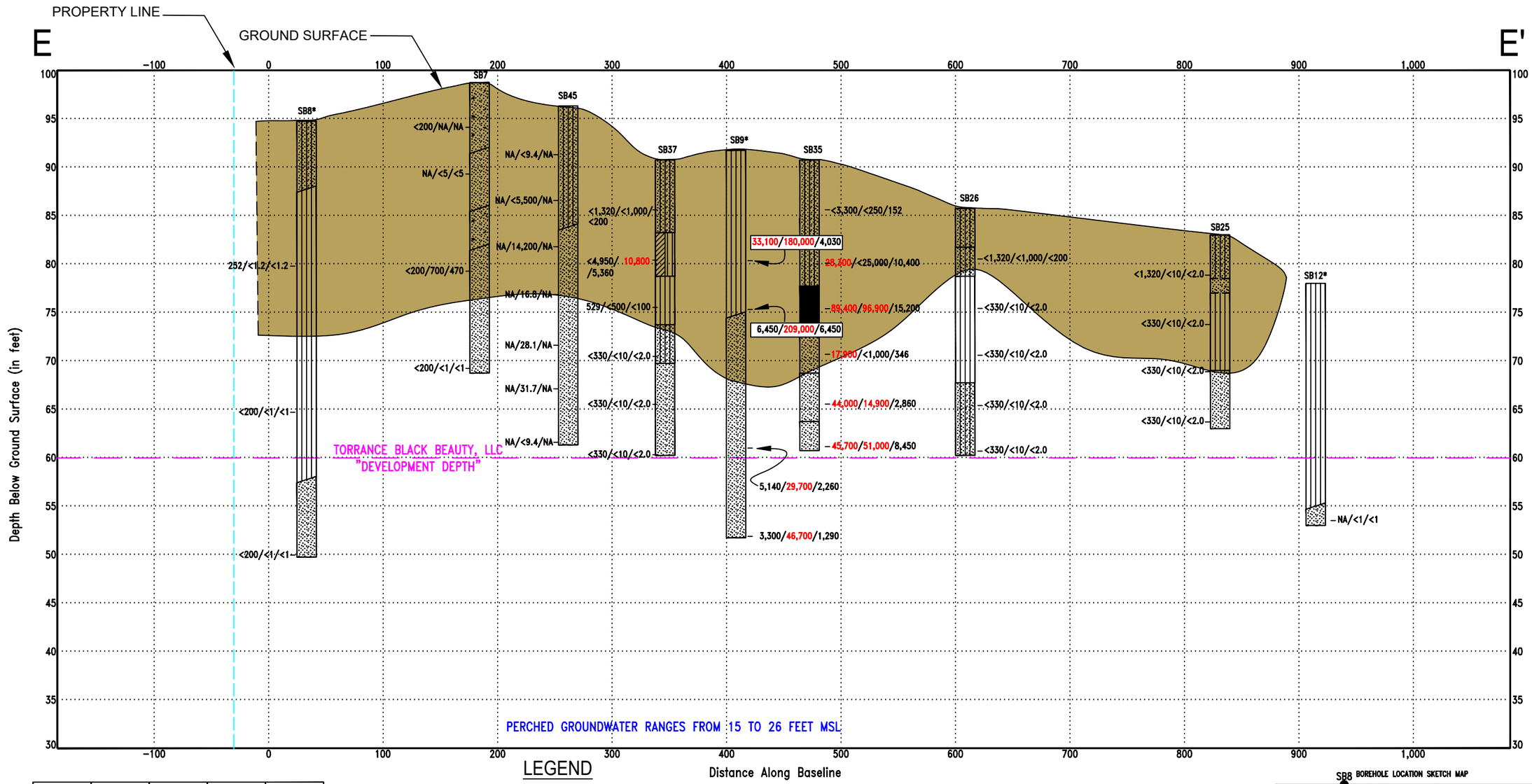
PROJ. NO.	01217339.00
DSN. BY:	SCS
DWG. BY:	AH
CHK. BY:	CJ
APP. BY:	KHL
ACAD FILE:	LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 20

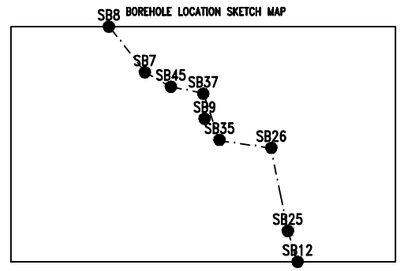
\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\E-E'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB25	1768103	6457564	83.0	20.0
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB37	1768459	6457345	91.0	30.5
SB45	1768477	6457261	93.8	35.0
SB7	1768514	6457194	99.0	30.0
SB8	1768633	6457100	95.0	45.0
SB9	1768394	6457348	92.0	40.0

LEGEND

SB9	BORING ID
(5,810/11,100/2,210)	VOLATILE ORGANIC COMPOUNDS (5,810/11,100/2,210) = (NAPTHALENE 8270C/ NAPTHALENE 8260B/ ETHYLBENZENE 8260B)
5,810	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
10,800	EXCEEDS CLEAN-UP STANDARDS
NA	NOT ANALYZED
(<330/<10/<2.0)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION E-E'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

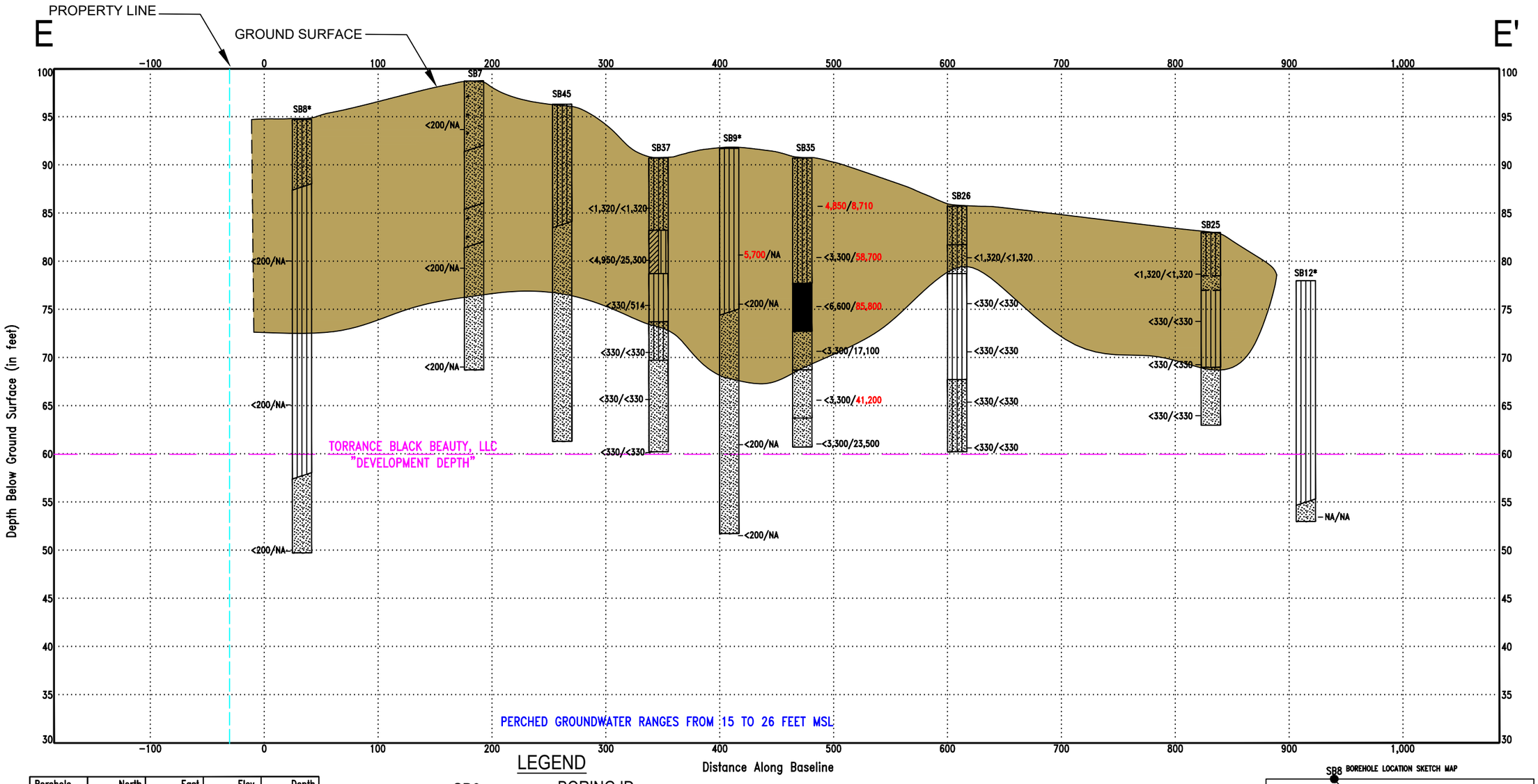
PROJ. NO. 01217339.00 | DSN. BY: SCS | DRN. BY: AH | CHK. BY: CJ | APP. BY: KHL | ACAD FILE: LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 21

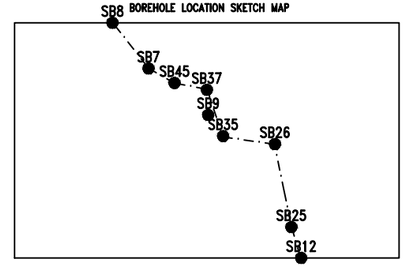
\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\E-E'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB25	1768103	6457564	83.0	20.0
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB37	1768459	6457345	91.0	30.5
SB45	1768477	6457261	93.8	35.0
SB7	1768514	6457194	99.0	30.0
SB8	1768633	6457100	95.0	45.0
SB9	1768394	6457348	92.0	40.0

LEGEND

SB9	BORING ID
(10,200/19,800)	BENZO(A)PYRENE, 1-METHYLNAPTHALENE
5,610	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
4,850	EXCEEDS CLEAN-UP STANDARDS
NA	NOT ANALYZED
(<330/<330)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE:
SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION E-E'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

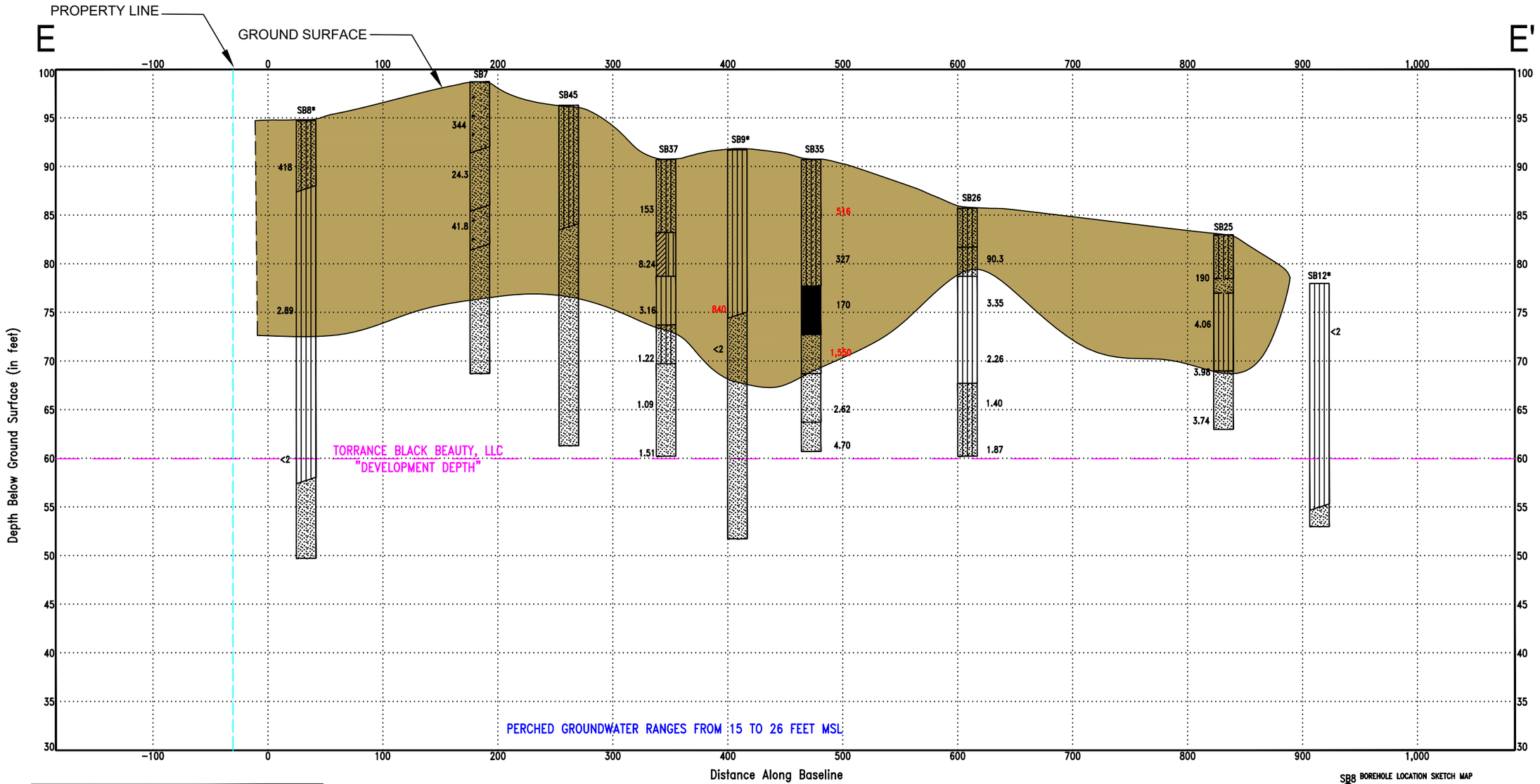
PROJ. NO. 01217339.00 | DSN. BY: SCS | DWN. BY: AH | CHK. BY: CJ | APP. BY: KHL | ACAD FILE: LOCATION

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 22

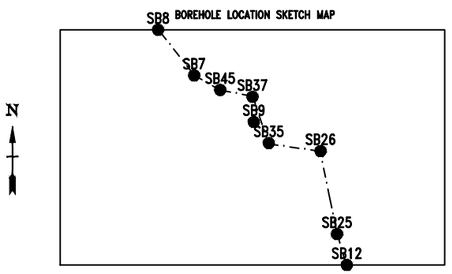
\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\E-E'.dwg Jun 07, 2023 - 5:6pm By: 2178aph



Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB25	1768103	6457564	83.0	20.0
SB26	1768318	6457522	86.0	25.5
SB35	1768339	6457387	91.0	30.0
SB37	1768459	6457345	91.0	30.5
SB45	1768477	6457261	93.8	35.0
SB7	1768514	6457194	99.0	30.0
SB8	1768633	6457100	95.0	45.0
SB9	1768394	6457348	92.0	40.0

LEGEND

SB9	BORING ID
15.4	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
516	EXCEEDS CLEAN-UP STANDARDS
*	BORING CONDUCTED AS PART OF PREVIOUS INVESTIGATION (DUE DILIGENCE IN MAY/JUNE 2018)
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTION E-E'

PROJECT TITLE: NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO. 01217339.00 | DSN. BY: SCS | DRN. BY: AH | CHK. BY: CJ | ACAD FILE: LOCATION | APP'R. BY: KHL

DATE: APRIL 2023

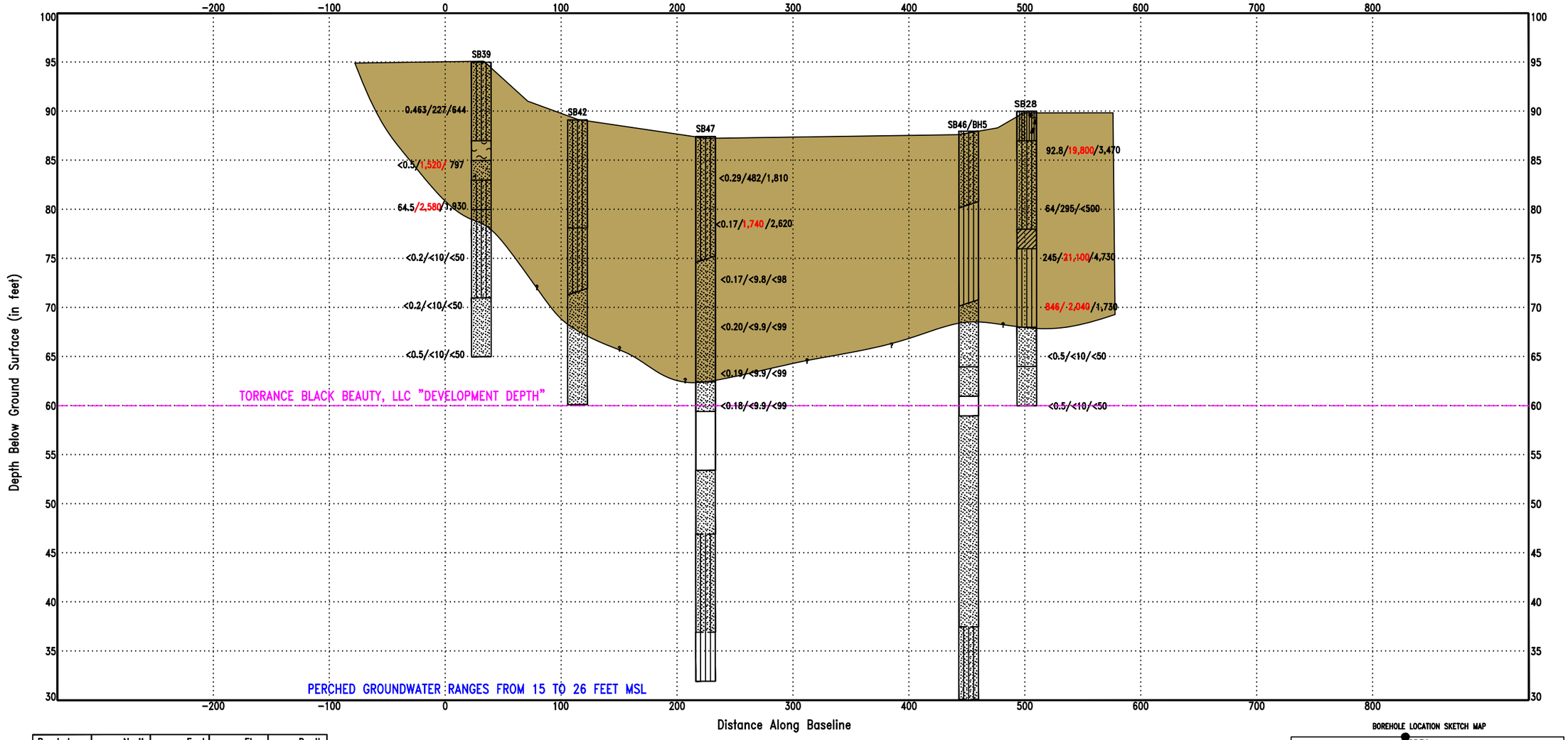
SCALE: AS SHOWN

FIGURE NO. 23

\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\E-E'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

F

F'

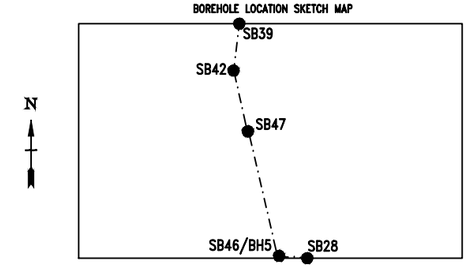


Borehole	North	East	Elev.	Depth
BH5	1767961	6457180	87.0	81.5
SB28	1767957	6457230	90.0	30.0
SB39	1768370	6457110	95.0	30.0
SB42	1768287	6457100	87.7	29.0
SB46	1767961	6457180	87.0	27.0
SB47	1768180	6457125	87.4	55.5

LEGEND

SB31	BORING ID
(1,050/4,130/<50)	TOTAL PETROLEUM HYDROCARBONS CONCENTRATIONS (1,050/4,130/<50 = GASOLINE/ DIESEL/ HEAVY RANGES)
1,050	EXCEEDS CLEAN-UP STANDARDS
3.78	CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
(<0.5/<10/<50)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
PETROLEUM HYDROCARBON CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	01217339.00
DES. BY:	DESIGN
DWN. BY:	AH
CHK. BY:	CJ
APP. BY:	KHL
ACAD FILE:	LOCATION

DATE: APRIL 2023

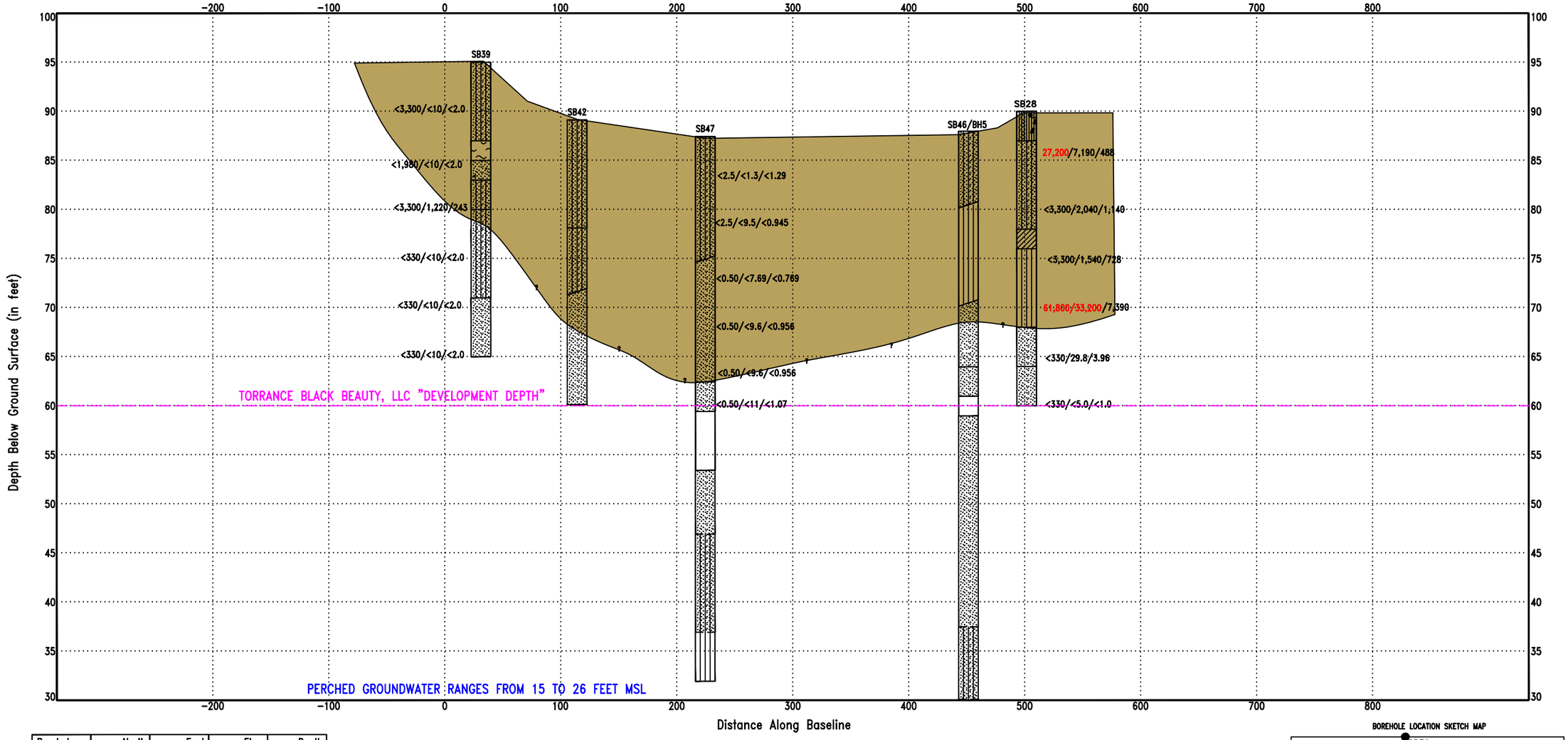
SCALE: AS SHOWN

FIGURE NO. 24

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\F-F'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

F

F'

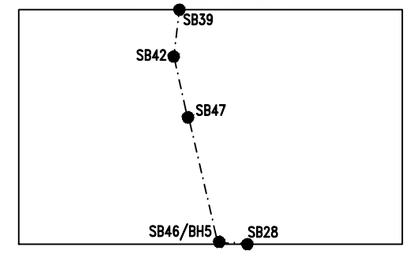


Borehole	North	East	Elev.	Depth
BH5	1767961	6457180	87.0	81.5
SB28	1767957	6457230	90.0	30.0
SB39	1768370	6457110	95.0	30.0
SB42	1768287	6457100	87.7	29.0
SB46	1767961	6457180	87.0	27.0
SB47	1768180	6457125	87.4	55.5

LEGEND

SB31	BORING ID
(387,000/125,000/41,200)	VOLATILE ORGANIC COMPOUNDS (387,000/125,000/41,200 = (NAPTHALENE 8270C/ NAPTHALENE 8260B/ ETHYLBENZENE 8260B)
26,200	EXCEEDS CLEAN-UP STANDARDS
3,970	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
(<330/<10/<2.0)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	01217339.00
DSN. BY:	DESIGN
DWN. BY:	AH
CHK. BY:	CJ
APP. BY:	KHL
ACAD FILE:	LOCATION

DATE: APRIL 2023

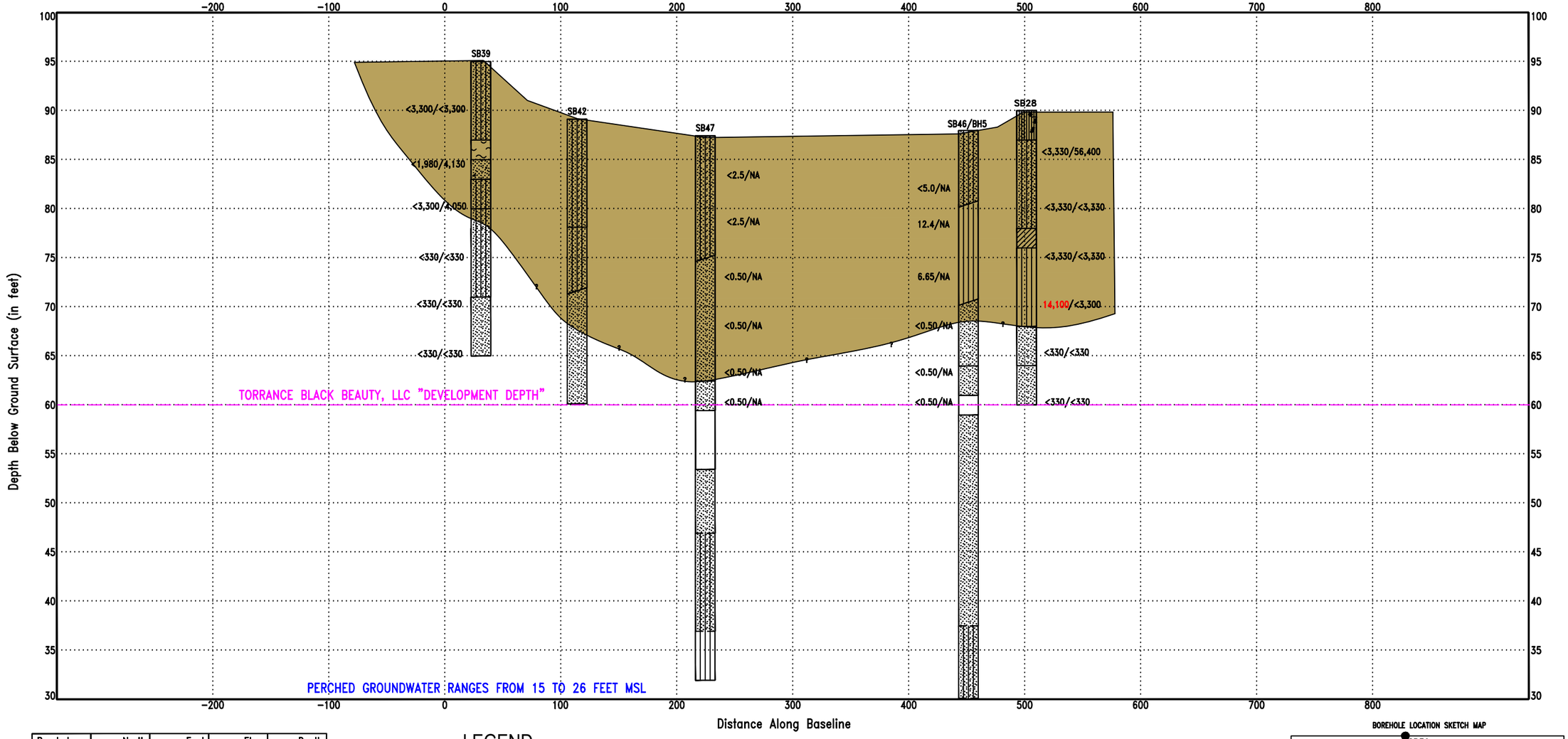
SCALE: AS SHOWN

FIGURE NO. 25

\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\F-F'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

F

F'

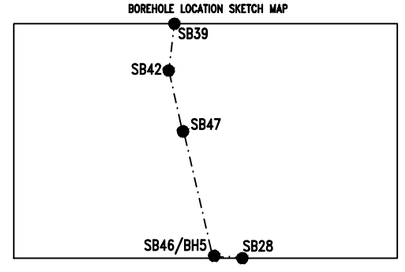


Borehole	North	East	Elev.	Depth
BH5	1767961	6457180	87.0	81.5
SB28	1767957	6457230	90.0	30.0
SB39	1768370	6457110	95.0	30.0
SB42	1768287	6457100	87.7	29.0
SB46	1767961	6457180	87.0	27.0
SB47	1768180	6457125	87.4	55.5

LEGEND

SB31	BORING ID
(14,600/166,000)	BENZO(A)PYRENE, 1-METHYLNAPTHALENE
8,710	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
3,580	EXCEEDS CLEAN-UP STANDARDS
(<330/<330)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
(NA)	NOT ANALYZED
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRAIONS CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	01217339.00
DSN. BY:	DESIGN
DRN. BY:	AH
CHK. BY:	CJ
APP. BY:	KHL
ACAD FILE:	LOCATION

DATE: APRIL 2023

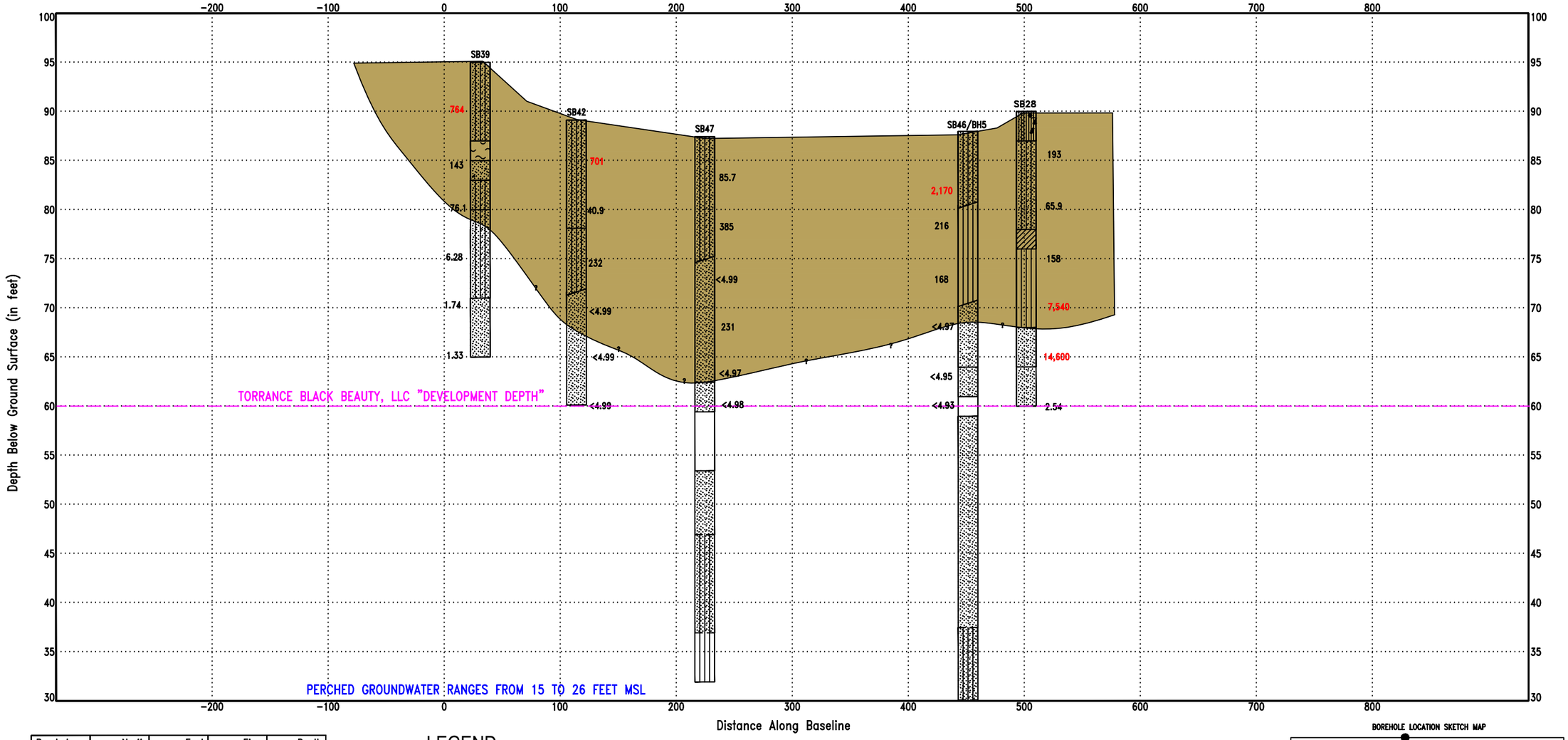
SCALE: AS SHOWN

FIGURE NO. 26

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\F-F'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

F

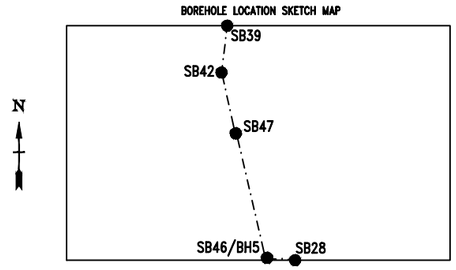
F'



Borehole	North	East	Elev.	Depth
BH5	1767961	6457180	87.0	81.5
SB28	1767957	6457230	90.0	30.0
SB39	1768370	6457110	95.0	30.0
SB42	1768287	6457100	87.7	29.0
SB46	1767961	6457180	87.0	27.0
SB47	1768180	6457125	87.4	55.5

LEGEND

SB31	BORING ID
1.91	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
327	EXCEEDS CLEAN-UP STANDARDS
	APPROXIMATE LIMITS OF FILL



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE: NORTH POSSE, 3401 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC, PIER 1, BAY 1, SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO. 01217339.00 | DSN. BY: DESIGN | DWN. BY: AH | CHK. BY: CJ | APP. BY: KHL | CAD FILE: LOCATION

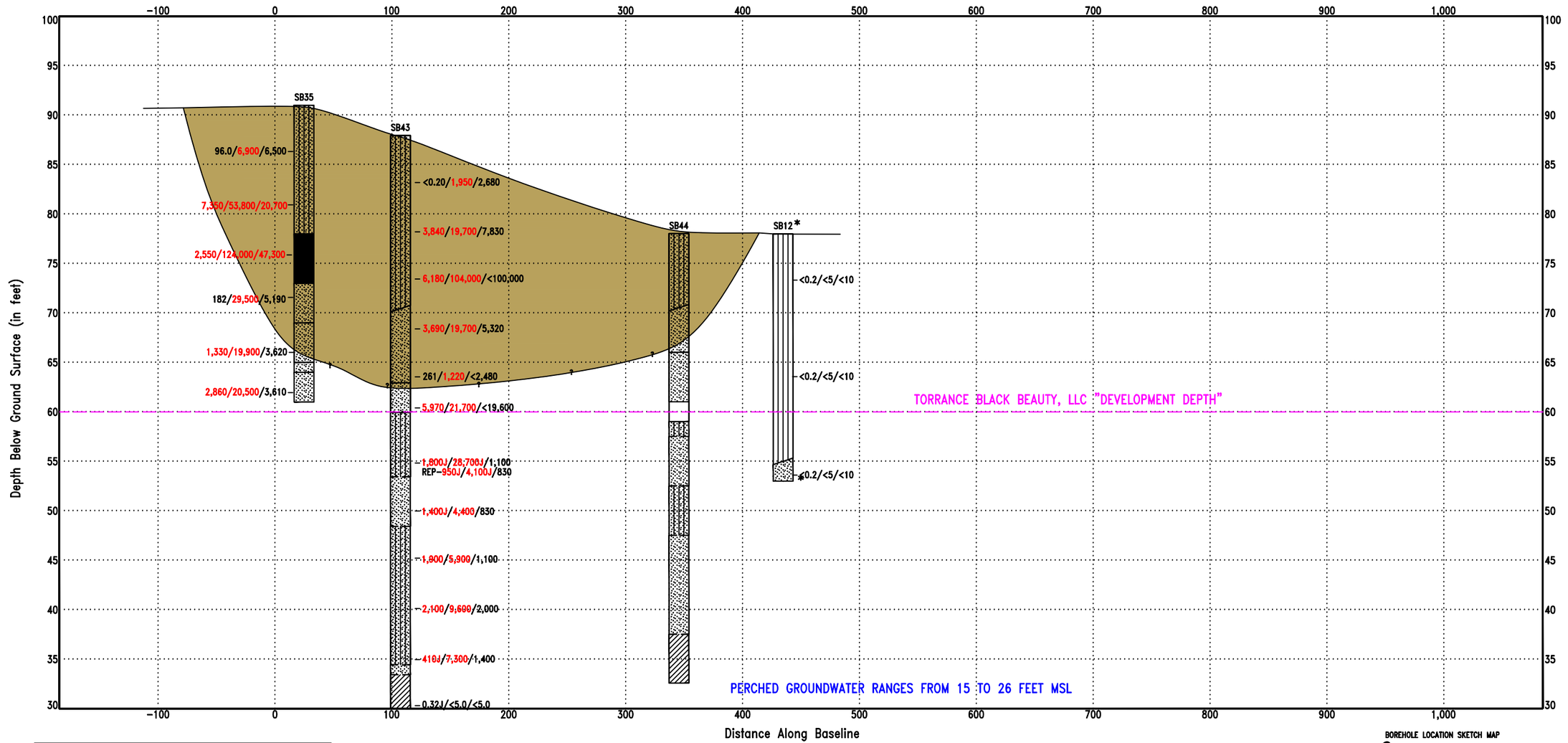
DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 27

G

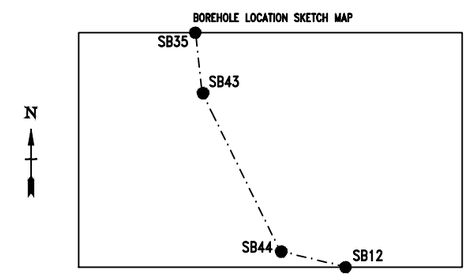
G'



Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB35	1768339	6457387	91.0	30.0
SB43	1768258	6457398	87.9	65.5
SB44	1768044	6457503	75.4	45.5

LEGEND

SB31	BORING ID
(1,050/4,130/<50)	TOTAL PETROLEUM HYDROCARBONS CONCENTRATIONS (1,050/4,130/<50 = GASOLINE/ DIESEL/ HEAVY RANGES)
1,050	EXCEEDS CLEAN-UP STANDARDS
3.78	CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
(<0.5/<10/<50)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
	APPROXIMATE LIMITS OF FILL



SHEET TITLE:
PETROLEUM HYDROCARBON CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
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DATE: APRIL 2023

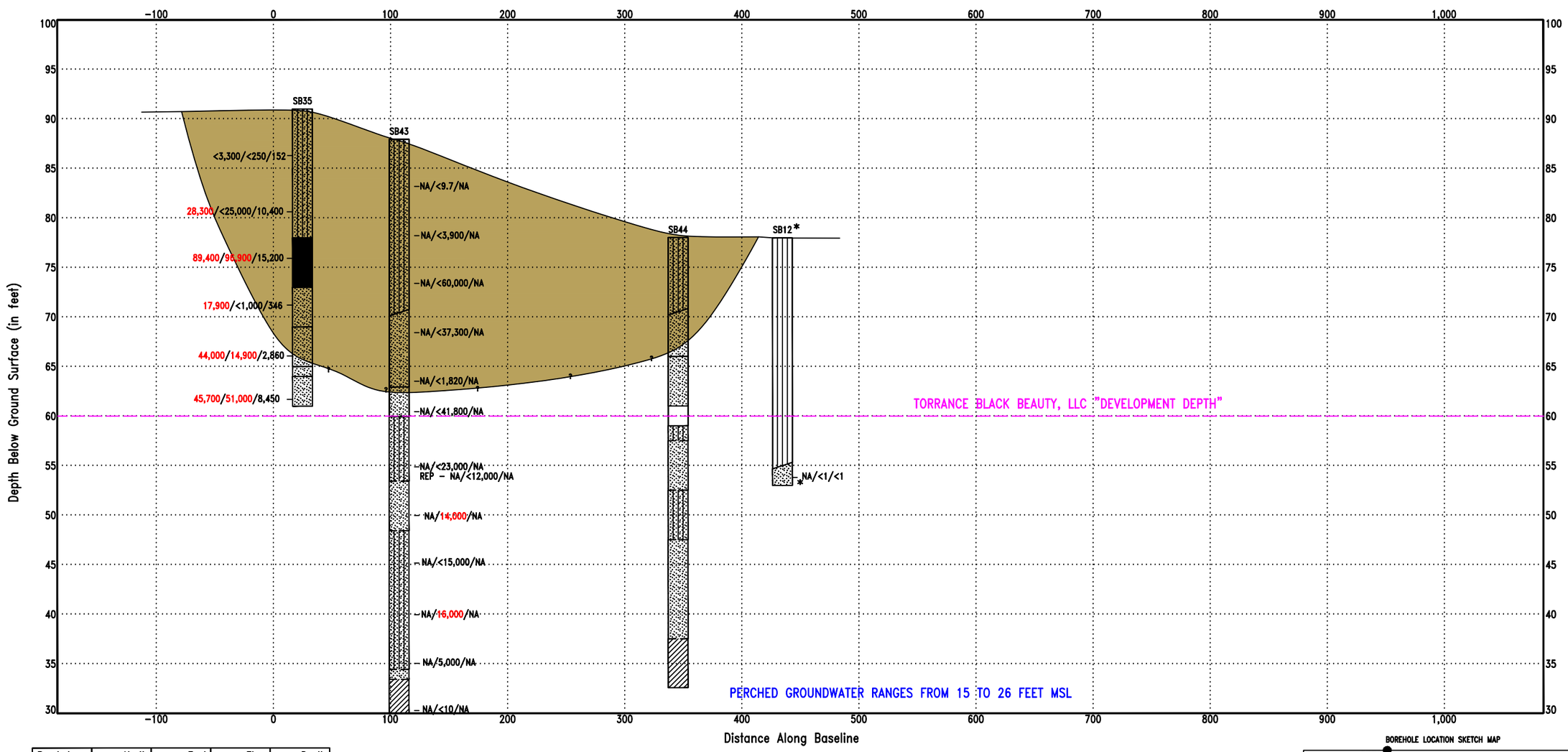
SCALE: AS SHOWN

FIGURE NO. 28

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\G-G'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

G

G'



Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB35	1768339	6457387	91.0	30.0
SB43	1768258	6457398	87.9	65.5
SB44	1768044	6457503	75.4	45.5

LEGEND

SB31 — BORING ID

(387,000/125,000/41,200) — VOLATILE ORGANIC COMPOUNDS
(387,000/125,000/41,200 = (NAPTHALENE 8270C/ NAPTHALENE 8260B/ ETHYLBENZENE 8260B)

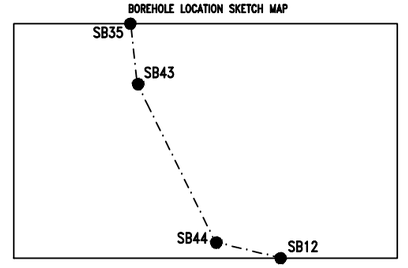
26,200 — EXCEEDS CLEAN-UP STANDARDS

3,970 — CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)

(<330/<10/<2.0) — CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT

APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
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3900 KILROY AIRPORT WAY, SUITE 100
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PH. (562) 426-9544 FAX. (562) 427-0905

PROJ. NO.	DSN. BY:	DWN. BY:	CHK. BY:	APP'. BY:
01217339.00	DESIGN	AH	GJ	KHL

ACAD FILE: LOCATION

DATE: APRIL 2023

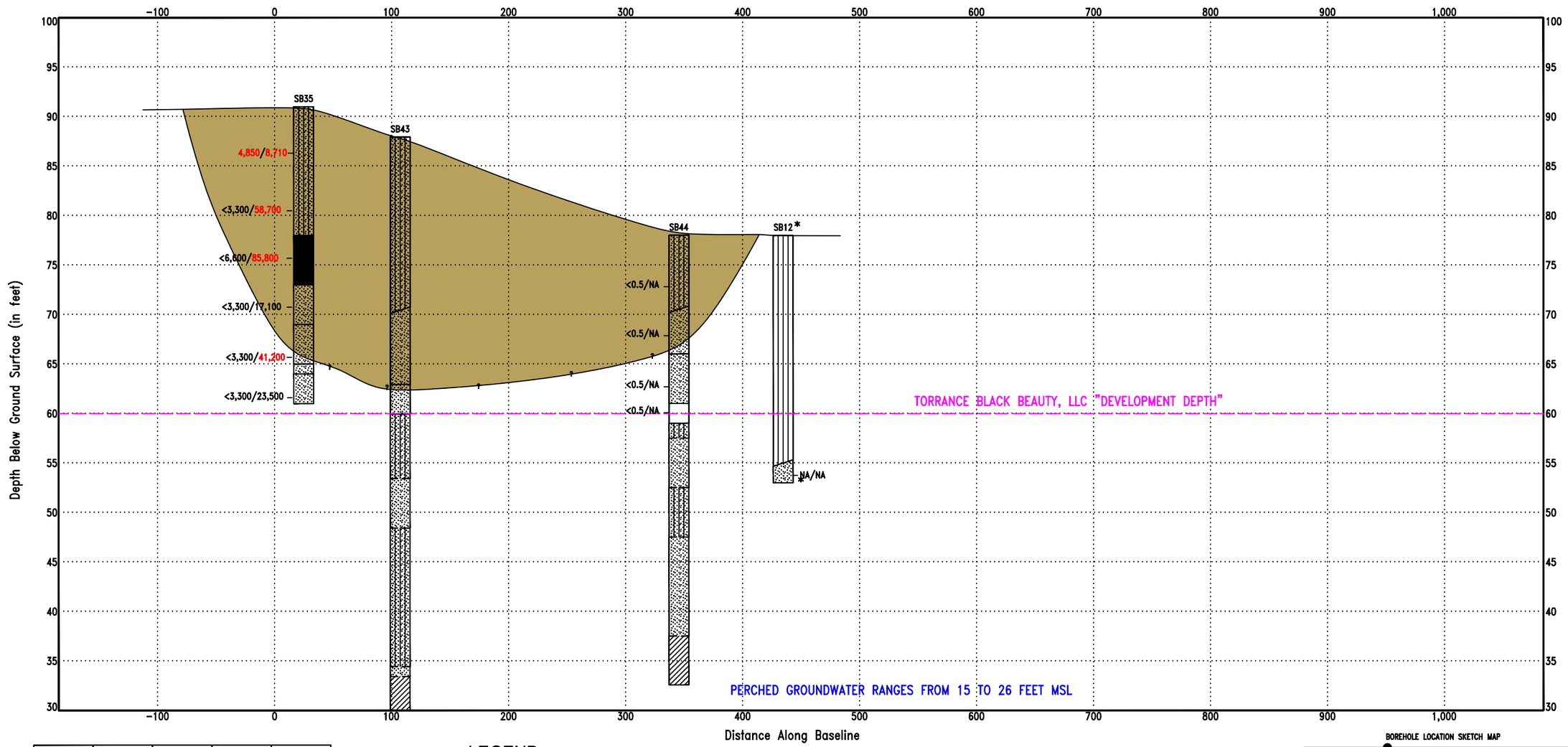
SCALE: AS SHOWN

FIGURE NO. 29

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\G-G'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

G

G'

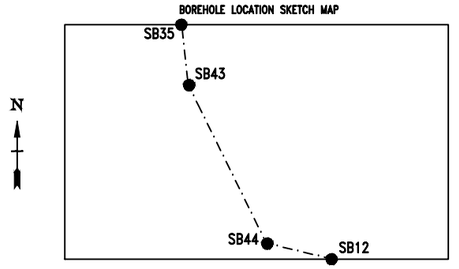


Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB35	1768339	6457387	91.0	30.0
SB43	1768258	6457398	87.9	65.5
SB44	1768044	6457503	75.4	45.5

LEGEND

SB31	BORING ID
(14,600/166,000)	BENZO(A)PYRENE, 1-METHYLNAPTHALENE
8,710	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (µg/KG)
3,580	EXCEEDS CLEAN-UP STANDARDS
(<330/<330)	CONCENTRATION NOT DETECTED ABOVE LABORATORY REPORTING LIMIT
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE:
SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRAIONS CROSS SECTION B-B'

PROJECT TITLE:
NORTH POSSE
3401 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

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PROJ. NO.	01217339.00
DSN. BY:	DESIGN
DWN. BY:	AH
CHK. BY:	CJ
APP'D. BY:	KHL

DATE: APRIL 2023

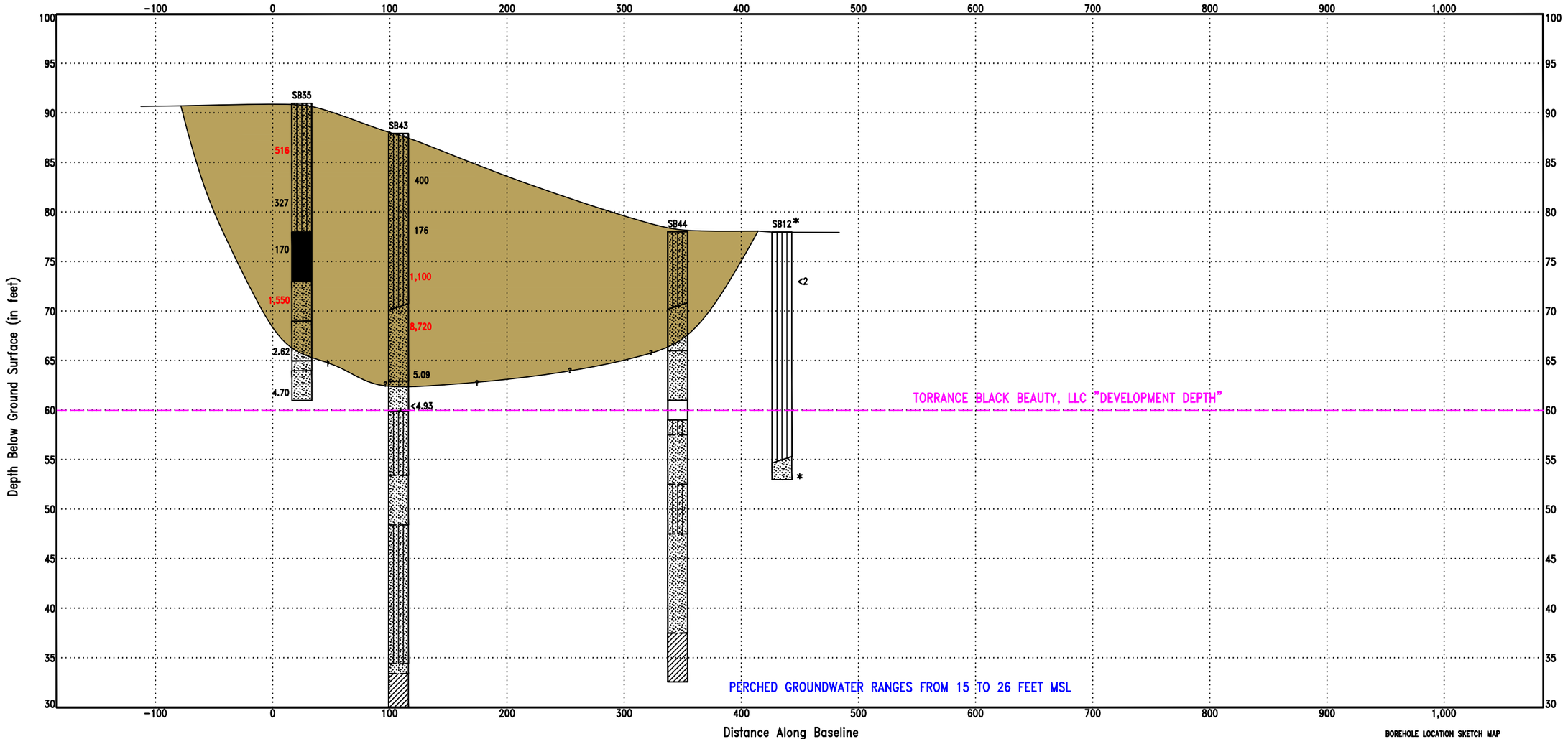
SCALE: AS SHOWN

FIGURE NO. 30

\\bc-fs01\DATA\PROJECTS\01217339.00\Design\2023 - updated cross section\G-G'.dwg Jun 07, 2023 - 5:6pm By: 2178aph

G

G'

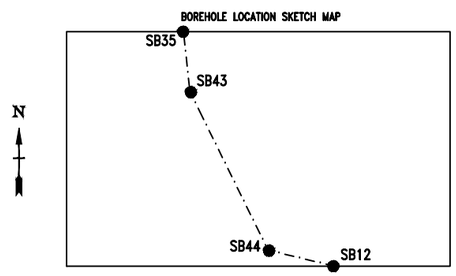


Borehole	North	East	Elev.	Depth
SB12	1768023	6457590	78.0	25.0
SB35	1768339	6457387	91.0	30.0
SB43	1768258	6457398	87.9	65.5
SB44	1768044	6457503	75.4	45.5

LEGEND

SB31	BORING ID
1.91	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (MG/KG)
327	EXCEEDS CLEAN-UP STANDARDS
	APPROXIMATE LIMITS OF FILL

BOREHOLE LOCATION SKETCH MAP



SHEET TITLE: LEAD CONCENTRATIONS ON CROSS SECTION B-B'

PROJECT TITLE: NORTH POSSE
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ACAD FILE: LOCATION	
APPR. BY:	KHL
DWN. BY:	AH
CHK. BY:	CJ
PROJ. NO.	01217339.00
DSN. BY:	DESIGN

DATE: APRIL 2023

SCALE: AS SHOWN

FIGURE NO. 31

HSA-1			
DEPTH	TPH-G	TPH-D	TPH-O
5'	2.9	16,000	6,700
10'	2,100	48,000	22,500
15'	290	2,800	5,600
20'	1.3	<10	<10
25'	2.7	260	95

SB-8			
DEPTH	TPH-G	TPH-D	TPH-O
15'	2.7	4,860	3,240
30'	0.25	<5	<10
45'	<0.2	<5	<10

SB-7			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.2	547	655
10'	7.91	1,640	924
15'	12.8	1,940	2,800
20'	517	24,400	10,700
30'	<0.2	<5	<10

SB-38			
DEPTH	TPH-G	TPH-D	TPH-O
5'	32.0	4,210	4,180
10'	23.8	5,360	5,360
15'	712	30,500	18,900
20'	983	5,940	2,230
25'	490	10,000	4,710
30'	0.402	12.2	<50

GP-1			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	100	600
10'	1,800	19,000	5,200
15'	2,300	15,000	4,400
20'	4,900	10,000	2,960

SB-37			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	428	1,140
10'	4,380	8,360	<50
15'	242	379	<50
20'	<0.5	<10	<50
25'	2.87	<10	<50
30'	1.54	<10	<50

SB-9			
DEPTH	TPH-G	TPH-D	TPH-O
10'	2,090	24,900	6,600
15'	4,620	27,400	2,200
30'	1,270	8,300	718
40'	1,890	2,850	240

SB-36			
DEPTH	TPH-G	TPH-D	TPH-O
5'	23.3	356	670
10'	6,790	34,000	<1,000
15'	6,810	19,200	<1,000
20'	2,390	4,500	<100
25'	1,660	4,660	<100
30'	1,460	1,140	<50

SB-35			
DEPTH	TPH-G	TPH-D	TPH-O
5'	96.0	6,900	6,500
10'	7,350	53,800	20,700
15'	2,550	124,000	47,300
20'	182	29,500	5,190
25'	1,330	19,900	3,620
30'	2,860	20,500	3,610

SB-39			
DEPTH	TPH-G	TPH-D	TPH-O
5'	0.463	227	644
11'	<0.5	1,520	797
15'	64.5	2,580	1,930
20'	<0.2	<10	<50
25'	<0.2	<10	<50
30'	<0.5	<10	<50

GP-2			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	1,000	4,200
10'	<1.0	5,000	4,380
15'	<1.0	<10	<10
20'	<1.0	<10	<10

SB-6			
DEPTH	TPH-G	TPH-D	TPH-O
5'	1,490	22,900	3,000
15'	0.77	1,080	<10
25'	1.37	<5	<10

SB43			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.2	1,950	2,680
10'	3,840	19,700	7,830
15'	6,180	104,000	<100,000
20'	3,690	19,700	5,320
25'	261	1,220	<2,480
28'	5,970	21,700	<19,600

SB-34			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	73.5	67.4
10'	5.45	46.9	<50
15'	165	13,000	11,600
20'	<0.5	275	116
25'	76.4	1,990	1,040
30'	<0.5	<10	<50

SB-41			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<10	19,300	16,100
10'	13.5	2,500	940
15'	34.2	14,800	4,800
20'	<0.5	456	<50
25'	<0.5	<10	<50
30'	<0.5	<10	<50

SB-40			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	369	1,630
10'	<0.5	7,820	9,470
15'	<0.5	<10	<50
20'	<0.5	<10	<50
25'	<0.2	<10	<50

SB-5			
DEPTH	TPH-G	TPH-D	TPH-O
15'	0.67	<5	<10
25'	<0.2	<5	<10

T-2			
DEPTH	TPH-G	TPH-D	TPH-O
14'	118	11,500	8,900

SB26			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	<10	<50
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	<0.5	<10	<50
25'	<0.5	<10	<50

HSA-2			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	250	720
10'	2,000	25,000	10,300
15'	3,400	46,000	15,500
20'	2,700	6,400	2,390

GP-3			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	1,900	8,700
10'	1,800	130,000	86,000
15'	680	3,500	1,330
20'	420	1,100	400

T-1			
DEPTH	TPH-G	TPH-D	TPH-O
9'	2,270	40,800	7,800
19.5'	87.7	880	320

SB-26			
DEPTH	TPH-G	TPH-D	TPH-O
5'	13.1	29.3	<100
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	<0.5	<10	<50
25'	<0.5	<10	<50

SB47			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.29	482	1,810
10'	<0.17	1,740	2,620
15'	<0.17	<9.8	<98
20'	<0.20	<9.9	<99
25'	<0.19	<9.9	<99
28'	<0.18	<9.9	<99

SB-10			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.2	<5	<10
15'	<0.2	<5	<10
20'	<0.2	<5	<10

GP-4			
DEPTH	TPH-G	TPH-D	TPH-O
5'	270	120,000	17,300
10'	570	50,000	21,500
15'	72	310	150
20'	1.7	100	40

SB-33			
DEPTH	TPH-G	TPH-D	TPH-O
4'	<0.5	75.6	131
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	<0.5	<10	<50
25'	<0.5	<10	<50
30'	<0.5	<10	<50

SB-12			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.2	<5	<10
15'	<0.2	<5	<10
25'	<0.2	<5	<10

SB-27			
DEPTH	TPH-G	TPH-D	TPH-O
4'	<0.5	444	2,980
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	<0.5	<10	<50
25'	<0.5	<10	<50

B-7			
DEPTH	TPH-G	TPH-D	TPH-O
30'	0.65	<5	<10

SB-25			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	1,400	2,250
10'	<0.5	<10	<50
15'	<0.5	182	<50
20'	0.701	151	<50

SB-4			
DEPTH	TPH-G	TPH-D	TPH-O
10'	0.49	<5	<10
20'	<0.2	<5	<10

SB-32			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	2,740	1,430
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	<0.5	<10	<50
25'	<0.5	<10	<50

HSA-3			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	1,700	1,700
10'	<1.0	61	148
15'	<1.0	130	59
20'	<1.0	<10	<10

T-6			
DEPTH	TPH-G	TPH-D	TPH-O
0.5'	<0.2	935	574

GP-5			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	6,300	23,000
10'	1,300	95,000	35,400
15'	1,100	19,000	5,230
20'	670	3,000	8,180

SB-1			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.2	<5	<10
20'	<0.2	<5	<10

T-3			
DEPTH	TPH-G	TPH-D	TPH-O
0.5'	0.22	434	450
1.5'	<0.2	<5	<10

B-8			
DEPTH	TPH-G	TPH-D	TPH-O
1.5'	0.49	<5	24

SB-11			
DEPTH	TPH-G	TPH-D	TPH-O
30'	<0.2	<5	<10

SB-24			
DEPTH	TPH-G	TPH-D	TPH-O
4'	<0.5	248	1,110
8'	<0.5	730	2,690
15'	<0.5	<10	<50
20'	<0.5	<10	<50

HSA-4			
DEPTH	TPH-G	TPH-D	TPH-O
10'	300	15,000	7,100
15'	210	480	570
20'	640	16,000	4,650
25'	970	3,600	1,490

GP-6			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	<10	<10
10'	<1.0	<10	<10
15'	<1.0	<10	<10

SB-30			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	<20	426
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	25.2	22.0	<50
25'	<0.5	<10	<50
30'	<0.5	<10	<50

SB-22			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	<10	<50
10'	<0.5	<10	<50
15'	<0.5	50.5	<50
20	<0.5	<10	<50
25'	<0.5	<10	<50
30'	<0.5	<10	<50

SB-23			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.2	<10	<50
10'	<0.2	<10	<50
15'	<0.2	<10	<50
20	<0.2	<10	<50
25'	<0.5	<10	<50
30'	<0.5	<10	<50

SB-31			
DEPTH	TPH-G	TPH-D	TPH-O
4'	14.4	3,810	<2,000
8'	3.78	3,720	7,460
15'	2,750	50,000	<2,000
20'	356	20,100	<1,000
25'	10,400	13,100	<1,000
30'	1,050	4,130	<50

B-4			
DEPTH	TPH-G	TPH-D	TPH-O
10'	29.6	2,460	830

SB-21			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	<10	<50
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	<0.5	<10	<50

SB-3			
DEPTH	TPH-G	TPH-D	TPH-O
5'	0.46	516	513
15'	<0.2	<5	<10
25'	0.32	<5	<10
35'	<0.2	<5	<10
40'	<0.2	<5	<10

SB-28			
DEPTH	TPH-G	TPH-D	TPH-O
4'	92.8	19,800	3,470
10'	64	295	<500
15'	245	21,100	4,730
20'	846	2,040	1,730
25'	<0.5	<10	<50
30'	<0.5	<10	<50

SB-20			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	<10	<50
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20	<0.5	<10	<50
25'	<0.5	127	<50
30'	<0.5	<10	<50

SB-29			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	<10	<50
9'	<0.5	3,310	6,630
15'	<0.5	31.9	<50
20'	<0.5	<10	<50
25'	<0.5	16.5	<50
30'	<0.5	<10	<50

GP-7			
DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	2,400	2,520
10'	58	4,700	3,200
15'	540	7,500	5,000
20'	4.5	93	<10

SB-2			
DEPTH	TPH-G	TPH-D	TPH-O
5'	0.48	233	275
10'	<0.2	136	55.1
15'	<0.2	<5	<10
20'	<0.2	<5	<10

LEGEND

- APPROXIMATE BORING LOCATION (SoCal Geo)
- APPROXIMATE TRENCH LOCATION (SoCal Geo)
- BORING LOCATION (SCS)
- SOIL/SOIL VAPOR BORING LOCATION (STANTEC)
- HSA GEOTECH/ENV SOIL BORING LOCATION (STANTEC)
- BORING LOCATIONS (SCS,2019)
- BORING AND MULTI-NESTED SOIL VAPOR PROBE LOCATIONS (SCS, 2019)
- BORING LOCATIONS (SCS ON BEHALF OF TBB, 2022)
- COMBINED BORING LOCATION (AECOM/SCS, 2022)
- AREAS WITH TPH CONCENTRATIONS EXCEEDING SCREENING LEVELS

T-1			
DEPTH	TPH-G	TPH-D	TPH-O
9'	--	19,800	3,470

CONCENTRATION OF TPH IN MILLIGRAMS PER KILOGRAM

HIGHLIGHTED CELL INDICATES CONCENTRATION ABOVE SCREENING LEVEL

NOT ANALYZED

N

GRAPHIC SCALE

0 250 500

APPROXIMATE SCALE IN FEET

Note: Stantec data was obtained from draft data tables.

SHEET TITLE: TOTAL PETROLEUM HYDROCARBONS IN SOIL

PROJECT TITLE: NORTH POSSE 3041 DEL AMO BOULEVARD TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC PIER 1, BAY 1 SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

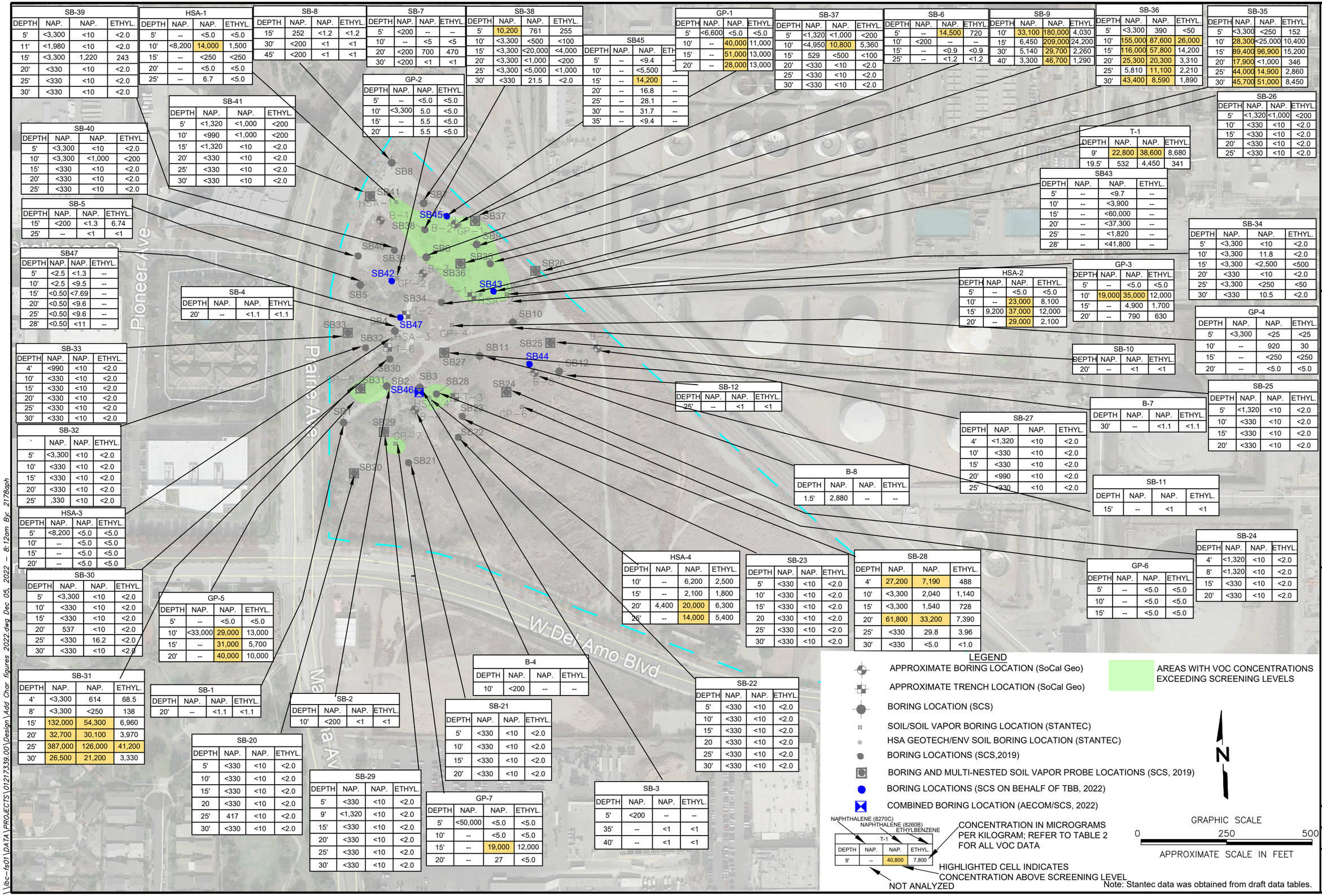
PROJ.NO: 01217339.00 | DSN. BY: DESIGN | DWN. BY: ED | CHK. BY: KWG | APP. BY: KWG | ACAD FILE: LOCATION

DATE: DECEMBER 2022

SCALE: 1" = 250'

FIGURE NO. 32

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SB-39			
DEPTH	NAP.	NAP.	ETHYL.
5'	<3,300	<10	<2.0
11'	<1,980	<10	<2.0
15'	<3,300	1,220	243
20'	<330	<10	<2.0
25'	<330	<10	<2.0
30'	<330	<10	<2.0

HSA-1			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	<5.0	<5.0
10'	<8,200	14,000	1,500
15'	--	<250	<250
20'	--	<5.0	<5.0
25'	--	6.7	<5.0

SB-8			
DEPTH	NAP.	NAP.	ETHYL.
15'	252	<1.2	<1.2
30'	<200	<1	<1
45'	<200	<1	<1

SB-7			
DEPTH	NAP.	NAP.	ETHYL.
5'	<200	--	--
10'	--	<5	<5
20'	<200	700	470
30'	<200	<1	<1

SB-38			
DEPTH	NAP.	NAP.	ETHYL.
5'	10,200	761	255
10'	<3,300	<500	<100
15'	<3,300	<20,000	<4,000
20'	<3,300	<1,000	<200
25'	<3,300	<5,000	<1,000
30'	<330	21.5	<2.0

SB45			
DEPTH	NAP.	NAP.	ETH
5'	--	<9.4	--
10'	--	<5,500	--
15'	--	14,200	--
20'	--	16.8	--
25'	--	28.1	--
30'	--	31.7	--
35'	--	<9.4	--

GP-1			
DEPTH	NAP.	NAP.	ETHYL.
5'	<6,600	<5.0	<5.0
10'	--	40,000	11,000
15'	--	51,000	13,000
20'	--	28,000	13,000

SB-37			
DEPTH	NAP.	NAP.	ETHYL.
5'	<1,320	<1,000	<200
10'	<4,950	10,800	5,360
15'	529	<500	<100
20'	<330	<10	<2.0
25'	<330	<10	<2.0
30'	<330	<10	<2.0

SB-6			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	14,500	720
10'	<200	--	--
15'	--	<0.9	<0.9
25'	--	<1.2	<1.2

SB-9			
DEPTH	NAP.	NAP.	ETHYL.
10'	33,100	180,000	4,030
15'	6,450	209,000	24,200
30'	5,140	29,700	2,260
40'	3,300	46,700	1,290

SB-36			
DEPTH	NAP.	NAP.	ETHYL.
5'	<3,300	390	<50
10'	155,000	87,600	26,000
15'	116,000	57,800	14,200
20'	25,300	20,300	3,310
25'	5,810	11,100	2,210
30'	43,400	8,590	1,890

SB-35			
DEPTH	NAP.	NAP.	ETHYL.
5'	<3,300	<250	152
10'	28,300	<25,000	10,400
15'	89,400	96,900	15,200
20'	17,900	<1,000	346
25'	44,000	14,900	2,860
30'	45,700	51,000	8,450

GP-2			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	<5.0	<5.0
10'	<3,300	5.0	<5.0
15'	--	5.5	<5.0
20'	--	5.5	<5.0

SB-41			
DEPTH	NAP.	NAP.	ETHYL.
5'	<1,320	<1,000	<200
10'	<990	<1,000	<200
15'	<1,320	<10	<2.0
20'	<330	<10	<2.0
25'	<330	<10	<2.0
30'	<330	<10	<2.0

SB-40			
DEPTH	NAP.	NAP.	ETHYL.
5'	<3,300	<10	<2.0
10'	<3,300	<1,000	<200
15'	<330	<10	<2.0
20'	<330	<10	<2.0
25'	<330	<10	<2.0

SB-5			
DEPTH	NAP.	NAP.	ETHYL.
15'	<200	<1.3	6.74
25'	--	<1	<1

SB47			
DEPTH	NAP.	NAP.	ETHYL.
5'	<2.5	<1.3	--
10'	<2.5	<9.5	--
15'	<0.50	<7.69	--
20'	<0.50	<9.6	--
25'	<0.50	<9.6	--
28'	<0.50	<11	--

SB-4			
DEPTH	NAP.	NAP.	ETHYL.
20'	--	<1.1	<1.1

T-1			
DEPTH	NAP.	NAP.	ETHYL.
9'	22,800	38,600	8,680
19.5'	532	4,450	341

SB43			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	<9.7	--
10'	--	<3,900	--
15'	--	<60,000	--
20'	--	<37,300	--
25'	--	<1,820	--
28'	--	<41,800	--

SB-26			
DEPTH	NAP.	NAP.	ETHYL.
5'	<1,320	<1,000	<200
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20'	<330	<10	<2.0
25'	<330	<10	<2.0

SB-34			
DEPTH	NAP.	NAP.	ETHYL.
5'	<3,300	<10	<2.0
10'	<3,300	11.8	<2.0
15'	<3,300	<2,500	<500
20'	<330	<10	<2.0
25'	<3,300	<250	<50
30'	<330	10.5	<2.0

HSA-2			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	<5.0	<5.0
10'	--	23,000	8,100
15'	9,200	37,000	12,000
20'	--	29,000	2,100

GP-3			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	<5.0	<5.0
10'	19,000	35,000	12,000
15'	--	4,900	1,700
20'	--	790	630

GP-4			
DEPTH	NAP.	NAP.	ETHYL.
5'	<3,300	<25	<25
10'	--	920	30
15'	--	<250	<250
20'	--	<5.0	<5.0

SB-10			
DEPTH	NAP.	NAP.	ETHYL.
20'	--	<1	<1

SB-33			
DEPTH	NAP.	NAP.	ETHYL.
4'	<990	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20'	<330	<10	<2.0
25'	<330	<10	<2.0
30'	<330	<10	<2.0

SB-12			
DEPTH	NAP.	NAP.	ETHYL.
25'	--	<1	<1

SB-25			
DEPTH	NAP.	NAP.	ETHYL.
5'	<1,320	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20'	<330	<10	<2.0

B-7			
DEPTH	NAP.	NAP.	ETHYL.
30'	--	<1.1	<1.1

SB-27			
DEPTH	NAP.	NAP.	ETHYL.
4'	<1,320	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20'	<990	<10	<2.0
25'	<330	<10	<2.0

B-8			
DEPTH	NAP.	NAP.	ETHYL.
1.5'	2,880	--	--

SB-32			
`	NAP.	NAP.	ETHYL.
5'	<3,300	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20'	<330	<10	<2.0
25'	,330	<10	<2.0

SB-11			
DEPTH	NAP.	NAP.	ETHYL.
15'	--	<1	<1

HSA-3			
DEPTH	NAP.	NAP.	ETHYL.
5'	<8,200	<5.0	<5.0
10'	--	<5.0	<5.0
15'	--	<5.0	<5.0
20'	--	<5.0	<5.0

HSA-4			
DEPTH	NAP.	NAP.	ETHYL.
10'	--	6,200	2,500
15'	--	2,100	1,800
20'	4,400	20,000	6,300
25'	--	14,000	5,400

SB-23			
DEPTH	NAP.	NAP.	ETHYL.
5'	<330	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20	<330	<10	<2.0
25'	<330	<10	<2.0
30'	<330	<10	<2.0

SB-28			
DEPTH	NAP.	NAP.	ETHYL.
4'	27,200	7,190	488
10'	<3,300	2,040	1,140
15'	<3,300	1,540	728
20'	61,800	33,200	7,390
25'	<330	29.8	3.96
30'	<330	<5.0	<1.0

SB-24			
DEPTH	NAP.	NAP.	ETHYL.
4'	<1,320	<10	<2.0
8'	<1,320	<10	<2.0
15'	<330	<10	<2.0
20'	<330	<10	<2.0

GP-6			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	<5.0	<5.0
10'	--	<5.0	<5.0
15'	--	<5.0	<5.0

SB-30			
DEPTH	NAP.	NAP.	ETHYL.
5'	<3,300	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20'	537	<10	<2.0
25'	<330	16.2	<2.0
30'	<330	<10	<2.0

GP-5			
DEPTH	NAP.	NAP.	ETHYL.
5'	--	<5.0	<5.0
10'	<33,000	29,000	13,000
15'	--	31,000	5,700
20'	--	40,000	10,000

SB-31			
DEPTH	NAP.	NAP.	ETHYL.
4'	<3,300	614	68.5
8'	<3,300	<250	138
15'	132,000	54,300	6,960
20'	32,700	30,100	3,970
25'	387,000	126,000	41,200
30'	26,500	21,200	3,330

SB-1			
DEPTH	NAP.	NAP.	ETHYL.
20'	--	<1.1	<1.1

B-4			
DEPTH	NAP.	NAP.	ETHYL.
10'	<200	--	--

SB-2			
DEPTH	NAP.	NAP.	ETHYL.
10'	<200	<1	<1

SB-22			
DEPTH	NAP.	NAP.	ETHYL.
5'	<330	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20	<330	<10	<2.0
25'	<330	<10	<2.0
30'	<330	<10	<2.0

SB-21			
DEPTH	NAP.	NAP.	ETHYL.
5'	<330	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20'	<330	<10	<2.0

SB-20			
DEPTH	NAP.	NAP.	ETHYL.
5'	<330	<10	<2.0
10'	<330	<10	<2.0
15'	<330	<10	<2.0
20	<330	<10	<2.0
25'	417	<10	<2.0
30'	<330	<10	<2.0

SB-29			
DEPTH	NAP.	NAP.	ETHYL.
5'	<330	<10	<2.0
9'	<1,320	<10	<2.0
15'	<330	<10	<2.0
20'	<330	<10	<2.0
25'	<330	<10	<2.0
30'	<330	<10	<2.0

GP-7			
DEPTH	NAP.	NAP.	ETHYL.
5'	<50,000	<5.0	<5.0
10'	--	<5.0	<5.0
15'	--	19,000	12,000
20'	--	27	<5.0

SB-3			
DEPTH	NAP.	NAP.	ETHYL.
5'	<200	--	--
35'	--	<1	<1
40'	--	<1	<1

LEGEND

- APPROXIMATE BORING LOCATION (SoCal Geo)
- APPROXIMATE TRENCH LOCATION (SoCal Geo)
- BORING LOCATION (SCS)
- SOIL/SOIL VAPOR BORING LOCATION (STANTEC)
- HSA GEOTECH/ENV SOIL BORING LOCATION (STANTEC)
- BORING LOCATIONS (SCS,2019)
- BORING AND MULTI-NESTED SOIL VAPOR PROBE LOCATIONS (SCS, 2019)
- BORING LOCATIONS (SCS ON BEHALF OF TBB, 2022)
- COMBINED BORING LOCATION (AECOM/SCS, 2022)

AREAS WITH VOC CONCENTRATIONS EXCEEDING SCREENING LEVELS

NAPHTHALENE (8270C)
NAPHTHALENE (8260B)
ETHYLBENZENE

T-1			
DEPTH	NAP.	NAP.	ETHYL.
9'	--	40,800	7,800

CONCENTRATION IN MICROGRAMS PER KILOGRAM; REFER TO TABLE 2 FOR ALL VOC DATA

HIGHLIGHTED CELL INDICATES CONCENTRATION ABOVE SCREENING LEVEL

NOT ANALYZED

Note: Stantec data was obtained from draft data tables.

N

GRAPHIC SCALE
0 250 500
APPROXIMATE SCALE IN FEET

SHEET TITLE: NAPHTHALENE AND ETHYLBENZENE IN SOIL

PROJECT TITLE: NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

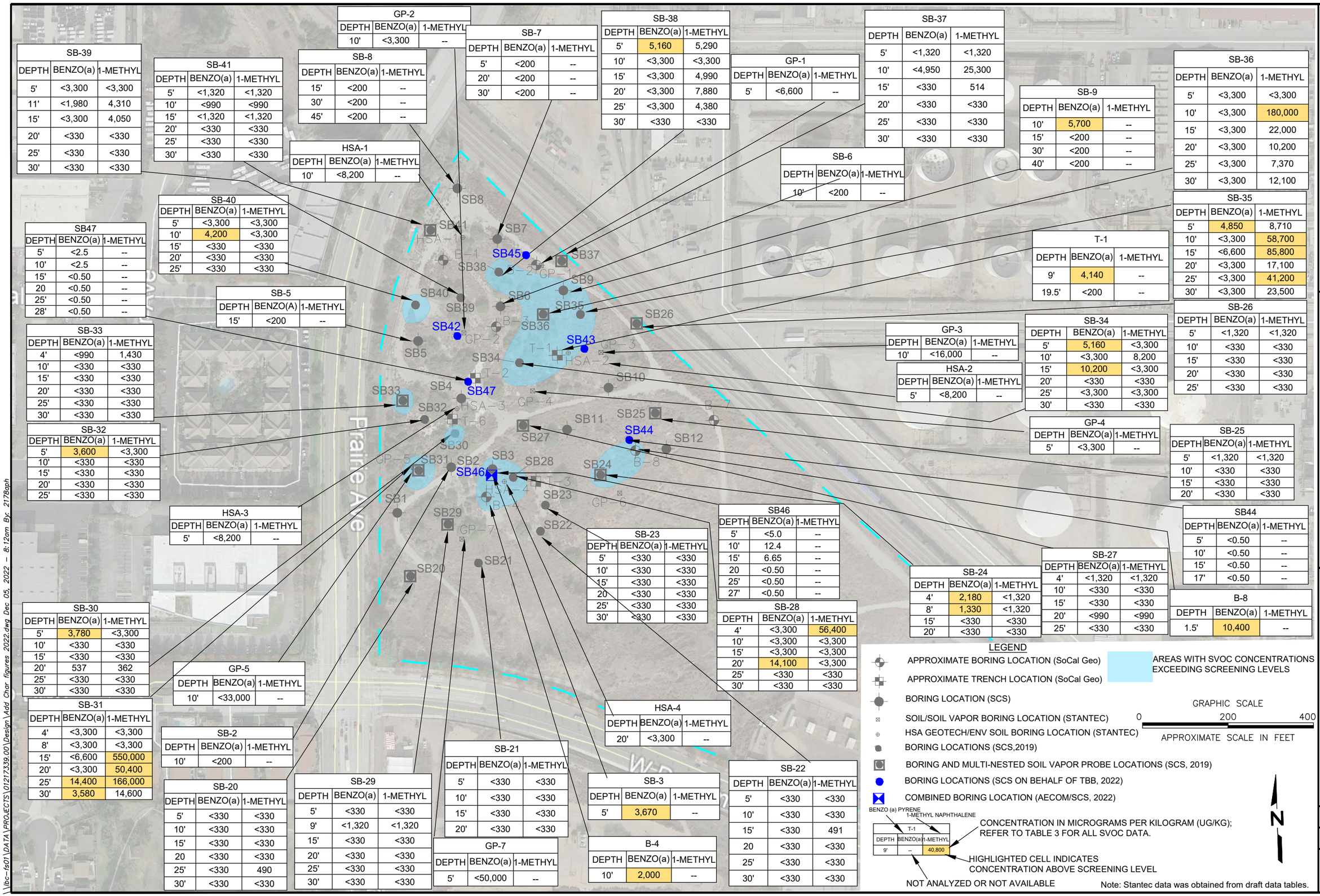
PROJ. NO: 01217339.00 | DSN. BY: DESIGN | DWN. BY: APH | CHK. BY: KWG | CAD FILE: LOCATION | APP'D BY: KWG

DATE: DECEMBER 2022

SCALE: 1" = 250'

FIGURE NO. 33

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SB-39		
DEPTH	BENZO(a)	1-METHYL
5'	<3,300	<3,300
11'	<1,980	4,310
15'	<3,300	4,050
20'	<330	<330
25'	<330	<330
30'	<330	<330

SB-41		
DEPTH	BENZO(a)	1-METHYL
5'	<1,320	<1,320
10'	<990	<990
15'	<1,320	<1,320
20'	<330	<330
25'	<330	<330
30'	<330	<330

GP-2		
DEPTH	BENZO(a)	1-METHYL
10'	<3,300	--

SB-8		
DEPTH	BENZO(a)	1-METHYL
15'	<200	--
30'	<200	--
45'	<200	--

SB-7		
DEPTH	BENZO(a)	1-METHYL
5'	<200	--
20'	<200	--
30'	<200	--

SB-38		
DEPTH	BENZO(a)	1-METHYL
5'	5,160	5,290
10'	<3,300	<3,300
15'	<3,300	4,990
20'	<3,300	7,880
25'	<3,300	4,380
30'	<330	<330

GP-1		
DEPTH	BENZO(a)	1-METHYL
5'	<6,600	--

SB-37		
DEPTH	BENZO(a)	1-METHYL
5'	<1,320	<1,320
10'	<4,950	25,300
15'	<330	514
20'	<330	<330
25'	<330	<330
30'	<330	<330

HSA-1		
DEPTH	BENZO(a)	1-METHYL
10'	<8,200	--

SB-6		
DEPTH	BENZO(a)	1-METHYL
10'	<200	--

SB-9		
DEPTH	BENZO(a)	1-METHYL
10'	5,700	--
15'	<200	--
30'	<200	--
40'	<200	--

SB-36		
DEPTH	BENZO(a)	1-METHYL
5'	<3,300	<3,300
10'	<3,300	180,000
15'	<3,300	22,000
20'	<3,300	10,200
25'	<3,300	7,370
30'	<3,300	12,100

SB-40		
DEPTH	BENZO(a)	1-METHYL
5'	<3,300	<3,300
10'	4,200	<3,300
15'	<330	<330
20'	<330	<330
25'	<330	<330

SB47		
DEPTH	BENZO(a)	1-METHYL
5'	<2.5	--
10'	<2.5	--
15'	<0.50	--
20	<0.50	--
25'	<0.50	--
28'	<0.50	--

SB-5		
DEPTH	BENZO(A)	1-METHYL
15'	<200	--

SB-35		
DEPTH	BENZO(a)	1-METHYL
5'	4,850	8,710
10'	<3,300	58,700
15'	<6,600	85,800
20'	<3,300	17,100
25'	<3,300	41,200
30'	<3,300	23,500

T-1		
DEPTH	BENZO(a)	1-METHYL
9'	4,140	--
19.5'	<200	--

SB-33		
DEPTH	BENZO(a)	1-METHYL
4'	<990	1,430
10'	<330	<330
15'	<330	<330
20'	<330	<330
25'	<330	<330
30'	<330	<330

GP-3		
DEPTH	BENZO(a)	1-METHYL
10'	<16,000	--

HSA-2		
DEPTH	BENZO(a)	1-METHYL
5'	<8,200	--

SB-34		
DEPTH	BENZO(a)	1-METHYL
5'	5,160	<3,300
10'	<3,300	8,200
15'	10,200	<3,300
20'	<330	<330
25'	<3,300	<3,300
30'	<330	<330

SB-26		
DEPTH	BENZO(a)	1-METHYL
5'	<1,320	<1,320
10'	<330	<330
15'	<330	<330
20'	<330	<330
25'	<330	<330

SB-32		
DEPTH	BENZO(a)	1-METHYL
5'	3,600	<3,300
10'	<330	<330
15'	<330	<330
20'	<330	<330
25'	<330	<330

GP-4		
DEPTH	BENZO(a)	1-METHYL
5'	<3,300	--

SB-25		
DEPTH	BENZO(a)	1-METHYL
5'	<1,320	<1,320
10'	<330	<330
15'	<330	<330
20'	<330	<330

HSA-3		
DEPTH	BENZO(a)	1-METHYL
5'	<8,200	--

SB-23		
DEPTH	BENZO(a)	1-METHYL
5'	<330	<330
10'	<330	<330
15'	<330	<330
20	<330	<330
25'	<330	<330
30'	<330	<330

SB46		
DEPTH	BENZO(a)	1-METHYL
5'	<5.0	--
10'	12.4	--
15'	6.65	--
20	<0.50	--
25'	<0.50	--
27'	<0.50	--

SB-24		
DEPTH	BENZO(a)	1-METHYL
4'	2,180	<1,320
8'	1,330	<1,320
15'	<330	<330
20'	<330	<330

SB-27		
DEPTH	BENZO(a)	1-METHYL
4'	<1,320	<1,320
10'	<330	<330
15'	<330	<330
20'	<990	<990
25'	<330	<330

SB44		
DEPTH	BENZO(a)	1-METHYL
5'	<0.50	--
10'	<0.50	--
15'	<0.50	--
17'	<0.50	--

B-8		
DEPTH	BENZO(a)	1-METHYL
1.5'	10,400	--

SB-28		
DEPTH	BENZO(a)	1-METHYL
4'	<3,300	56,400
10'	<3,300	<3,300
15'	<3,300	<3,300
20'	14,100	<3,300
25'	<330	<330
30'	<330	<330

SB-30		
DEPTH	BENZO(a)	1-METHYL
5'	3,780	<3,300
10'	<330	<330
15'	<330	<330
20'	537	362
25'	<330	<330
30'	<330	<330

GP-5		
DEPTH	BENZO(a)	1-METHYL
10'	<33,000	--

HSA-4		
DEPTH	BENZO(a)	1-METHYL
20'	<3,300	--

SB-31		
DEPTH	BENZO(a)	1-METHYL
4'	<3,300	<3,300
8'	<3,300	<3,300
15'	<6,600	550,000
20'	<3,300	50,400
25'	14,400	166,000
30'	3,580	14,600

SB-2		
DEPTH	BENZO(a)	1-METHYL
10'	<200	--

SB-21		
DEPTH	BENZO(a)	1-METHYL
5'	<330	<330
10'	<330	<330
15'	<330	<330
20'	<330	<330

SB-22		
DEPTH	BENZO(a)	1-METHYL
5'	<330	<330
10'	<330	<330
15'	<330	491
20	<330	<330
25'	<330	<330
30'	<330	<330

SB-20		
DEPTH	BENZO(a)	1-METHYL
5'	<330	<330
10'	<330	<330
15'	<330	<330
20	<330	<330
25'	<330	490
30'	<330	<330

SB-29		
DEPTH	BENZO(a)	1-METHYL
5'	<330	<330
9'	<1,320	<1,320
15'	<330	<330
20'	<330	<330
25'	<330	<330
30'	<330	<330

SB-3		
DEPTH	BENZO(a)	1-METHYL
5'	3,670	--

GP-7		
DEPTH	BENZO(a)	1-METHYL
5'	<50,000	--

B-4		
DEPTH	BENZO(a)	1-METHYL
10'	2,000	--

LEGEND

- APPROXIMATE BORING LOCATION (SoCal Geo)
- APPROXIMATE TRENCH LOCATION (SoCal Geo)
- BORING LOCATION (SCS)
- SOIL/SOIL VAPOR BORING LOCATION (STANTEC)
- HSA GEOTECH/ENV SOIL BORING LOCATION (STANTEC)
- BORING LOCATIONS (SCS,2019)
- BORING AND MULTI-NESTED SOIL VAPOR PROBE LOCATIONS (SCS, 2019)
- BORING LOCATIONS (SCS ON BEHALF OF TBB, 2022)
- COMBINED BORING LOCATION (AECOM/SCS, 2022)
- AREAS WITH SVOC CONCENTRATIONS EXCEEDING SCREENING LEVELS

GRAPHIC SCALE
0 200 400
APPROXIMATE SCALE IN FEET

BENZO (a) PYRENE
1-METHYL NAPHTHALENE

T-1		
DEPTH	BENZO(a)	1-METHYL
9'	--	40,800

CONCENTRATION IN MICROGRAMS PER KILOGRAM (UG/KG); REFER TO TABLE 3 FOR ALL SVOC DATA.

HIGHLIGHTED CELL INDICATES CONCENTRATION ABOVE SCREENING LEVEL

NOT ANALYZED OR NOT AVAILABLE

Note: Stantec data was obtained from draft data tables.

N

SHEET TITLE:
BENZO(A)PYRENE AND 1-METHYL NAPHTHALENE IN SOIL

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

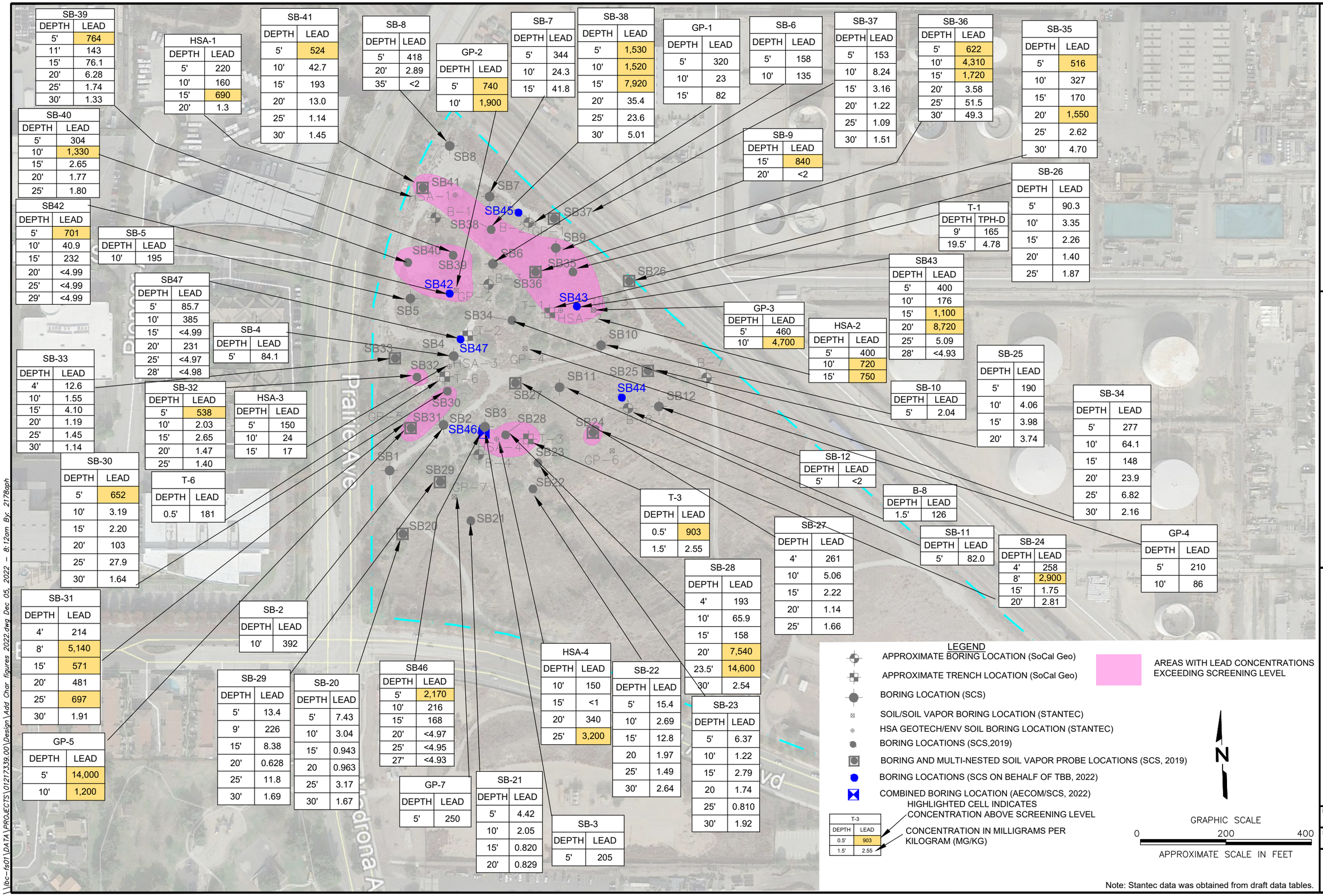
PROJ.NO. 01217339.00 | DSN. BY: DESIGN | DWN. BY: ED | CHK. BY: KWG | APP. BY: KWG | ACAD FILE: LOCATION

DATE: DECEMBER 2022

SCALE: 1" = 200'

FIGURE NO. 34

\\lbc--fs01\DATA\PROJECTS\01217339.00\Design\Add Char figures 2022.dwg Dec 05, 2022 - 8:12am By: 2178qph



SB-39	
DEPTH	LEAD
5'	764
11'	143
15'	76.1
20'	6.28
25'	1.74
30'	1.33

SB-40	
DEPTH	LEAD
5'	304
10'	1,330
15'	2.65
20'	1.77
25'	1.80

SB42	
DEPTH	LEAD
5'	701
10'	40.9
15'	232
20'	<4.99
25'	<4.99
29'	<4.99

SB-33	
DEPTH	LEAD
4'	12.6
10'	1.55
15'	4.10
20'	1.19
25'	1.45
30'	1.14

SB-30	
DEPTH	LEAD
5'	652
10'	3.19
15'	2.20
20'	103
25'	27.9
30'	1.64

SB-31	
DEPTH	LEAD
4'	214
8'	5,140
15'	571
20'	481
25'	697
30'	1.91

GP-5	
DEPTH	LEAD
5'	14,000
10'	1,200

HSA-1	
DEPTH	LEAD
5'	220
10'	160
15'	690
20'	1.3

SB-41	
DEPTH	LEAD
5'	524
10'	42.7
15'	193
20'	13.0
25'	1.14
30'	1.45

SB-5	
DEPTH	LEAD
10'	195

SB47	
DEPTH	LEAD
5'	85.7
10'	385
15'	<4.99
20'	231
25'	<4.97
28'	<4.98

SB-4	
DEPTH	LEAD
5'	84.1

SB-32	
DEPTH	LEAD
5'	538
10'	2.03
15'	2.65
20'	1.47
25'	1.40

HSA-3	
DEPTH	LEAD
5'	150
10'	24
15'	17

T-6	
DEPTH	LEAD
0.5'	181

SB-2	
DEPTH	LEAD
10'	392

SB-29	
DEPTH	LEAD
5'	13.4
9'	226
15'	8.38
20'	0.628
25'	11.8
30'	1.69

SB-20	
DEPTH	LEAD
5'	7.43
10'	3.04
15'	0.943
20	0.963
25'	3.17
30'	1.67

SB46	
DEPTH	LEAD
5'	2,170
10'	216
15'	168
20'	<4.97
25'	<4.95
27'	<4.93

GP-7	
DEPTH	LEAD
5'	250

SB-21	
DEPTH	LEAD
5'	4.42
10'	2.05
15'	0.820
20'	0.829

SB-3	
DEPTH	LEAD
5'	205

HSA-4	
DEPTH	LEAD
10'	150
15'	<1
20'	340
25'	3,200

SB-22	
DEPTH	LEAD
5'	15.4
10'	2.69
15'	12.8
20	1.97
25'	1.49
30'	2.64

T-3	
DEPTH	LEAD
0.5'	903
1.5'	2.55

SB-28	
DEPTH	LEAD
4'	193
10'	65.9
15'	158
20'	7,540
23.5'	14,600
30'	2.54

SB-23	
DEPTH	LEAD
5'	6.37
10'	1.22
15'	2.79
20	1.74
25'	0.810
30'	1.92

SB-8	
DEPTH	LEAD
5'	418
20'	2.89
35'	<2

GP-2	
DEPTH	LEAD
5'	740
10'	1,900

SB-7	
DEPTH	LEAD
5'	344
10'	24.3
15'	41.8

SB-38	
DEPTH	LEAD
5'	1,530
10'	1,520
15'	7,920
20'	35.4
25'	23.6
30'	5.01

GP-1	
DEPTH	LEAD
5'	320
10'	23
15'	82

SB-6	
DEPTH	LEAD
5'	158
10'	135

SB-9	
DEPTH	LEAD
15'	840
20'	<2

SB-37	
DEPTH	LEAD
5'	153
10'	8.24
15'	3.16
20'	1.22
25'	1.09
30'	1.51

SB-27	
DEPTH	LEAD
4'	261
10'	5.06
15'	2.22
20'	1.14
25'	1.66

SB-12	
DEPTH	LEAD
5'	<2

B-8	
DEPTH	LEAD
1.5'	126

SB-11	
DEPTH	LEAD
5'	82.0

SB-24	
DEPTH	LEAD
4'	258
8'	2,900
15'	1.75
20'	2.81

SB-36	
DEPTH	LEAD
5'	622
10'	4,310
15'	1,720
20'	3.58
25'	51.5
30'	49.3

SB-35	
DEPTH	LEAD
5'	516
10'	327
15'	170
20'	1,550
25'	2.62
30'	4.70

T-1	
DEPTH	TPH-D
9'	165
19.5'	4.78

SB-26	
DEPTH	LEAD
5'	90.3
10'	3.35
15'	2.26
20'	1.40
25'	1.87

SB43	
DEPTH	LEAD
5'	400
10'	176
15'	1,100
20'	8,720
25'	5.09
28'	<4.93

GP-3	
DEPTH	LEAD
5'	460
10'	4,700

HSA-2	
DEPTH	LEAD
5'	400
10'	720
15'	750

SB-10	
DEPTH	LEAD
5'	2.04

SB-25	
DEPTH	LEAD
5'	190
10'	4.06
15'	3.98
20'	3.74

SB-34	
DEPTH	LEAD
5'	277
10'	64.1
15'	148
20'	23.9
25'	6.82
30'	2.16

GP-4	
DEPTH	LEAD
5'	210
10'	86

LEGEND

- APPROXIMATE BORING LOCATION (SoCal Geo)
- APPROXIMATE TRENCH LOCATION (SoCal Geo)
- BORING LOCATION (SCS)
- SOIL/SOIL VAPOR BORING LOCATION (STANTEC)
- HSA GEOTECH/ENV SOIL BORING LOCATION (STANTEC)
- BORING LOCATIONS (SCS,2019)
- BORING AND MULTI-NESTED SOIL VAPOR PROBE LOCATIONS (SCS, 2019)
- BORING LOCATIONS (SCS ON BEHALF OF TBB, 2022)
- COMBINED BORING LOCATION (AECOM/SCS, 2022)

AREAS WITH LEAD CONCENTRATIONS EXCEEDING SCREENING LEVEL

T-3	
DEPTH	LEAD
0.5'	903
1.5'	2.55

HIGHLIGHTED CELL INDICATES CONCENTRATION ABOVE SCREENING LEVEL

CONCENTRATION IN MILLIGRAMS PER KILOGRAM (MG/KG)

GRAPHIC SCALE
0 200 400
APPROXIMATE SCALE IN FEET

Note: Stantec data was obtained from draft data tables.

SHEET TITLE: LEAD IN SOIL

PROJECT TITLE: NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

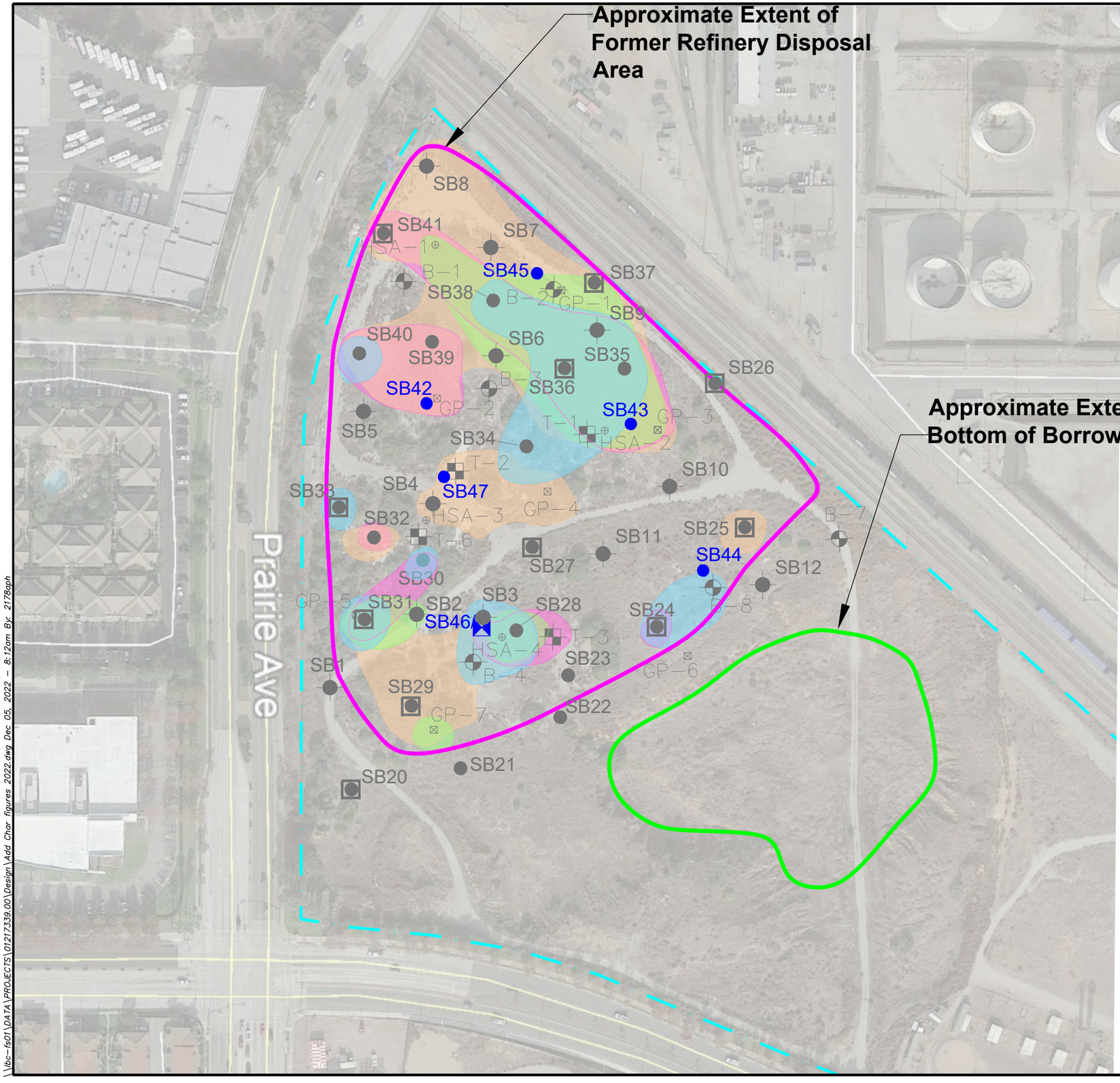
PROJ. NO.	DSN. BY	DWN. BY	CHK. BY	CAD FILE	APP. BY
01217339.00	DESIGN	ED	KWG	LOCATION	KWG

DATE: DECEMBER 2022

SCALE: 1" = 200'

FIGURE NO. 35

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LEGEND

- APPROXIMATE BORING LOCATION (SoCal Geo)
- APPROXIMATE TRENCH LOCATION (SoCal Geo)
- BORING LOCATION (SCS)
- SOIL/SOIL VAPOR BORING LOCATION (STANTEC)
- HSA GEOTECH/ENV SOIL BORING LOCATION (STANTEC)
- BORING LOCATIONS (SCS,2019)
- BORING AND MULTI-NESTED SOIL VAPOR PROBE LOCATIONS (SCS, 2019)
- BORING LOCATIONS (SCS ON BEHALF OF TBB, 2022)
- COMBINED BORING LOCATION (AECOM/SCS, 2022)

AREAS WITH TPH CONCENTRATIONS EXCEEDING SCREENING LEVELS

AREAS WITH SVOC CONCENTRATIONS EXCEEDING SCREENING LEVELS

AREAS WITH VOC CONCENTRATIONS EXCEEDING SCREENING LEVELS

AREAS WITH LEAD CONCENTRATIONS EXCEEDING SCREENING LEVEL

N

GRAPHIC SCALE

0 150 250

APPROXIMATE SCALE IN FEET

Note: Stantec data was obtained from draft data tables.

SHEET TITLE:
AREAS OF CONTAMINANTS EXCEEDING SCREENING LEVELS

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH: (562) 426-9544 FAX: (562) 427-0805

PROJECT NO. 01217339.00
DSN. BY: ED
CHK. BY: KWG
APP. BY: KWG
ACAD FILE: LOCATION
DESIGN

DATE: DECEMBER 2022

SCALE: 1" = 150'

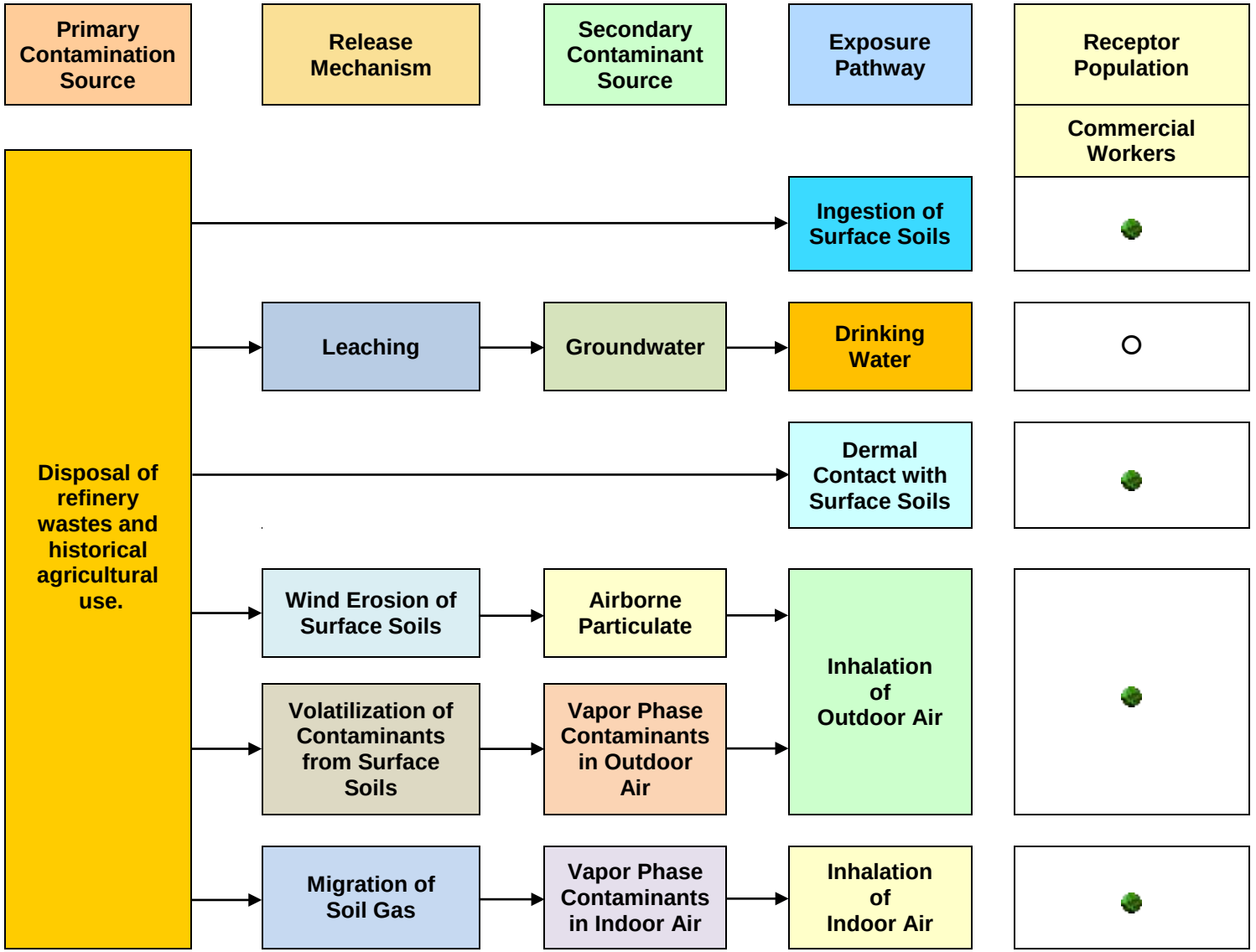
FIGURE NO. 36

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FIGURE 37

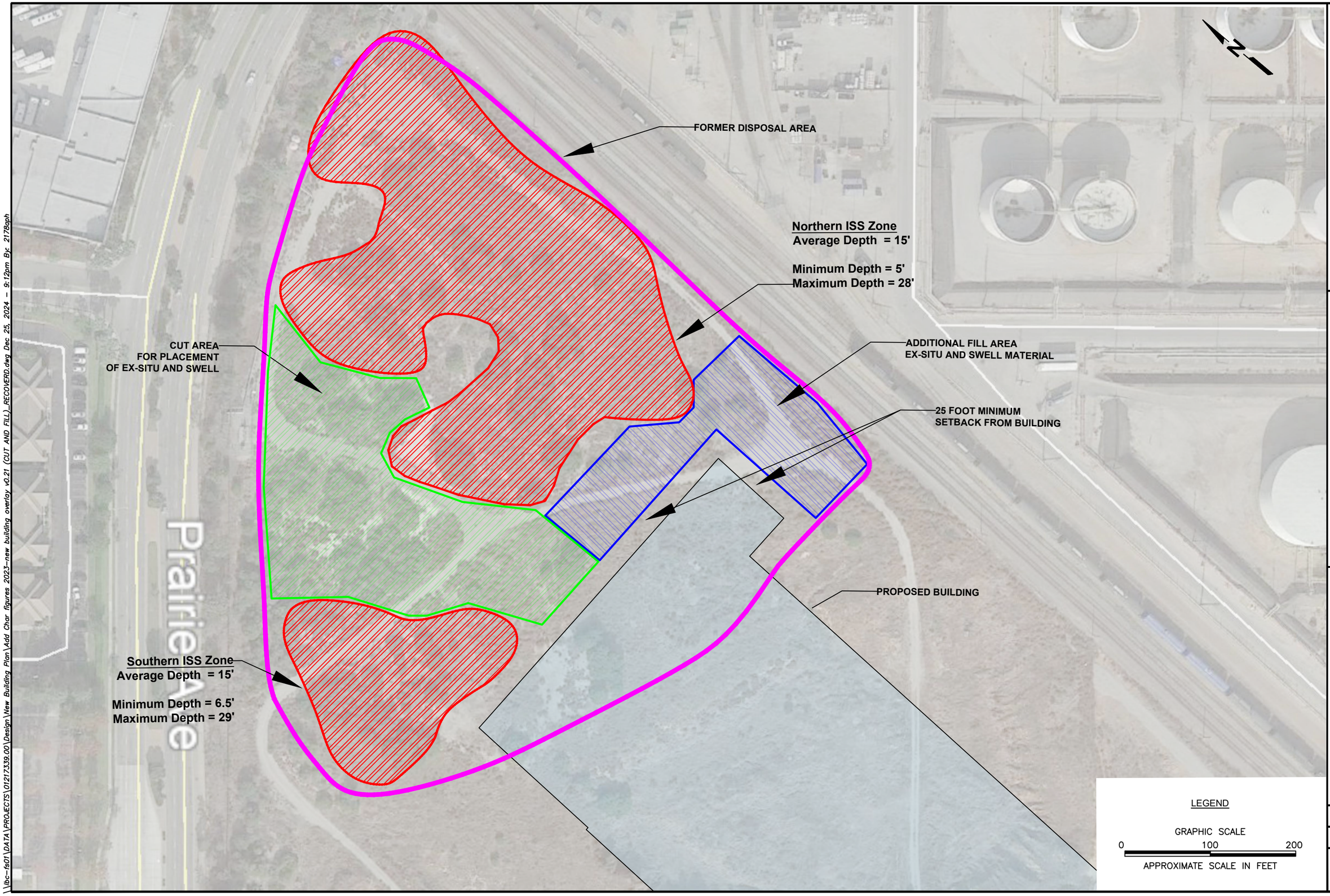
RISK ASSESSMENT CONCEPTUAL SITE MODEL

NORTH POSSE SITE, 3014 DEL AMO BLVD, TORRANCE, CALIFORNIA



● Indicates a complete exposure pathway.

○ Indicates an incomplete exposure pathway.



SHEET TITLE: ISS AND ESS PLACEMENT AREAS

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ NO.	DWN BY	CHK BY	ACAD FILE	APP BY
012173339.00	RR	KWG	LOCATION	KWG

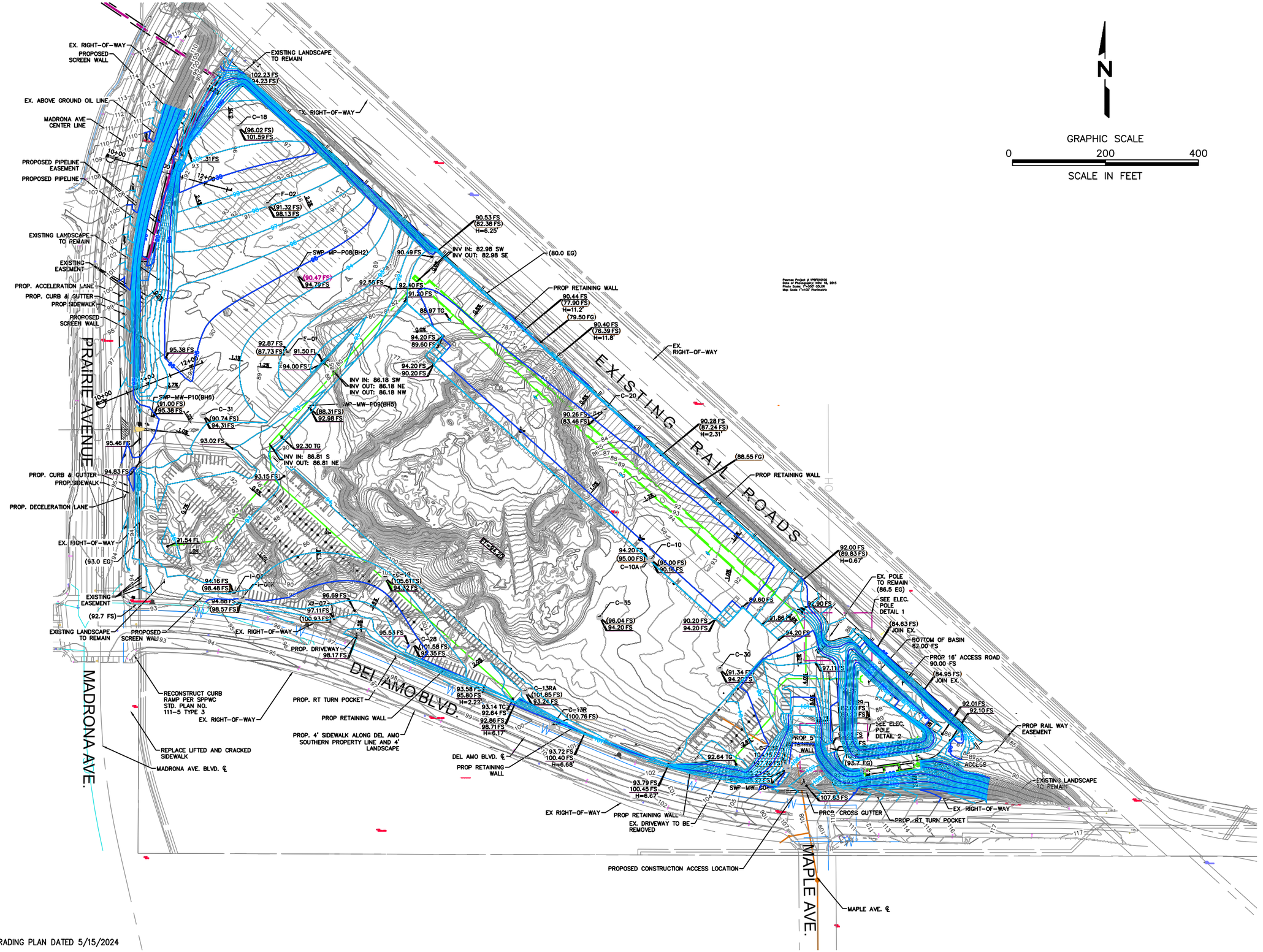
DSN BY: RR

DATE: JULY 2024

SCALE: 1" = 100'

FIGURE NO. 38

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N

GRAPHIC SCALE

0 200 400

SCALE IN FEET

NO.	REVISION	DATE
		2-DATE

SHEET TITLE: PROJECTED FINAL SITE GRADES

PROJECT TITLE: NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	01217339.00
DSN. BY:	DESIGN
DWN. BY:	KIMLEY HORN
CHK. BY:	APH
ACAD FILE	LOCATION
APP. BY:	KHL

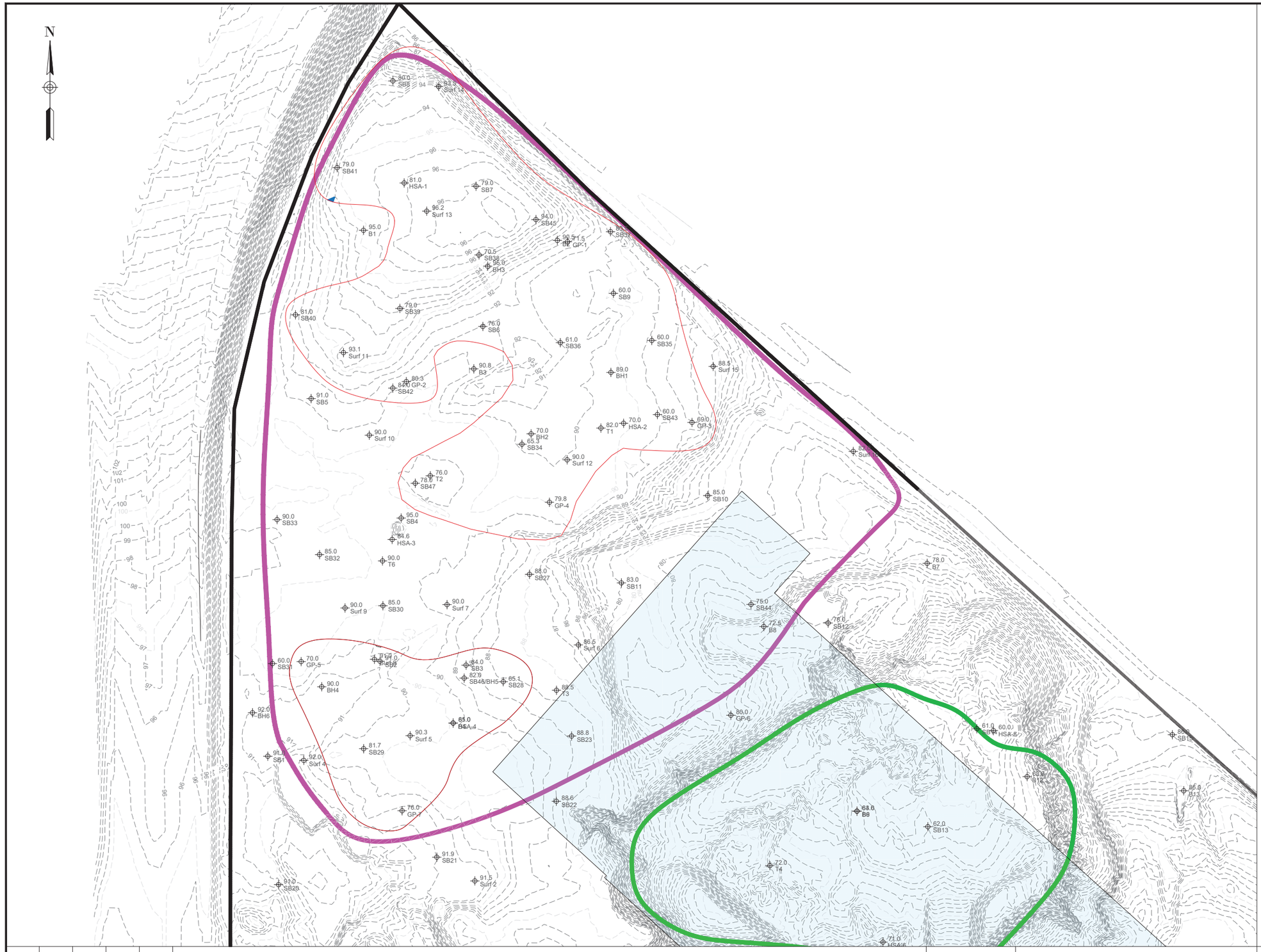
DATE: JANUARY 2025

SCALE: 1" = 200'

FIGURE NO. 39

SOURCE: KIMLEY-HORN PRELIMINARY GRADING PLAN DATED 5/15/2024

\\bc-fs01\DATA\PROJECTS\01217339.00\Design\New Building Plan\Figure 39 - 1 GRADING AND DRAINAGE PLAN.dwg Jan 10, 2025 - 5:1pm By: 2747r_r



LEGEND

- EXISTING MAJOR CONTOURS — 50
- EXISTING MINOR CONTOURS — 48
- PROPERTY BOUNDARY
- FORMER DISPOSAL AREA
- BORROW PIT
- PROPOSED ISS AREAS
- PROPOSED BUILDING FOOTPRINT
- SOIL BORINGS — MAX. EXCEEDANCE ELEV. BORING ID

NOTES

1. BASEMAP DATA PROVIDED BY SCS BASED ON JULY 2024 FIGURES.
2. THE DATA DEPICTED HEREIN ARE BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83) FOR HORIZONTAL AND GEOMETRIC CONTROL DATUM AND NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

0 25 50 100
SCALE:1"=50'

REVISION	DATE	BY	CHECKED	APPROVED	DESCRIPTION

Signature_____

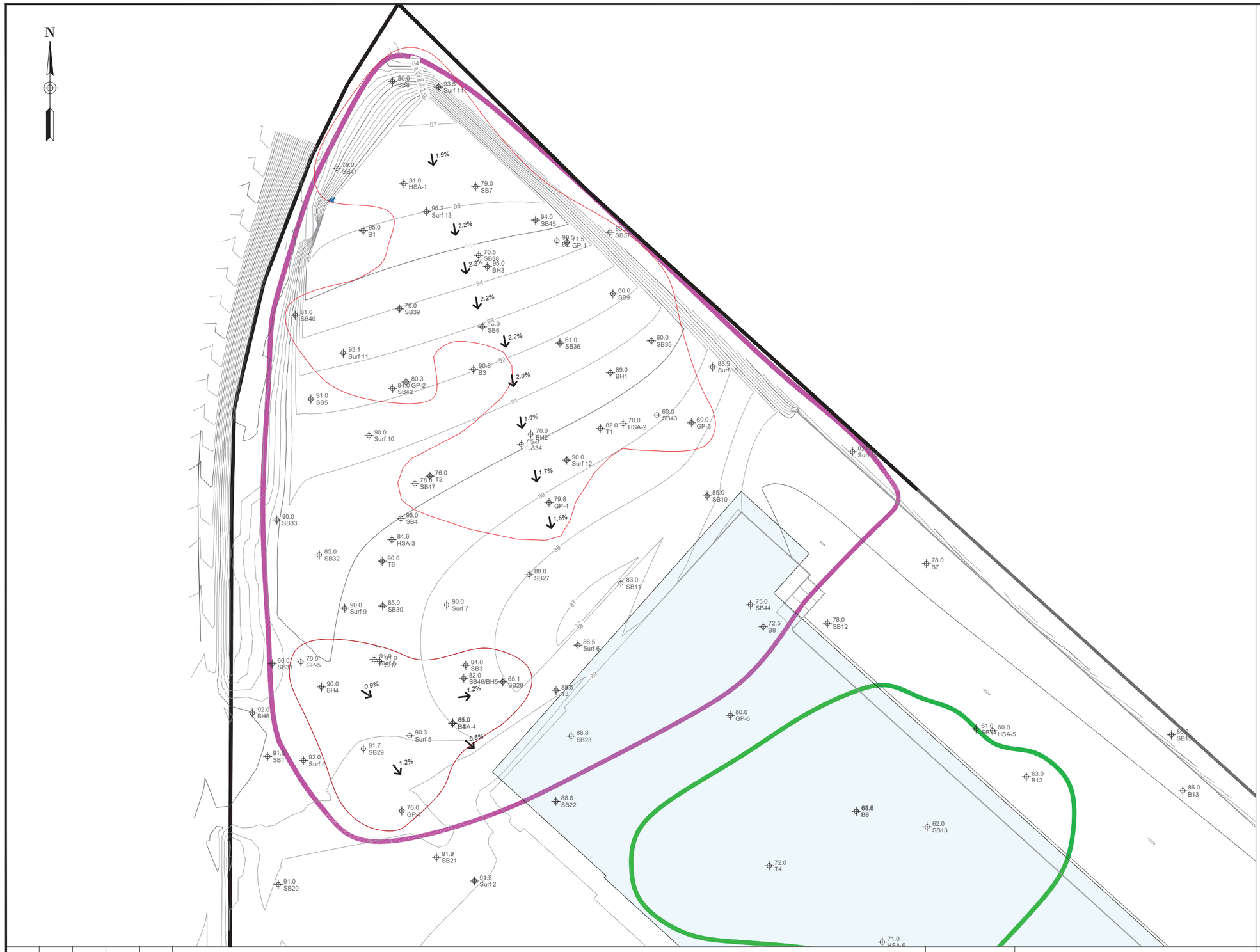
NOT FOR CONSTRUCTION

ENTACT.

DRAWING NAME
FIGURE 40 - EXISTING GRADE

PROJECT NAME & LOCATION
TORRANCE POSSE
TORRANCE, CA

DRAWN BY	J.CARR	APPROVED BY	T.MORAN	DRAWING NO.	1 OF 3
DATE	12/6/2024	DATE	12/6/2024	PROJECT NO.	E9109



LEGEND

- ISS WORKPAD MAJOR CONTOURS — 50
- ISS WORKPAD MINOR CONTOURS — 48
- PROPERTY BOUNDARY
- FORMER DISPOSAL AREA
- BORROW PIT
- PROPOSED ISS AREAS
- PROPOSED BUILDING FOOTPRINT
- SOIL BORINGS — MAX. EXCEEDANCE ELEV. BORING ID
- WORK PAD SLOPE GRADE — 1.9%

NOTES

1. BASEMAP DATA PROVIDED BY SCS BASED ON JULY 2024 FIGURES.
2. THE DATA DEPICTED HEREIN ARE BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83) FOR HORIZONTAL AND GEOMETRIC CONTROL DATUM AND NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
3. PROPOSED ISS WORKPAD SURFACE IS BASED ON 5 FEET BELOW THE PROPOSED FINAL GRADE TO ALLOW FOR 5 FEET OF CLEAN FILL ABOVE THE TOP OF ISS. ISS WORKPAD WILL BE DESIGNED FOR A MAXIMUM SLOPE OF 2% IN ISS AREAS FOR EQUIPMENT STABILITY PURPOSES.

0 25 50 100
SCALE: 1"=50'

REVISION	DATE	BY	CHECKED	APPROVED	DESCRIPTION

Signature_____

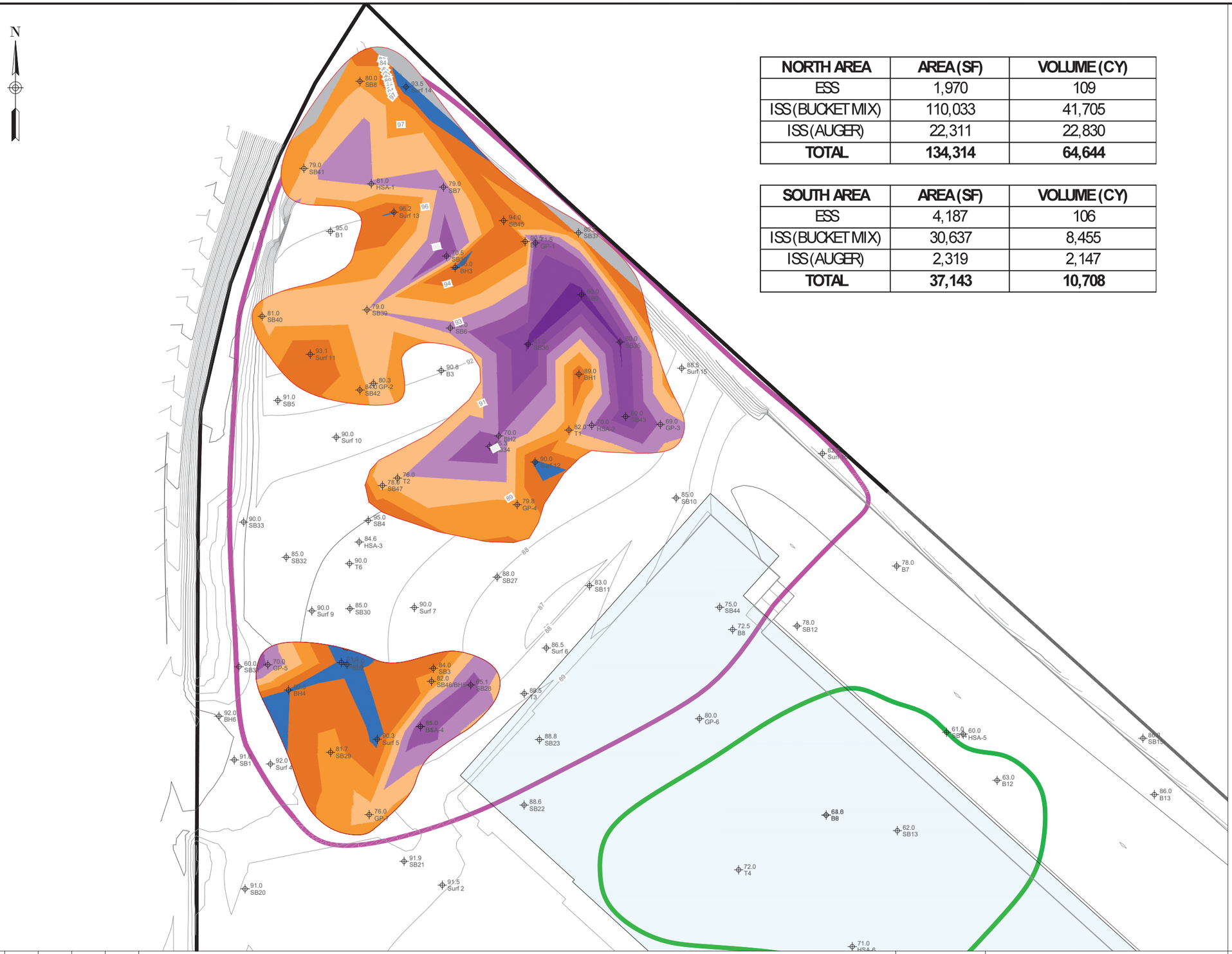
NOT FOR CONSTRUCTION

ENTACT.

DRAWING NAME
FIGURE 41 - PROPOSED ISS WORKPAD GRADES

PROJECT NAME & LOCATION
TORRANCE POSSE
TORRANCE, CA

DRAWN BY	J.CARR	APPROVED BY	T.MORAN	DRAWING NO.	2 OF 3
DATE	12/6/2024	DATE	12/6/2024	PROJECT NO.	E9109



NORTH AREA	AREA (SF)	VOLUME (CY)
ESS	1,970	109
ISS (BUCKET MIX)	110,033	41,705
ISS (AUGER)	22,311	22,830
TOTAL	**134,314**	**64,644**

SOUTH AREA	AREA (SF)	VOLUME (CY)
ESS	4,187	106
ISS (BUCKET MIX)	30,637	8,455
ISS (AUGER)	2,319	2,147
TOTAL	**37,143**	**10,708**

LEGEND

- ISS WORKPAD MAJOR CONTOURS — 50
- ISS WORKPAD MINOR CONTOURS — 48
- PROPERTY BOUNDARY
- FORMER DISPOSAL AREA
- BORROW PIT
- PROPOSED ISS AREAS
- PROPOSED BUILDING FOOTPRINT
- ESS > 5 FT
- ISS DEPTH 0-5 FT
- ISS DEPTH 5-10 FT
- ISS DEPTH 10-15 FT
- ISS DEPTH 15-20 FT
- ISS DEPTH 20-25 FT
- ISS DEPTH 25-30 FT
- ISS DEPTH 30 - 35 FT
- MISSING DATA (SEE NOTE 4)
- SOIL BORINGS — MAX. EXCEEDANCE ELEV. BORING ID

NOTES

1. BASEMAP DATA PROVIDED BY SCS BASED ON JULY 2024 FIGURES.
2. THE DATA DEPICTED HEREIN ARE BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83) FOR HORIZONTAL AND GEOMETRIC CONTROL DATUM AND NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
3. PROPOSED ISS WORKPAD SURFACE IS BASED ON 5 FEET BELOW THE PROPOSED FINAL GRADE TO ALLOW FOR 5 FEET OF CLEAN FILL ABOVE THE TOP OF ISS. ISS WORKPAD WILL BE DESIGNED FOR A MAXIMUM SLOPE OF 2% IN ISS AREAS FOR EQUIPMENT STABILITY PURPOSES. ISS QUANTITIES MAY CHANGE +/- 10% FROM THIS RAP TO REMEDIAL DESIGN.
4. FINAL GRADE SURFACE DOES NOT OVERLAP WITH PROPOSED ISS AREAS.

0 25 50 100
SCALE:1"=50'

REVISION	DATE	BY	CHECKED	APPROVED	DESCRIPTION

Signature

NOT FOR CONSTRUCTION

ENTACT.

DRAWING NAME: FIGURE 42 - ISS DEPTHS

PROJECT NAME & LOCATION: TORRANCE POSSE, TORRANCE, CA

DRAWN BY	J.CARR	APPROVED BY	T.MORAN	DRAWING NO.	3 OF 3
DATE	12/6/2024	DATE	12/6/2024	PROJECT NO.	E9109

Tables

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL - TPH, VOCs, SVOCs, and PCBs (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (BGS)	Surface Elevation (ft above msl)	Sample Elevation	Sampe Date	Total Petroleum Hydrocarbons (EPA Method 8015M)			Volatile Organic Compounds (EPA Method 8260B)*																			Semi-Volatile Organic Compounds (EPA Method 8270C)*																							PCBs (EPA Method 8082)*
					Gasoline Range (C_4-C_{12})	Diesel Range (C_{13}-C_{22})	Heavy Hydrocarbon Range (C_{23}-C_{40})	Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene	4-Isopropyltoluene	Naphthalene	n-Propylbenzene	1,2,4- Trichlorobenzene	1,2,4- Trimethylbenzene	1,3,5- Trimethylbenzene	Toluene	tert-Butyl Alcohol	Vinyl Chloride	Xylenes	2-Butanone (MEK)	Methyl tert-Butyl Ether	Naphthalene	2-Methylnaphthalene	2-Methylphenol(O-cresol)	2,4-Dimethylphenol	Carbazole	Phenanthrene	Anthracene	Fluoranthene	Fluorene	Pyrene	bis(2-Ethylhexyl) Phthalate	Benzo(a)anthracene	Benzoic Acid	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(e)pyrene	Indeno(1,2,3-C,D)Pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	All Analytes
					milligrams per kilogram (mg/kg), equivalent to parts per million			micrograms per kilogram (ug/kg), equivalent to parts per billion																																									
T1	9	91	82		**2,270**	**40,800**	**7,800**	**390**	**4,240**	**3,170**	**306**	**8,680**	**3,770**	**213**	**38,600**	**7,760**	**678**	**380**	<176	<176	<8,800	<176	**800**	<1760	<176	**22,800**	**120,000**	<200	<200	<200	**16,000**	<200	**686**	<200	**7,620**	<200	**8,950**	<800	**17,900**	**4,360**	**4,430**	**4,140**	**1,190**	**2,980**	**3,030**	ND
	19.5		71.5		**87.7**	**880**	**320**	<44	**380**	**193**	<44	**341**	**147**	**218**	**4,450**	**413**	**166**	**490**	**88.9**	<44	<2,200	<44	**132**	<440	<44	**532**	**1,050**	<200	<200	<200	**692**	<200	<200	<200	**234**	<200	<200	<800	**299**	<200	<200	<200	<200	<200	<200	ND
T2	14	90	76	5/29/2018	**118**	**11,500**	**8,900**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T3	0.5	89	88.5		**0.22**	**434**	**450**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1.5		87.5		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T4	8.5	72	63.5		<0.2	<5	**46.1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14.5		57.5		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T5	7	90	83		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T6	0.5	90	89.5		<0.2	**935**	**574**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B4	10	91	81		**29.6**	**2,460**	**830**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<200	<200	<200	<200	<200	<200	<200	<200	**2,040**	<200	**626**	<800	**1,280**	**3,110**	**3,160**	**2,000**	**2,230**	**389**	**6,900**	ND
B7	30	78	48		**0.65**	<5	<10	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<55	<1.1	<2.2	<11	<1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B8	1.5	79	77.5	5/30/2018	**0.49**	<5	**24**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**2,680**	**4,680**	<200	<200	**2,350**	**47,200**	**2,870**	**2,120**	<200	**15,000**	<200	**21,700**	<800	<200	<200	**8,440**	**10,400**	<200	**5,880**	**6,720**	ND
B9	4	65	61		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	16		49		**1.43**	<5	<10	**14.9**	**1.54**	<1	<1	**7.26**	<1	<1	**16.8**	**2.33**	<1	**21.6**	**7.22**	<1	<50	<1	**18.7**	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B10	2	106	104		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		96		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B11	20	85	65		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B13	5	86	81	5/31/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		76		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		66		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		56		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B14	5	95	90		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		85		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		80		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		75		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B15	5	94	89		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		84		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		79		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		74		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		69		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B19	5	86	81		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		76		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		66		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B20	5	91	86		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		81		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		76		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		66		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		61		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB1	5	91	86	6/20/2018	<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		81		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		76		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		71		<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<55	<1.1	<2.2	<11	<1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB2	5	93	88	6/20/2018	**0.48**	**233**	**275**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		83		<0.2	**136**	**55.1**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<55	<1	<2	<10	<1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<800	<200	<200	<200	<200	<200	<200	**884**	PCB 1260 - **651**
	15		78		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		73		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB3	5	91	86	6/19/2018	**0.46**	**516**	**513**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<200	**229**	<200	<200	<200	<200	<200	<200	<200	<200	<200	**1,130**	<800	**3,310**	<200	**3,330**	**3,670**	**1,370**	**1,700**	**3,840**	--
	10		81		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		76		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		66		**0.32**	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		61		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		56		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**69.6**	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40		51		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**177**	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB4	5	95	90	6/25/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		85		**0.49**	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		80		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		75		<0.2	<5	<10	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<55	<1.1	<2.2	<11	<1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB5	5	91	86		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		81		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		76		**0.67**	<5	<10	**50.4**	<1.3	<1.3	<1.3	**6.74**	<1.3	<1.3	<1.3	<1.3	<1.3	**4.01**	**2.86**	**48.1**	<65	<1.3	**8.36**	<13	<1.3	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<800	<200	<200	<200	<200	<200	<200	<200	ND
	20		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		66		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	5	91	86		**1,490**	**22,900**	**3,000**	<232	**1,610**	**1,020**	**365**	**720**	**418**	**1,800**	**14,500**	**1,010**	<232	**3,350**	**527**	<232	<11,600	<232	**820**	<2,320	<232	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		81		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<200	<200	<200	<200	<200	**951**	**251**	**512**	**234**	<200	<200	<200	**975**	**307**	<200	<200	<200	<200	<200	<200	--
	15		76		**0.77**	**1,080**	<10	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	**1,090**	<0.9	<1.8	**46.2**	<0.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		66		**1.37**	<5	<10	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	**166**	<1.2	<2.4	<12	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	5	99	94	6/20/2018	<0.2	**547**	**655**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<200	<200	<200	<200	<200	<200	<200	<200	**282**	<200	<200	<800	<200	<200	<200	<200	<200	<200	<200	--
	10		89		**7.91**	**1,640**	**924**	<5	<5	<5	<5	<5	<5	<5	<5	<5	**6.86**	<5	<5	**890**	<5	<10	<50	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	15		84		**12.8**	**1,940**	**2,800**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	20		79		**517**	**24,400**	**10,700**	<12	**131**	**414**	**43.6**	**470**	**437**	**31.4**	**700**	**481**	<12	**37.6**	<12	<12	<600	<12	**100**	<120	<12	<200	<200	<200	<200	<200	<200	<200	<200	<200	**3,090**	**259**	<200	<800	<200	<200	<200	<200	<200	<200	<200	--
	25		74		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		69		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**80.6**	<1	<2	<10	<1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<800	<200	<200	<200	<200	<200	<200	<200	--
RWQCB SSLs (<20 above groundwater)					100	100	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RWQCB SSLs (20-150 feet above groundwater)					500	1,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs					--	--	--	2.6	3,200	5,900	1,600	780	740	--	0.54	1,200	200	81	87	690	--	0.69	190	1,200	3.2	0.54	190	750	420	--	--	58,000	89,000	5,400	13,000	1,400	11	15,000	9,000	300	2,900	240	980	96	--	--
Source of DTSC-Recommended SL (RSL or HERO Note 3)					--	--	--	HERO	HERO	HERO	HERO	RSL	RSL	--	RSL	RSL	RSL	RSL	RSL	HERO	--	HERO	RSL	RSL	RSL	RSL	RSL	RSL	RSL	--	--	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	--	--
DTSC-Recommended SL (Commercial/Industrial)					--	--	--	1,400	18,000,000	12,000,000	12,000,000	25,000	9,900,000	--	17,000	24,000,000	110,000	1,800,000	1,500,000	5,300,000	--	150	11,000	190,000,000	210,000	17,000	3,000,000	41,000,000	16,000,000	--	--	230,000,000	30,000,000	30,000,000	23,000,000	160,000	21,000	3,300,000,000	2,100,000	21,000	210,000	2,100	21,000	2,100	--	--

Notes:

-- = Not Analyzed, Not Applicable, or Not Calculated

ND = Not detected, all analytes

Gray Highlight = Concentration of analyte is above screening limit

* Only analytes detected are listed, refer to analytical report for full list.

RWQCB SSLs = Los Angeles Regional Water Quality Control Board Soil Screening Levels.

Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - industrial/commercial land use scenarios June 2018 and U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).

"J" Indicates analyte was detected. However, analyte concentration is an estimated value which is between the method detection limit (MDL) and the practical quantitation limit (PQL).

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL - TPH, VOCs, SVOCs, and PCBs (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (BGS)	Surface Elevation (ft above msl)	Sample Elevation	Sampe Date	Total Petroleum Hydrocarbons (EPA Method 8015M)			Volatile Organic Compounds (EPA Method 8260B)*																			Semi-Volatile Organic Compounds (EPA Method 8270C)*																					PCBs (EPA Method 8082)*
					Gasoline Range (C_4-C_{12})	Diesel Range (C_{13}-C_{22})	Heavy Hydrocarbon Range (C_{23}-C_{40})	Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene	4-Isopropyltoluene	Naphthalene	n-Propylbenzene	1,2,4- Trichlorobenzene	1,2,4- Trimethylbenzene	1,3,5- Trimethylbenzene	Toluene	tert-Butyl Alcohol	Vinyl Chlorde	Xylenes	2-Butanone (MEK)	Methyl tert-Butyl Ether	Naphthalene	2-Methylnaphthalene	2-Methylphenol(O-cresol)	2,4-Dimethylphenol	Carbazole	Phenanthrene	Anthracene	Fluoranthene	Fluorene	Pyrene	bis(2-Ethylhexyl) Phthalate	Benzo(a)anthracene	Benzoic Acid	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-C,D)Pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	All Analytes
					milligrams per kilogram (mg/kg), equivalent to parts per million			micrograms per kilogram (ug/kg), equivalent to parts per billion																																								
SB8	5	95	90	6/25/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		85		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		80		**2.7**	**4,860**	**3,240**	**1.48**	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	**2.05**	<1.2	<1.2	**174**	<1.2	**3.31**	<12	<1.2	**252**	**297**	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<800	**294**	<200	<200	<200	<200	<200	<200	ND
	20		75		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		65		**0.25**	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<800	<200	<200	<200	<200	<200	<200	<200	--
	35		60		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40		55		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	45		50		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<800	<200	<200	<200	<200	<200	<200	<200	ND
SB9	5	91	86	6/25/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		81		**2,090**	**24,900**	**6,600**	**2,130**	**3,360**	**1,960**	<807	**4,030**	**1,410**	**3,500**	**180,000**	**3,350**	<607	**28,000**	**8,440**	**4,520**	<30,350	<607	**19,500**	<6,070	<607	**33,100**	**85,600**	**3,620**	**29,000**	<200	**23,800**	**1,450**	**1,060**	**4,790**	<200	<200	**7,620**	<800	**28,800**	<200	**4,540**	**5,700**	**12,100**	<200	**3,340**	ND
	15		76		**4,620**	**27,400**	**2,200**	**6,060**	**8,200**	**4,940**	<740	**24,200**	**5,760**	**6,700**	**209,000**	**12,100**	<740	**82,800**	**33,700**	**36,400**	<37,000	<740	**176,000**	<7,400	<740	**6,450**	**15,200**	<200	<200	<200	**1,970**	**202**	<200	**730**	<200	<200	**260**	<800	**512**	<200	<200	<200	<200	<200	<200	ND
	20		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		66		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		61		**1,270**	**8,300**	**718**	**330**	**1,620**	**990**	**174**	**2,260**	**830**	**1,410**	**29,700**	**1,740**	<50	**10,100**	**1,600**	**81.5**	**4,900**	<50	**3,210**	<500	<50	**5,140**	**20,500**	<200	<200	<200	**2,390**	<200	<200	**1,380**	<200	<200	**262**	<800	**416**	<200	<200	<200	<200	<200	<200	ND
	35		56		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40		51		**1,890**	**2,850**	**240**	**160**	**1,110**	**622**	**174**	**1,290**	**450**	**1,060**	**46,700**	**1,200**	<112	**5,990**	**2,100**	<112	<5600	<112	**1,750**	<1,120	<112	**3,300**	**7,040**	<200	<200	<200	**612**	<200	<200	<200	<200	<200	<800	<200	<200	<200	<200	<200	<200	<200	--
SB10	5	85	80	6/20/2018	<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		75		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		70		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		65		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB11	5	83	78	6/19/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		73		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		68		--	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		63		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		58		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		53		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB12	5	78	73	6/20/2018	<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		68		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		63		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		58		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		53		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB13	5	62	57	6/20/2018	**11.4**	<5	<10	**270**	**9.84**	**6.67**	<4	**166**	**11.2**	**5.07**	<4	**36.7**	<4	**259**	**85.1**	**7.79**	**650**	<4	**510**	<40	**160**	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	**884**	--
	10		52		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		47		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB14	5	61	56		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		51		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		46		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB15	5	86	81	6/21/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		76		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		71		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		66		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		61		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		56		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		51		**2.66**	<5	<10	**22.2**	<1	<1	<1	**2.93**	<1	<1	**9.20**	<1	<1	**12.9**	**4.55**	**3.47**	<50	<1	**27.9**	<10	**11.8**	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	--
SB16	5	93	88	6/21/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		83		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		78		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		73		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		68		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**80.6**	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		63		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	--
SB17	5	90	85	6/21/2018	<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		80		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		75		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		70		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		65		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		60		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	**7.63**	<1	<1	**2.59**	<1	<1	<50	**2.18**	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		55		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40		50		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	**14.8**	<1	<1	**8.98**	**2.09**	<1	<50	**3.26**	<2	<10	<1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	--
SB18	5	96	91	6/21/2018	<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<10	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		86		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		81		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		76		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB19	5	89	84	6/20/2018	<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	--
	10		79		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		74		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		69		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		64		<0.2	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		59		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		54		<0.2	<5	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1	<2	<2	<1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	--
RWQCB SSLs (<20 above groundwater)					100	100	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RWQCB SSLs (20-150 feet above groundwater)					500	1,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs					--	--	--	2.6	3,200	5,900	1,600	780	740	--	0.54	1,200	200	81	87	690	--	0.69	190	1,200	3.2	0.54	190	750	420	--	--	58,000	89,000	5,400	13,000	1,400	11	15,000	9,000	300	2,900	240	980	96	--	--
Source of DTSC-Recommended SL (RSL or HERO Note 3)					--	--	--	HERO	HERO	HERO	HERO	RSL	RSL	--	RSL	RSL	RSL	RSL	RSL	HERO	--	HERO	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	--	--	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	--	--
DTSC-Recommended SL (Commercial/Industrial)					--	--	--	1,400	18,000,000	12,000,000	12,000,000	25,000	9,900,000	--	17,000	24,000,000	110,000	1,800,000	1,500,000	5,300,000	--	150	11,000	190,000,000	210,000	17,000	3,000,000	41,000,000	16,000,000	--	--	230,000,000	30,000,000	30,000,000	23,000,000	160,000	21,000	3,300,000,000	2,100,000	21,000	210,000	2,100	21,000	2,100	--	--

Notes:

-- = Not Analyzed, Not Applicable, or Not Calculated

ND = Not detected, all analytes

Gray Highlight = Concentration of analyte is above screening limit

* Only analytes detected are listed, refer to analytical report for full list.

RWQCB SSLs = Los Angeles Regional Water Quality Control Board Soil Screening Levels.

Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - industrial/commercial land use scenarios June 2018 and U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).

"J" Indicates analyte was detected. However, analyte concentration is an estimated value which is between the method detection limit (MDL) and the practical quantitation limit (PQL).

TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR METALS AND PESTICIDES IN SOIL (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals (EPA Method 6010B, except Mercury by EPA Method 7471A)																	OCPs (EPA Method 8081A)										
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead (STLC/TCLP)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Hexavlent Chromium	Chlordane (total)	Chlordane (alpha)	Chlordane (gamma)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Heptachlor	Heptachlor Epoxide	Betta-BHC	Toxaphene
			milligrams per kilogram (mg/kg), equivalent to parts per million																		micrograms per kilogram (ug/kg), equivalent to parts per billion										
T1	9	5/29/2018	<2	<2	**90.7**	<1	<1	**26.6**	**7.20**	**22.6**	**165 (9.04 /0.10)**	<0.05	<2	**16.4**	<2	<1	<2	**30.3**	**51.5**	--	--	--	--	--	--	--	--	--	--	--	--
	19.5		<2	**2.91**	**51.5**	<1	<1	**14.4**	**4.66**	**8.39**	**4.78**	<0.05	<2	**6.41**	<2	<1	<2	**21.8**	**15.5**	--	--	--	--	--	--	--	--	--	--	--	--
T2	14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T3	0.5		<2	<2	**69.6**	<1	<1	**176**	**18.2**	**106**	**903 (33.2** / <0.1)	<0.05	<2	**52.0**	<2	<1	<2	**124**	**327**	**3.21**	<2	<2	<2	**27.2**	<2	**126**	<2	<2	<2	<2	<2
	1.5		<2	<2	**64.2**	<1	<1	**10.5**	**4.77**	**8.76**	**2.55**	<0.05	<2	**5.85**	<2	<1	<2	**14.4**	**15.2**	--	--	--	--	--	--	--	--	--	--	--	--
T4	8.5		<2	<2	**76.8**	<1	<1	**11.3**	**6.67**	**16.7**	**14.6**	<0.05	<2	**10.2**	<2	<1	<2	**23.6**	**41.1**	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	14.5		<2	**6.09**	**163**	<1	<1	**20.6**	**10.7**	**25.7**	**5.73**	<0.05	<2	**19.8**	<2	<1	<2	**41.3**	**43.2**	--	--	--	--	--	--	--	--	--	--	--	--
T5	7		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T6	0.5		<2	<2	**31.4**	<1	<1	**183**	**5.57**	**28.9**	**181 (4.75/0.44)**	<0.05	<2	**17.6**	<2	<1	<2	**27.0**	**177**	**3.51**	<2	<2	<2	**9.82**	**21.5**	**72.5**	<2	**61.0**	**11.1**	<2	<2
B4	10		--	--	--	--	(S /T)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B7	30	5/30/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B8	1-2		<2	<2	**38.3**	<1	<1	**41.2**	**5.42**	**27.5**	**126** (<0.02/**0.65**)	<0.05	<2	**15.7**	<2	<1	<2	**26.5**	**42.1**	--	--	--	--	--	--	--	--	--	--	--	--
B9	4		<2	<2	**101**	<1	<1	**18.7**	**11.2**	**24.7**	**7.09**	<0.05	<2	**17.0**	<2	<1	<2	**40.4**	**55.1**	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCP1	surface		<2	<2	**28.3**	<1	<1	**8.85**	**3.94**	**11.9**	<2	<0.05	<2	**6.26**	<2	<1	<2	**12.1**	**38.1**	--	**2.37**	**1.20J**	**1.17J**	**18.9**	**386**	**151**	<2	<2	<2	<2	**719**
OCP2	surface		<2	<2	**22.9**	<1	<1	**8.59**	**4.10**	**11.2**	**16.3**	<0.05	<2	**5.79**	<2	<1	<2	**11.9**	**43.7**	--	<2	<2	<2	**7.22**	**86.3**	**61.1**	<2	<2	<2	**1.07J**	**471**
OCP3	surface		<2	<2	**41.3**	<1	<1	**10.5**	**4.11**	**15.8**	**16.3**	<0.05	<2	**6.53**	<2	<1	<2	**15.8**	**64.9**	--	**2.32**	**1.00J**	**1.32J**	**10.4**	**160**	**57.0**	<2	<2	<2	**1.47J**	**161J**
OCP4	surface		<2	<2	**32.9**	<1	<1	**8.39**	**3.98**	**15.3**	**18.8**	<0.05	<2	**6.23**	<2	<1	<2	**13.2**	**40.9**	--	**1.17J**	<2	<2	**13.6**	**328**	**83.4**	<2	<2	<2	<2	**250**
B10	2	5/31/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B11	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B13	5		<2	<2	**53.5**	<1	<1	**10.0**	**4.92**	**9.54**	**2.75**	<0.05	<2	**5.90**	<2	<1	<2	**15.6**	**15.3**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B14	5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B15	5		<2	<2	**54.0**	<1	<1	**9.87**	**4.65**	**10.3**	**2.42**	<0.05	<2	**5.59**	<2	<1	<2	**14.7**	**14.7**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B19	5		<2	<2	**25.8**	<1	<1	**5.25**	**2.22**	**5.91**	<2	<0.05	<2	**2.86**	<2	<1	<2	**7.38**	**8.56**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B20	5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB1	5	6/20/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB2	5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		<2	<2	**275**	<1	<1	**169**	**5.96**	**80.2**	**392 (4.69**/<0.02)	<0.05	<2	**47.4**	<2	<1	<2	**74.3**	**217**	**0.162 J**	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB3	5	6/19/2018	<2	<2	**738**	<1	<1	**241**	**6.49**	**19.3**	**205 (4.74/**<0.02)	<0.05	<2	**11.3**	<2	<1	<2	**114**	**33.3**	**0.151 J**	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs			0.27	0.29	82	3.2	--	40,000,000	0.27	28	14	0.10	2.0	26	0.26	0.80	0.14	86	370	0.00067	270	--	--	7.5	11	77	0.071	33	4.1	--	460
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	HERO	RSL	HERO	RSL	--	RSL	--	--	RSL	RSL	RSL	RSL	RSL	RSL	--	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	12 [β]	220,000	210	7.3	170,000	350	47,000	320	4.4	5,800	3,100	5,800	1,500	12	1,000	350,000	6.3	7,700	--	--	9,600	9,300	8,500	140	630	330	--	2,100
TTLC			500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000	500	2,500	--	--	1.0	1.0	1.0	1.0	4.7	4.7	--	5.0
STLC**			15	5	100	0.75	1	5	80	25	5	0.2	350	20	1	5	7	24	250	5	250	--	--	0.1	0.1	0.1	0.1	0.47	0.47	--	0.5
TCLP**			--	5	100	--	1	5	--	--	5	0.2	--	--	1	5	--	--	--	--	30	--	--	--	--	--	--	0.008	0.008	--	0.5

Notes:
bgs = below ground surface
* Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Fampton, J.A., and Wright, H., 1996, *Background Concentrations of Trace and Major Elements in California Soils,* Kearney Foundation of Soil Science Special Report, Division of Agriculture and Natural Resources, University of California.
** - Values in milligrams per liter (mg/L)
Gray Highlight = Concentration of analyte is above screening limit
Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018
DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - industrial/commercial land use scenarios June 2018 and U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).
[β] DTSC-recommended SL for arsenic is based on acceptable levels for school sites up to 12 mg/kg.
TTLC = Total Threshold Limit Concentration as identified in Title 22 of the California Code of Regulations. Wastes with concentrations above this value are considered hazardous for the purposes of disposal under California regulations.
STLC = Soluble Threshold Limit Concentration, in mg/L, as identified in Title 22 of the California Code of Regulations. A concentration of ten times the STLC is sometimes used as a trigger to conduct further analysis (i.e., the soluble analysis) of a sample to determine disposal requirements. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

TCLP = Toxicity Characteristic Leaching Procedure concentration, in mg/L, as identified in the Code of Federal Regulations. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under federal regulations.

"J" Indicates analyte was detected. However, analyte concentration is an estimated value which is between the method detection limit (MDL) and the practical quantitation limit (PQL).
-- = Not Analyzed or Not Applicable

TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR METALS AND PESTICIDES IN SOIL (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals (EPA Method 6010B, except Mercury by EPA Method 7471A)																	OCPs (EPA Method 8081A)										
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead (STLC/TCLP)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Hexavlent Chromium	Chlordane (total)	Chlordane (alpha)	Chlordane (gamma)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Heptachlor	Heptachlor Epoxide	Betta-BHC	Toxaphene
			milligrams per kilogram (mg/kg), equivalent to parts per million																	micrograms per kilogram (ug/kg), equivalent to parts per billion										
SB4	5	6/25/2018	<2	<2	**156**	<1	<1	**9.46**	<2	**14.4**	**84.1**	<0.05	<2	**4.45**	<2	<1	<2	<2	**32.9**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB5	5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		<2	**6.85**	<2	<1	<1	<1	**4.75**	<2	**195 (7.24 / 0.11)**	<0.05	**26.3**	**21.6**	<2	<1	<2	<2	**154**	**0.185 J**	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	5		<2	**15.7**	**134**	<1	<1	**37.2**	<2	**59.6**	**158 (5.87/0.47)**	<0.05	<2	**10.3**	<2	<1	<2	**23.6**	**27.8**	--	--	--	--	--	--	--	--	--	--	--	--
	10		<2	<2	**72.6**	<1	<1	**11.0**	**2.06**	**19.1**	**135 (2.14 / 0.04)**	<0.05	<2	**4.70**	<2	<1	<2	**18.5**	**22.8**	<0.2	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	5	6/20/2018	<2	**3.56**	**300**	<1	<1	**70.9**	**6.06**	**68.9**	**344 (16.1/0.28)**	<0.05	<2	**46.0**	<2	<1	<2	**66.8**	**198**	--	--	--	--	--	--	--	--	--	--	--	--
	10		<2	<2	**179**	<1	<1	**5.09**	<2	**8.77**	**24.3**	<0.05	<2	**21.8**	<2	<1	<2	**28.5**	**38.9**	--	--	--	--	--	--	--	--	--	--	--	--
	15		<2	**9.15**	**152**	<1	<1	**28.0**	**19.0**	**538**	**41.8**	<0.05	<2	**198**	<2	<1	<2	**7.66**	**409**	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	5	6/25/2018	<2	<2	**77.3**	<1	<1	**21.5**	**3.69**	**46.3**	**418 (16.5/0.49)**	<0.05	<2	**14.3**	<2	<1	<2	**26.4**	**95.8**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		<2	<2	**47.6**	<1	<1	**7.09**	**3.40**	**8.79**	**2.89** / <0.01 / <0.01	<0.05	<2	**6.89**	<2	<1	<2	**12.4**	**16.3**	<0.2	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		<2	**4.02**	**25.7**	<1	<1	**11.7**	**3.72**	**4.40**	<2 / <0.01 / <0.01	<0.05	<2	**10.1**	<2	<1	<2	**18.8**	**20.1**	**0.271**	--	--	--	--	--	--	--	--	--	--	--
	40		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	45		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB9	5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		<2	**23.9**	**184**	<1	<1	**28.5**	<2	**129**	**840 / 3.23** / <0.01	<0.05	<2	**27.2**	<2	<1	<2	**19.9**	**8.66**	**1.12**	--	--	--	--	--	--	--	--	--	--	--
	20		<2	<2	**21.5**	<1	<1	**7.49**	<2	**2.90**	<2 / <0.01 / <0.01	<0.05	<2	**4.48**	<2	<1	<2	**68.9**	**6.63**	<0.2	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB10	5	6/20/2018	<2	<2	**58.1**	<1	<1	**9.50**	**2.80**	**9.88**	**2.04**	<0.05	<2	**4.66**	<2	<1	<2	**14.5**	**13.7**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB11	5	6/19/2018	<2	<2	**48.9**	<1	<1	**201**	**8.16**	**23.6**	**82.0**	<0.05	<2	**24.7**	<2	<1	<2	**21.1**	**121**	**3.54**	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB12	5		<2	<2	**42.3**	<1	<1	**20.8**	**4.15**	**6.61**	<2	<0.05	<2	**10.4**	<2	<1	<2	**22.3**	**16.6**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB13	5	6/20/2018	<2	<2	**175**	<1	<1	**20.3**	**10.7**	**23.8**	**9.28**	<0.05	<2	**16.8**	<2	<1	<2	**45.3**	**41.5**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	<2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		<2	<2	**8.68**	<1	<1	**6.28**	<2	**2.17**	<2	<0.05	<2	**3.60**	<2	<1	<2	**7.88**	**5.47**	--	--	--	--	--	--	--	--	--	--	--	--
SB14	5		<2	**4.59**	**29.9**	<1	<1	**17.8**	**4.33**	**6.92**	<2	<0.05	<2	**14.8**	<2	<1	<2	**30.3**	**19.5**	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs			0.27	0.29	82	3.2	--	40,000,000	0.27	28	14	0.10	2.0	26	0.26	0.80	0.14	86	370	0.00067	270	--	--	7.5	11	77	0.071	33	4.1	--	460
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	HERO	RSL	HERO	RSL	--	RSL	--	--	RSL	RSL	RSL	RSL	RSL	RSL	--	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	12 [β]	220,000	210	7.3	170,000	350	47,000	320	4.4	5,800	3,100	5,800	1,500	12	1,000	350,000	6.3	7,700	--	--	9,600	9,300	8,500	140	630	330	--	2,100
TTLC			500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000	500	2,500	--	--	1.0	1.0	1.0	1.0	4.7	4.7	--	5.0
STLC**			15	5	100	0.75	1	5	80	25	5	0.2	350	20	1	5	7	24	250	5	250	--	--	0.1	0.1	0.1	0.1	0.47	0.47	--	0.5
TCLP**			--	5	100	--	1	5	--	--	5	0.2	--	--	1	5	--	--	--	--	30	--	--	--	--	--	--	0.008	0.008	--	0.5

Notes:
bgs = below ground surface
* Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Fampton, J.A., and Wright, H., 1996, *Background Concentrations of Trace and Major Elements in California Soils,* Kearney Foundation of Soil Science Special Report, Division of Agriculture and Natural Resources, University of California.
** - Values in milligrams per liter (mg/L)
Gray Highlight = Concentration of analyte is above screening limit
Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018
DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - industrial/commercial land use scenarios June 2018 and U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).
[β] DTSC-recommended SL for arsenic is based on acceptable levels for school sites up to 12 mg/kg.
TTLC = Total Threshold Limit Concentration as identified in Title 22 of the California Code of Regulations. Wastes with concentrations above this value are considered hazardous for the purposes of disposal under California regulations.
STLC = Soluble Threshold Limit Concentration, in mg/L, as identified in Title 22 of the California Code of Regulations. A concentration of ten times the STLC is sometimes used as a trigger to conduct further analysis (i.e., the soluble analysis) of a sample to determine disposal requirements. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

TCLP = Toxicity Characteristic Leaching Procedure concentration, in mg/L, as identified in the Code of Federal Regulations. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under federal regulations.

"J" Indicates analyte was detected. However, analyte concentration is an estimated value which is between the method detection limit (MDL) and the practical quantitation limit (PQL).
-- = Not Analyzed or Not Applicable

TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR METALS AND PESTICIDES IN SOIL (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals (EPA Method 6010B, except Mercury by EPA Method 7471A)																	OCPs (EPA Method 8081A)										
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead (STLC/TCLP)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Hexavlent Chromium	Chlordane (total)	Chlordane (alpha)	Chlordane (gamma)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Heptachlor	Heptachlor Epoxide	Betta-BHC	Toxaphene
			milligrams per kilogram (mg/kg), equivalent to parts per million																		micrograms per kilogram (ug/kg), equivalent to parts per billion										
SB15	5	6/21/2018	<2	<2	**54.7**	<1	<1	**10.2**	**3.91**	**7.31**	<2	<0.05	<2	**5.89**	<2	<1	<2	**14.9**	**11.7**	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<170
	10		<2	<2	**18.1**	<1	<1	**10.0**	**2.28**	**4.58**	<2	<0.05	<2	**4.36**	<2	<1	<2	**13.4**	**5.09**	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		<2	<2	**10.7**	<1	<1	**8.23**	**2.08**	**3.11**	<2	<0.05	<2	**5.68**	<2	<1	<2	**10.7**	**8.86**	--	--	--	--	--	--	--	--	--	--	--
SB16	5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB17	5		<2	<2	**31.4**	<1	<1	**9.50**	**3.24**	**5.44**	<2	<0.05	<2	**4.82**	<2	<1	<2	**13.2**	**7.32**	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<170
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40		<2	<2	**12.6**	<1	<1	**8.61**	**2.42**	**3.29**	<2	<0.05	<2	**5.92**	<2	<1	<2	**10.0**	**8.81**	--	--	--	--	--	--	--	--	--	--	--
SB18	5		<2	<2	**20.0**	<1	<1	**7.88**	**2.06**	**4.40**	<2	<0.05	<2	**3.63**	<2	<1.0	<2	**9.60**	<5	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<170
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		<2	<2	**21.3**	<1	<1	**17.7**	**3.22**	**4.32**	<2	<0.05	<2	**8.21**	<2	<1.0	<2	**13.9**	**7.56**	--	--	--	--	--	--	--	--	--	--	--
SB19	5	6/21/2018	<2	<2	**44.5**	<1	<1	**10.2**	<2	**6.44**	<2	<0.05	<2	**5.60**	<2	<1	<2	**12.6**	**8.54**	--	--	--	--	--	--	--	--	--	--	--
	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	25		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	30		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	35		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Surface 1			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2	<2	<2	**10.5J**	<2	<2	<2	<2	<170
Surface 2			<2	<2	**36.1**	<1	<1	**17.5**	<2	**10.4**	**19.9**	<0.05	<2	**5.33**	<2	<1	<2	**11.7**	**64.3**	--	--	--	--	--	--	--	--	--	--	--
Surface 3			<2	<2	**42.7**	<1	<1	**8.22**	**2.19**	**27.0**	**20.8**	<0.05	<2	**8.67**	<2	<1	<2	**14.7**	**51.6**	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<170
Surface 4			<2	<2	**27.8**	<1	<1	**17.4**	**2.51**	**8.80**	**38.2**	<0.05	<2	**6.75**	<2	<1	<2	**16.4**	**24.1**	--	--	--	--	--	--	--	--	--	--	--
Surface 5			<2	**23.4**	**87.5**	<1	<1	**138**	**10.8**	**177**	**289 (6.12/0.44)**	<0.05	**36.8**	**123**	<2	<1	<2	**107**	**211**	**0.159 J**	--	--	--	--	--	--	--	--	--	--
Surface 6			<2	<2	**52.7**	<1	<1	**93.5**	**3.92**	**941**	**115**	<0.05	<2	**20.2**	<2	<1	<2	**42.3**	**235**	--	<2	<2	<2	<2	**60.2**	<2	<2	<2	<2	<170
Surface 7			<2	**10.5**	**57.5**	<1	<1	**72.6**	**6.94**	**35.5**	**83.1**	<0.05	<2	**26.4**	<2	<1	<2	**40.0**	**101**	--	--	--	--	--	--	--	--	--	--	--
Surface 8	--	6/18/2018	<2	**47.5**	**46.7**	<1	<1	**104**	**19.1**	**109**	**620 (7.36/0.07)**	<0.05	**12.8**	**54.9**	<2	<1	<2	**21.0**	**195**	<0.2	**18.1 J**	<2	<2	**18.1J**	**141**	**170**	<2	<2	<2	<2	<170
Surface 9			<2	<2	**13.1**	<1	<1	**29.6**	**2.56**	**22.8**	**56.4**	<0.05	<2	**18.4**	<2	<1	<2	**13.3**	**67.6**	--	--	--	--	--	--	--	--	--	--	--
Surface 10			<2	**8.47**	**128**	<1	<1	**56.9**	**5.19**	**52.2**	**293 (7.92/0.13)**	<0.05	**9.95**	**38.0**	<2	<1	<2	**25.5**	**43.6**	--	<2	<2	<2	<2	**17.8J**	**39.4**	<2	<2	<2	<2	<170
Surface 11			<2	<2	**92.9**	<1	<1	**24.3**	**2.42**	**38.4**	**263 (15.9/0.19)**	<0.05	<2	**15.3**	<2	<1	<2	**23.9**	**132**	--	--	--	--	--	--	--	--	--	--	--
Surface 12			<2	<2	**89.5**	<1	<1	**118**	**10.4**	**102**	**1115 (37.8/0.29)**	<0.05	<2	**68.8**	<2	<1	<2	**99.8**	**301**	<0.2	<2	<2	<2	<2	**40.7**	**21.4**	<2	<2	<2	<2	<170
Surface 13			<2	<2	**102**	<1	<1	**71.6**	**4.99**	**71.9**	**272 (10.4/0.08)**	<0.05	**14.2**	**23.6**	<2	<1	<2	**41.8**	**143**	--	<2	<2	<2	<2	<2	**10.5J**	<2	<2	<2	<2	<170
Surface 14			<2	<2	**104**	<1	<1	**27.5**	**7.30**	**25.8**	**43.8**	<0.05	<2	**26.5**	<2	<1	<2	**39.2**	**57.3**	--	--	--	--	--	--	--	--	--	--	--
Surface 15			<2	<2	**129**	<1	<1	**75.1**	**3.93**	**45.4**	**900 (29.8/0.50)**	<0.05	<2	**24.2**	<2	<1	<2	**45.8**	**84.7**	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<170
Surface 16			<2	<2	**41.2**	<1	<1	**19.5**	**2.37**	**24.9**	**225 (13.4/0.16)**	<0.05	<2	**9.56**	<2	<1	<2	**20.3**	**95.9**	--	--	--	--	--	--	--	--	--	--	--
Surface Comp 1			<2	<2	**195**	<1	<1	**18.6**	**11.2**	**27.7**	**33.0**	<0.05	<2	**16.8**	<2	<1	<2	**47.1**	**58.1**	--	<2	<2	<2	<2	<2	**3.8**	<2	<2	<2	<2	<170
Surface Comp 2			<2	<2	**143**	<1	<1	**12.7**	**7.96**	**18.7**	**7.10**	<0.05	<2	**11.8**	<2	<1	<2	**36.9**	**37.3**	--	--	--	--	--	--	--	--	--	--	--
Surface Comp 3			<2	<2	**118**	<1	<1	**11.7**	**7.30**	**25.5**	**11.1**	<0.05	<2	**11.6**	<2	<1	<2	**31.6**	**39.0**	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<170
Surface Comp 4			<2	<2	**177**	<1	<1	**16.7**	**10.7**	**26.8**	**19.8**	<0.05	<2	**17.2**	<2	<1	<2	**45.5**	**76.2**	--	--	--	--	--	--	--	--	--	--	--
Surface Comp 5			<2	<2	**151**	<1	<1	**15.6**	**10.2**	**22.2**	**37.9**	<0.05	<2	**14.9**	<2	<1	<2	**39.0**	**56.9**	--	--	--	--	--	--	--	--	--	--	--
Surface Comp 6	--	6/19/2018	<2	<2	**184**	<1	<1	**18.7**	**11.3**	**27.3**	**12.4**	<0.05	<2	**17.0**	<2	<1	<2	**48.7**	**57.0**	--	--	--	--	--	--	--	--	--	--	--
Surface Comp 7			<2	<2	**109**	<1	<1	**13.8**	**6.95**	**21.8**	**13.5**	<0.05	<2	**13.5**	<2	<1	<2	**29.9**	**48.6**	--	--	--	--	--	--	--	--	--	--	--
Surface Comp 8			<2	<2	**195**	<1	<1	**16.4**	**11.1**	**26.0**	**16.1**	<0.05	<2	**16.3**	<2	<1	<2	**43.9**	**46.6**	--	--	--	--	--	--	--	--	--	--	--
Surface Comp 9			<2	<2	**92.5**	<1	<1	**11.9**	**6.16**	**16.4**	**19.3**	<0.05	<2	**9.96**	<2	<1	<2	**27.3**	**41.1**	--	<2	<2	<2	<2	<2	**3.63**	<2	<2	<2	<2	<170
Surface Comp 10			<2	<2	**43.0**	<1	<1	**14.9**	**2.51**	**14.6**	**76.0**	<0.05	<2	**8.04**	<2	<1	<2	**18.2**	**38.5**	--	**1.29J**	<2	<2	**2.19**	**6.25**	**16.2**	**1.11J**	<2	<2	<2	<170
Surface Comp 11			<2	<2	**100**	<1	<1	**33.9**	**5.79**	**28.3**	**62.4**	<0.05	<2	**14.4**	<2	<1	<2	**46.1**	**56.0**	--	--	--	--	--	--	--	--	--	--	--
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs			0.27	0.29	82	3.2	--	40,000,000	0.27	28	14	0.10	2.0	26	0.26	0.80	0.14	86	370	0.00067	270	--	--	7.5	11	77	0.071	33	4.1	--	460
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	HERO	RSL	HERO	RSL	--	RSL	--	--	RSL	RSL	RSL	RSL	RSL	RSL	--	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	12 [β]	220,000	210	7.3	170,000	350	47,000	320	4.4	5,800	3,100	5,800	1,500	12	1,000	350,000	6.3	7,700	--	--	9,600	9,300	8,500	140	630	330	--	2,100
TTLC			500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000	500	2,500	--	--	1.0	1.0	1.0	1.0	4.7	4.7	--	5.0
STLC**			15	5	100	0.75	1	5	80	25	5	0.2	350	20	1	5	7	24	250	5	250	--	--	0.1	0.1	0.1	0.1	0.47	0.47	--	0.5
TCLP**			--	5	100	--	1	5	--	--	5	0.2	--	--	1	5	--	--	--	--	30	--	--	--	--	--	--	0.008	0.008	--	0.5

Notes:
bgs = below ground surface

* Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Fampton, J.A., and Wright, H., 1996, *Background Concentrations of Trace and Major Elements in California Soils,* Kearney Foundation of Soil Science Special Report, Division of Agriculture and Natural Resources, University of California.

** - Values in milligrams per liter (mg/L)

Gray Highlight = Concentration of analyte is above screening limit

Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - industrial/commercial land use scenarios June 2018 and U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).

[β] DTSC-recommended SL for arsenic is based on acceptable levels for school sites up to 12 mg/kg.

TTLC = Total Threshold Limit Concentration as identified in Title 22 of the California Code of Regulations. Wastes with concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

STLC = Soluble Threshold Limit Concentration, in mg/L, as identified in Title 22 of the California Code of Regulations. A concentration of ten times the STLC is sometimes used as a trigger to conduct further analysis (i.e., the soluble analysis) of a sample to determine disposal requirements. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

TCLP = Toxicity Characteristic Leaching Procedure concentration, in mg/L, as identified in the Code of Federal Regulations. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under federal regulations.

"J" Indicates analyte was detected. However, analyte concentration is an estimated value which is between the method detection limit (MDL) and the practical quantitation limit (PQL).

-- = Not Analyzed or Not Applicable

TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR ASBESTOS IN BUILDING MATERIALS (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Sample ID	Sample Description	Sample Date	EPA 600/R-93-116 Method Using Polarized Light Microscopy	
			Chrysotile	Amosite
			Percent	
1	Insulation	5/29/2018	ND	**30**
2	Gasket Wrap		**15**	ND
3	Miscellaneous Wrap		**70**	ND
4	Woven Insulation		**60**	ND
5	Tar Paper		**50**	ND
6	Orange Brick		ND	ND
7	Yellow Brick		ND	ND

Notes:
ND = None Detected
Lab report indicating samples collected 6/1/18 in error.
All samples collected from surface and shallow soils in the area of Trench T2.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR ASBESTOS IN SOIL (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Sample ID	Sample Depth (feet bgs)	Sample Date	ASTM D7521	
			Chrysotile	Amosite
			Percent	
Surface 3	Surface	6/28/2018	**0.25**	ND
Surface 6			ND	**0.46**
Surface 11			ND	**3.0**
Surface 12			**5.0**	ND
Surface 13			**0.58**	ND
Surface 16			**0.46**	ND
SB4	5-10		**5.0**	ND
SB6			**3.0**	ND

Notes:
ND = None Detected

TABLE 5
SUMMARY OF ANALYTICAL RESULTS FOR CATALYST - TPH AND PAHs (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sampe Date	Total Petroleum Hydrocarbons (EPA Method 8015M)		Polynuclear Aromatic Hydrocarbons (EPA Method 8310)*															
		Diesel Range (C_{13}-C_{22})	Heavy Hydrocarbon Range (C_{23}-C_{40})	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-C,D)Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	2-Methlynaphthalene
		milligrams per kilogram (mg/kg), equivalent to parts per million		micrograms per kilogram (ug/kg), equivalent to parts per billion															
Catalyst-1	7/13/2018	<1.0	**10.9**	<10	<10	<10	<10	**10.0J**	<10	<10	<10	<10	<10	<10	<10	<10	<10	**14.3J**	<10	**21.1**
Catalyst-2		**4,770**	**5,430**	**627**	**572**	**316**	<20	**816**	<20	<20	<20	<20	**22.0J**	<20	**73.1**	**21.4J**	**43.8**	**518**	**747**	**110.000**
Catalyst-3		<1.0	**69.0**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**13.3J**	**35.4**	**13.3J**	**98.9**
RWQCB SSLs (<20 above		100	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--
RWQCB SSLs (20-150 feet above groundwater)		1,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--
Protection of Groundwater SSLs		--	--	11	240	300	2,900	9,000	96	980	5,500	--	58,000	--	89,000	5,400	0.54	--	13,000	190
Source of DTSC-Recommended SL (RSL		--	--	RSL	RSL	RSL	RSL	RSL	RSL	RSL	RSL	--	RSL	--	RSL	RSL	RSL	--	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)		--	--	21,000	2,100	21,000	210,000	2,100,000	2,100	21,000	45,000,000	--	230,000,000	--	30,000,000	30,000,000	17,000	--	23,000,000	3,000,000

Notes:

-- = Not Analyzed, Not Applicable, or Not Calculated.
Gray Highlight = Concentration of analyte is above screening limit.
* Only analytes detected are listed, refer to analytical report for full list.
RWQCB SSLs = Los Angeles Regional Water Quality Control Board Soil Screening Levels.
Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018
DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - industrial/commercial land use scenarios June 2018 and U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).
"J" Indicates analyte was detected. However, analyte concentration is an estimated value which is between the method detection limit (MDL) and the practical quantitation limit (PQL).

TABLE 6
SUMMARY OF ANALYTICAL RESULTS FOR CATALYST - METALS (SCS 2018)
NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals (EPA Method 6010B, except Mercury by EPA Method 7471A)															
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			milligrams per kilogram (mg/kg), equivalent to parts per million																
Catalyst-1	0	7/13/2018	<1	<1	**29.9**	<1.3	<1.3	**6.99**	<2.5	**67.3**	**58.2**	<0.1	<2.5	**14.2**	<1	**6.61**	<0.7	**10.4**	**73.5**
Catalyst-2	0		<1	<1	**220**	<1.3	<1.3	**10.3**	<2.5	**169**	**97.4**	**0.597**	<2.5	**14.7**	<1	<2.5	<0.7	**24.8**	**119**
Catalyst-3	0		<1	<1	**35.9**	<1.3	<1.3	**6.06**	<2.5	**122**	**5.15**	<0.1	<2.5	**5.10**	<1	<2.5	<0.7	<2.5	**54.6**
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236
Protection of Groundwater SSLs			0.27	0.29	82	3.2	--	40,000,000	0.27	28	14	0.10	2.0	26	0.26	0.80	0.14	86	370
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	HERO	RSL	HERO	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	12 [β]	220,000	210	7.3	170,000	350	47,000	320	4.4	5,800	3,100	5,800	1,500	12	1,000	350,000
TTLC			500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC**			15	5	100	0.75	1	5	80	25	5	0.2	350	20	1	5	7	24	250
TCLP**			--	5	100	--	1	5	--	--	5	0.2	--	--	1	5	--	--	--

Notes:

bgs = below ground surface

* Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Fampton, J.A., and Wright, H., 1996, *Background Concentrations of Trace and Major Elements in California Soils,* Kearney Foundation of Soil Science Special Report, Division of Agriculture and Natural Resources, University of California.

** - Values in milligrams per liter (mg/L)

Gray Highlight = Concentration of analyte is above screening limit

Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - industrial/commercial land use scenarios June 2018 and U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).

[β] DTSC-recommended SL for arsenic is based on acceptable levels for school sites up to 12 mg/kg.

TTLC = Total Threshold Limit Concentration as identified in Title 22 of the California Code of Regulations. Wastes with concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

STLC = Soluble Threshold Limit Concentration, in mg/L, as identified in Title 22 of the California Code of Regulations. A concentration of ten times the STLC is sometimes used as a trigger to conduct further analysis (i.e., the soluble analysis) of a sample to determine disposal requirements. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

TCLP = Toxicity Characteristic Leaching Procedure concentration, in mg/L, as identified in the Code of Federal Regulations. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under federal regulations.

"J" Indicates analyte was detected. However, analyte concentration is an estimated value which is between the method detection limit (MDL) and the practical quantitation limit (PQL).

-- = Not Analyzed or Not Applicable

TABLE 7
SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Total Petroleum Hydrocarbons [EPA Method 8015M]			Volatile Organic Compounds (EPA Method 8260B with 5035 field preparation)													
			Gasoline Range (C_4-C_{12})	Diesel Range (C_{13}-C_{22})	Heavy Hydrocarbon Range (C_{23}-C_{40})	Acetone	Benzene	n-Butyl Benzene	Ethylbenzene	Tert-Amyl methyl ether (TAME)	Tert-Butyl Alcohol (TBA)	p-Isopropyltoluene	Naphthalene	Toluene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes
			milligrams per kilogram (mg/kg), equivalent to parts per million			micrograms per kilogram (µg/kg), equivalent to parts per billion													
SB20	5	3/15/2019	<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	**127**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB21	5		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB22	5		<0.5	<10	<50	**66.6**	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	**19.1**	<10	<10	<4.0	<2.0
	10		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	**50.5**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB23	5	3/18/2019	<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB24	4	3/13/2019	<0.5	**248**	**1,110**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	8		<0.5	**730**	**2,690**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB25	5	3/12/2019	<0.5	**1,400**	**2,250**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	**182**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		**0.701**	**151**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB26	5	3/12/2019	**13.1**	**29.3**	<100	<5,000	<200	<1,000	<200	<500	<2,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<400	<200
	10		<0.5	<10	<50	**76.7**	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
RWQCB SSLs (20-150 feet above groundwater)			500	1,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs			--	--	--	2,900	2.6	3,200	780	--	--	--	0.54	690	1.6	81	87	190	190
Source of DTSC-Recommended SL (RSL or HERO Note 3)			--	--	--	RSL	HERO	HERO	RSL	--	--	--	HERO	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			--	--	--	670,000,000	1,400	18,000,000	25,000	--	--	--	6,500	5,300,000	5,000	1,800,000	1,500,000	2,400,000	2,800,000

TABLE 7
SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Total Petroleum Hydrocarbons [EPA Method 8015M]			Volatile Organic Compounds (EPA Method 8260B with 5035 field preparation)													
			Gasoline Range (C_4-C_{12})	Diesel Range (C_{13}-C_{22})	Heavy Hydrocarbon Range (C_{23}-C_{40})	Acetone	Benzene	n-Butyl Benzene	Ethylbenzene	Tert-Amyl methyl ether (TAME)	Tert-Butyl Alcohol (TBA)	p-Isopropyltoluene	Naphthalene	Toluene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes
			milligrams per kilogram (mg/kg), equivalent to parts per million			micrograms per kilogram (µg/kg), equivalent to parts per billion													
SB27	4	3/13/2019	<0.5	**444**	**2,980**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB28	4	3/18/2019	**92.8**	**19,800**	**3,470**	<5,000	<200	<1,000	**488**	<500	<2,000	<1,000	**7,190**	**402**	<1,000	**2,630**	<1,000	**1,950**	**976**
	10		**64**	**295**	<500	<5,000	<200	<1,000	**1,140**	<500	<2,000	<1,000	**2,040**	<200	<1,000	<1,000	<1,000	**578**	**1,190**
	15		**245**	**21,100**	**4,730**	<5,000	<200	<1,000	**728**	<500	<2,000	<1,000	**1,540**	<200	<1,000	<1,000	<1,000	<400	**426**
	20		**846**	**2,040**	**1,730**	<25,000	<1,000	<5,000	**7,390**	<2,500	<10,000	<5,000	**33,200**	<1,000	<5,000	<5,000	<5,000	<2,000	**1,580**
	25		<0.5	<10	<50	<50	<2.0	<10	**3.96**	<5.0	<20	<10	**29.8**	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	**76.4**	<1.0	<5.0	<1.0	**18.2**	<10	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<2.0	<1.0
SB29	5	3/13/2019	<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	9		<0.5	**3,310**	**6,630**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	**31.9**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	**16.5**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB30	5	3/18/2019	<0.5	<20	**426**	**182**	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		**25.2**	**22.0**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	**16.2**	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB31	4	3/14/2019	**14.4**	**3,810**	<2,000	<1,250	<50	<250	**68.5**	<125	<500	<250	**614**	<50	<250	<250	<250	**213**	**62.0**
	8		**3.78**	**3,720**	**7,460**	<1,250	<50	<250	**138**	<125	<500	<250	<250	<50	<250	<250	<250	<100	<50
	15		**2,750**	**50,000**	<2,000	<50,000	<2,000	<10,000	**6,960**	<5,000	<20,000	<10,000	**54,300**	**2,920**	<10,000	**25,100**	<10,000	**18,900**	**9,280**
	20		**356**	**20,100**	<1,000	<25,000	<1,000	<5,000	**3,970**	<2,500	<10,000	<5,000	**30,100**	**2,180**	<5,000	**16,500**	<5,000	**10,200**	**9,300**
	25		**10,400**	**13,100**	<1,000	<125,000	<5,000	**33,800**	**41,200**	<12,500	<50,000	**28,300**	**126,000**	**26,600**	<25,000	**255,000**	**71,400**	**157,000**	**86,800**
	30		**1,050**	**4,130**	<50	<25,000	<1,000	**6,900**	**3,330**	<2,500	<10,000	**5,150**	**21,200**	<1,000	<5,000	**43,100**	**10,700**	**9,200**	**7,090**
SB32	5	3/18/2019	<0.5	**2,740**	**1,430**	<50	<2.0	<10	<2.0	<5.0	**33.2**	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10	3/19/2019	<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
RWQCB SSLs (20-150 feet above groundwater)			500	1,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs			--	--	--	2,900	2.6	3,200	780	--	--	--	0.54	690	1.6	81	87	190	190
Source of DTSC-Recommended SL (RSL or HERO Note 3)			--	--	--	RSL	HERO	HERO	RSL	--	--	--	HERO	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			--	--	--	670,000,000	1,400	18,000,000	25,000	--	--	--	6,500	5,300,000	5,000	1,800,000	1,500,000	2,400,000	2,800,000

TABLE 7
SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Total Petroleum Hydrocarbons [EPA Method 8015M]			Volatile Organic Compounds (EPA Method 8260B with 5035 field preparation)													
			Gasoline Range (C_4-C_{12})	Diesel Range (C_{13}-C_{22})	Heavy Hydrocarbon Range (C_{23}-C_{40})	Acetone	Benzene	n-Butyl Benzene	Ethylbenzene	Tert-Amyl methyl ether (TAME)	Tert-Butyl Alcohol (TBA)	p-Isopropyltoluene	Naphthalene	Toluene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes
			milligrams per kilogram (mg/kg), equivalent to parts per million			micrograms per kilogram (µg/kg), equivalent to parts per billion													
SB33	4	3/13/2019	<0.5	**75.6**	**131**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2..0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB34	5	3/19/2019	<0.5	**73.5**	**67.4**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		**5.45**	**46.9**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	**11.8**	<2.0	<10	<10	<10	<4.0	<2.0
	15		**165**	**13,000**	**11,600**	<12,500	<500	<2,500	<500	<1,250	<5,000	<2,500	<2,500	<500	<2,500	<2,500	<2,500	<1,000	<500
	20		<0.5	**275**	**116**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		**76.4**	**1,990**	**1,040**	<1,250	<50	<250	<50	<125	<500	<250	<250	<50	<250	<250	<250	<100	<50
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	**10.5**	<2.0	<10	<10	<10	<4.0	<2.0
SB35	5	3/19/2019	**96.0**	**6,900**	**6,500**	<1,250	**66.5**	<250	**152**	<125	<500	<250	<250	**55.5**	<250	<250	<250	<100	<50
	10		**7,350**	**53,800**	**20,700**	<125,000	<5,000	<25,000	**10,400**	<12,500	<50,000	<25,000	<25,000	<5,000	<25,000	<25,000	<25,000	<10,000	<5,000
	15		**2,550**	**124,000**	**47,300**	<250,000	<10,000	<50,000	**15,200**	<25,000	<100,000	<50,000	**96,900**	**14,700**	<50,000	<50,000	<50,000	**70,800**	**29,900**
	20		**182**	**29,500**	**5,190**	<5,000	<200	<1,000	**346**	<500	<2,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<400	<200
	25		**1,330**	**19,900**	**3,620**	<50,000	<2,000	<10,000	**2,860**	<5,000	<20,000	<10,000	**14,900**	<2,000	<10,000	<10,000	<10,000	<4,000	<2,000
	30		**2,860**	**20,500**	**3,610**	<125,000	<5,000	<25,000	**8,450**	<12,500	<50,000	<25,000	**51,000**	<5,000	<25,000	<25,000	<25,000	<10,000	**5,700**
SB36	5	3/14/2019	**23.3**	**356**	**670**	<1,250	<50	<250	<50	<125	<500	<250	**390**	<50	<50	<250	<250	<100	<50
	10		**6,790**	**34,000**	<1,000	<125,000	<5,000	<25,000	**26,000**	<12,500	<50,000	<25,000	**87,600**	**24,600**	<25,000	**127,000**	**37,000**	**99,900**	**48,900**
	15		**6,810**	**19,200**	<1,000	<125,000	<5,000	<25,000	**14,200**	<12,500	<50,000	<25,000	**57,800**	<5,000	<25,000	**38,100**	<25,000	**19,200**	**11,200**
	20		**2,390**	**4,500**	<100	<25,000	<1,000	<5,000	**3,310**	<2,500	<10,000	<5,000	**20,300**	<1,000	<5,000	<5,000	<5,000	<2,000	<1,000
	25		**1,660**	**4,660**	<100	<25,000	<1,000	<5,000	**2,210**	<2,500	<10,000	<5,000	**11,100**	<1,000	<5,000	**5,030**	<5,000	**3,240**	**1,900**
	30		**1,460**	**1,140**	<50	<25,000	<1,000	<5,000	**1,890**	<2,500	<10,000	<5,000	**8,590**	<1,000	<5,000	<5,000	<5,000	<2,000	<1,000
SB37	5	3/12/2019	<0.5	**428**	**1,140**	<5,000	<200	<1,000	<200	<500	<2,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<400	<200
	10		**4,380**	**8,360**	<50	<12,500	<500	<2,500	**5,360**	<1,250	<5,000	<2,500	**10,800**	<500	<2,500	**22,500**	**5,060**	**6,040**	<500
	15		**242**	**379**	<50	<2,500	<100	<500	<100	<250	<1,000	<500	<500	<100	<500	**570**	<500	<200	<100
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		**2.87**	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		**1.54**	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB38	5	3/19/2019	**32.0**	**4,210**	**4,180**	<2,500	<100	<500	**255**	<250	<1,000	<500	**761**	<100	<500	<500	<500	<200	**159**
	10		**23.8**	**5,360**	**5,360**	<2,500	<100	<500	<100	<250	<1,000	<500	<500	<100	<500	<500	<500	<200	<100
	15		**712**	**30,500**	**18,900**	<100,000	<4,000	<20,000	<4,000	<10,000	<40,000	<20,000	<20,000	<4,000	<20,000	<20,000	<20,000	<8,000	<4,000
	20		**983**	**5,940**	**2,230**	<5,000	<200	<1,000	<200	<500	<2,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<400	<200
	25		**490**	**10,000**	**4,710**	<25,000	<1,000	<5,000	<1,000	<2,500	<10,000	<5,000	<5,000	<1,000	<5,000	<5,000	<5,000	<2,000	<1,000
	30		**0.402**	**12.2**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	**21.5**	<2.0	<10	<10	<10	<4.0	<2.0
RWQCB SSLs (20-150 feet above groundwater)			500	1,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs			--	--	--	2,900	2.6	3,200	780	--	--	--	0.54	690	1.6	81	87	190	190
Source of DTSC-Recommended SL (RSL or HERO Note 3)			--	--	--	RSL	HERO	HERO	RSL	--	--	--	HERO	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			--	--	--	670,000,000	1,400	18,000,000	25,000	--	--	--	6,500	5,300,000	5,000	1,800,000	1,500,000	2,400,000	2,800,000

TABLE 7
SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Total Petroleum Hydrocarbons [EPA Method 8015M]			Volatile Organic Compounds (EPA Method 8260B with 5035 field preparation)													
			Gasoline Range (C_4-C_{12})	Diesel Range (C_{13}-C_{22})	Heavy Hydrocarbon Range (C_{23}-C_{40})	Acetone	Benzene	n-Butyl Benzene	Ethylbenzene	Tert-Amyl methyl ether (TAME)	Tert-Butyl Alcohol (TBA)	p-Isopropyltoluene	Naphthalene	Toluene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes
			milligrams per kilogram (mg/kg), equivalent to parts per million			micrograms per kilogram (µg/kg), equivalent to parts per billion													
SB39	5	3/19/2019	**0.463**	**227**	**644**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	11		<0.5	**1,520**	**797**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	15		**64.5**	**2,580**	**1,930**	<2,500	<100	<500	**243**	<250	<1,000	<500	**1,220**	<100	<500	<500	<500	**248**	<100
	20		<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB40	5		<0.5	**369**	**1,630**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	10		<0.5	**7,820**	**9,470**	<5,000	<200	<1,000	<200	<500	<2,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<400	<200
	15		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.2	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
SB41	5	3/12/2019	<10	**19,300**	**16,100**	<5,000	<200	<1,000	<200	<500	<2,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<400	<200
	10		**13.5**	**2,500**	**940**	<5,000	<200	<1,000	<200	<500	<2,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<400	<200
	15		**34.2**	**14,800**	**4,800**	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	20		<0.5	**456**	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	25		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
	30		<0.5	<10	<50	<50	<2.0	<10	<2.0	<5.0	<20	<10	<10	<2.0	<10	<10	<10	<4.0	<2.0
RWQCB SSLs (20-150 feet above groundwater)			500	1,000	10,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Groundwater SSLs			--	--	--	2,900	2.6	3,200	780	--	--	--	0.54	690	1.6	81	87	190	190
Source of DTSC-Recommended SL (RSL or HERO Note 3)			--	--	--	RSL	HERO	HERO	RSL	--	--	--	HERO	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			--	--	--	670,000,000	1,400	18,000,000	25,000	--	--	--	6,500	5,300,000	5,000	1,800,000	1,500,000	2,400,000	2,800,000

Notes:
bgs=below ground surface
-- = Not Analyzed or Not Applicable
Gray Highlight = Concentration of analyte is above screening limit
TPH = Total petroleum hydrocarbons
VOCs = Volatile organic compounds - Only analytes detected are listed, refer to analytical report for full list.
RWQCB SSLs = Los Angeles Regional Water Quality Control Board Soil Screening Levels for silt-clay mixtures. SSLs for VOCs vary by depth.
Protection of Groundwater SSLs = MCL-based SSL when applicable or otherwise risk-based SSL from U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018
DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - Industrial/commercial land use scenarios (April 2019 Referencing U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - April 2019).

TABLE 8
SUMMARY OF ANALYTICAL RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Semi Volatile Organic Compounds (EPA Method 8270C)																		
			Acenaphthene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Chrysene	Dibenz (a,h) anthracene	2,4-Dimethylphenol	Fluoranthene	Fluorene	Isophorone	1-Methyl Naphthalene	2-Methylnaphthalene	2-Methylphenol	3/4-Methylphenol	Naphthalene	Phenanthrene	Phenol	Pyrene
			micrograms per kilogram (µg/kg), equivalent to parts per billion																		
SB20	5	3/15/2019	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	**490**	**754**	<330	<330	**417**	**614**	<331	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<332	<330
SB21	5		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<333	<330
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<334	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<335	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<336	<330
SB22	5		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<337	<330
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<338	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	**491**	**698**	<330	<330	<330	**522**	<339	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<340	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<341	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<342	<330
SB23	5	3/18/2019	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<343	<330
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<344	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<345	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<346	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<347	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<348	<330
SB24	4	3/13/2019	<1,320	**1,350**	<1,320	**2,810**	**2,410**	**1,910**	**10,600**	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	**1,400**	<1,320	**2,730**
	8		<1,320	<1,320	<1,320	**1,330**	<1,320	<1,320	**3,350**	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	**1,330**	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB25	5	3/12/2019	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
Protection of Groundwater SSLs			5,500	58,000	11	240	300	--	9,000	96	420	89,000	5,400	26	6	190	--	--	0.54	--	3,300	13,000
Source of DTSC-Recommended SL (RSL or HERO Note 3)			HERO	HERO	HERO	HERO	HERO	--	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	--	HERO	HERO
DTSC-Recommended SL (Commercial/Industrial)			23,000,000	130,000,000	12,000	1,300	13,000	--	1,300,000	310	11,000,000	18,000,000	17,000,000	1,600,000	30,000	1,300,000	26,000,000	26,000,000 / 53,000,000	6,500	--	160,000,000	13,000,000

TABLE 8
SUMMARY OF ANALYTICAL RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Semi Volatile Organic Compounds (EPA Method 8270C)																		
			Acenaphthene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Chrysene	Dibenz (a,h) anthracene	2,4-Dimethylphenol	Fluoranthene	Fluorene	Isophorone	1-Methyl Naphthalene	2-Methylnaphthalene	2-Methylphenol	3/4-Methylphenol	Naphthalene	Phenanthrene	Phenol	Pyrene
			micrograms per kilogram (µg/kg), equivalent to parts per billion																		
SB26	5	3/12/2019	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB27	4	3/13/2019	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	**4,040**	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB28	4	3/18/2019	**10,500**	**7,650**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**47,900**	**15,400**	**26,400**	<3,300	**56,400**	**60,600**	**15,500**	**14,500**	**27,200**	**94,300**	**5,470**	**79,700**
	10		<3,300	<3,300	<3,300	<3,300	**4,460**	<3,300	<3,300	<3,300	<3,300	**5,260**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**8,180**	<3,300	**29,300**
	15		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	20		<3,300	**11,400**	<3,300	**14,100**	**13,000**	**8,620**	**13,100**	**4,120**	<3,300	**10,200**	**7,000**	<3,300	<3,300	**70,500**	<3,300	<3,300	**61,800**	**31,200**	<3,300	**13,400**
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB29	5	3/13/2019	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	9		<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB30	5	3/18/2019	<3,300	<3,300	<3,300	**3,780**	**3,840**	**4,460**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	**362**	**623**	<330	<330	**537**	**479**	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB31	4	3/14/2019	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	8		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	15		<6,600	**57,200**	**189,000**	<6,600	<6,600	<6,600	**308,000**	<6,600	<6,600	<6,600	<6,600	<6,600	**550,000**	**555,000**	<6,600	<6,600	**132,000**	**184,000**	<6,600	**130,000**
	20		**4,780**	**25,300**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**14,500**	**10,200**	**7,920**	<3,300	**50,400**	**100,000**	<3,300	<3,300	**32,700**	**59,000**	<3,300	**8,730**
	25		<3,300	**11,700**	<3,300	**14,400**	**13,200**	**6,440**	**29,800**	**3,380**	<3,300	**15,900**	**10,200**	<3,300	**166,000**	**478,000**	<3,300	<3,300	**387,000**	**156,000**	<3,300	**26,100**
	30		<3,300	**6,570**	<3,300	**3,580**	**3,510**	<3,300	**12,800**	<3,300	**5,280**	<3,300	**4,880**	<3,300	**14,600**	**30,400**	<3,300	<3,300	**26,500**	**14,000**	<3,300	**6,800**
Protection of Groundwater SSLs			5,500	58,000	11	240	300	--	9,000	96	420	89,000	5,400	26	6	190	--	--	0.54	--	3,300	13,000
Source of DTSC-Recommended SL (RSL or HERO Note 3)			HERO	HERO	HERO	HERO	HERO	--	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	--	HERO	HERO
DTSC-Recommended SL (Commercial/Industrial)			23,000,000	130,000,000	12,000	1,300	13,000	--	1,300,000	310	11,000,000	18,000,000	17,000,000	1,600,000	30,000	1,300,000	26,000,000	26,000,000 / 53,000,000	6,500	--	160,000,000	13,000,000

TABLE 8
SUMMARY OF ANALYTICAL RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Semi Volatile Organic Compounds (EPA Method 8270C)																		
			Acenaphthene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Chrysene	Dibenz (a,h) anthracene	2,4-Dimethylphenol	Fluoranthene	Fluorene	Isophorone	1-Methyl Naphthalene	2-Methylnaphthalene	2-Methylphenol	3/4-Methylphenol	Naphthalene	Phenanthrene	Phenol	Pyrene
			micrograms per kilogram (µg/kg), equivalent to parts per billion																		
SB32	5	3/18/2019	<3,300	<3,300	<3,300	**3,600**	<3,300	<3,300	**6,820**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**4,160**	<3,300	<3,300	<3,300	**5,480**	<3,300	<3,300
	10	3/19/2019	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	**812**	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB33	4	3/13/2019	<990	**1,490**	<990	<990	<990	<990	**2,940**	<990	<990	<990	<990	<990	**1,430**	**2,070**	<990	<990	<990	**4,620**	<990	**2,030**
	10		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB34	5	3/19/2019	<3,300	<3,300	<3,300	**5,160**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	10		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**8,200**	**12,200**	<3,300	<3,300	<3,300	**6,330**	<3,300	<3,300
	15		<3,300	<3,300	<3,300	**10,200**	**6,910**	<3,300	**20,200**	<3,300	<3,300	**3,350**	<3,300	<3,300	<3,300	**19,800**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	20		<330	<330	<330	<330	<330	<330	**774**	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	**562**
	25		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**5,230**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**6,520**
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB35	5		<3,300	<3,300	<3,300	**4,850**	<3,300	<3,300	**5,680**	<3,300	<3,300	<3,300	<3,300	<3,300	**8,710**	<3,300	<3,300	<3,300	<3,300	**7,970**	<3,300	**3,990**
	10		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**12,300**	<3,300	<3,300	<3,300	<3,300	<3,300	**58,700**	**84,900**	<3,300	<3,300	**28,300**	**26,200**	<3,300	**7,060**
	15		<6,600	**16,600**	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	**85,800**	**302,000**	<6,600	<6,600	**89,400**	**130,000**	<6,600	<6,600
	20		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**17,100**	**35,300**	<3,300	<3,300	**17,900**	**5,330**	<3,300	<3,300
	25		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**5,100**	<3,300	<3,300	**41,200**	**69,200**	<3,300	<3,300	**44,000**	**11,300**	<3,300	**5,260**
	30		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**23,500**	**81,100**	<3,300	<3,300	**45,700**	**11,900**	<3,300	<3,300
SB36	5	3/14/2019	<3,300	<3,300	<3,300	<3,300	<3,300	**3,860**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	10		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**180,000**	**376,000**	<3,300	<3,300	**155,000**	**142,000**	<3,300	<3,300
	15		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**22,000**	**270,000**	<3,300	<3,300	**116,000**	**11,900**	<3,300	<3,300
	20		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**10,200**	**42,000**	<3,300	<3,300	**25,300**	**4,640**	<3,300	<3,300
	25		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**7,370**	**11,700**	<3,300	<3,300	**5,810**	**3,770**	<3,300	<3,300
	30		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**6,150**	<3,300	<3,300	<3,300	<3,300	<3,300	**12,100**	**72,800**	<3,300	<3,300	**43,400**	**6,310**	<3,300	<3,300
SB37	5	3/12/2019	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	10		<4,950	<4,950	<4,950	<4,950	<4,950	<4,950	<4,950	<4,950	<4,950	<4,950	<4,950	<4,950	**25,300**	**57,100**	<4,950	<4,950	<4,950	<4,950	<4,950	<4,950
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	**514**	**875**	<330	<330	**529**	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
Protection of Groundwater SSLs			5,500	58,000	11	240	300	--	9,000	96	420	89,000	5,400	26	6	190	--	--	0.54	--	3,300	13,000
Source of DTSC-Recommended SL (RSL or HERO Note 3)			HERO	HERO	HERO	HERO	HERO	--	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	--	HERO	HERO
DTSC-Recommended SL (Commercial/Industrial)			23,000,000	130,000,000	12,000	1,300	13,000	--	1,300,000	310	11,000,000	18,000,000	17,000,000	1,600,000	30,000	1,300,000	26,000,000	26,000,000 / 53,000,000	6,500	--	160,000,000	13,000,000

TABLE 8

SUMMARY OF ANALYTICAL RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL (SCS 2019)

TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION

3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Semi Volatile Organic Compounds (EPA Method 8270C)																		
			Acenaphthene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Chrysene	Dibenz (a,h) anthracene	2,4-Dimethylphenol	Fluoranthene	Fluorene	Isophorone	1-Methyl Naphthalene	2-Methylnaphthalene	2-Methylphenol	3/4-Methylphenol	Naphthalene	Phenanthrene	Phenol	Pyrene
			micrograms per kilogram (µg/kg), equivalent to parts per billion																		
SB38	5	3/19/2019	<3,300	<3,300	<3,300	**5,160**	<3,300	<3,300	**6,670**	<3,300	<3,300	<3,300	<3,300	<3,300	**5,290**	**11,700**	<3,300	<3,300	**10,200**	**6,610**	<3,300	**4,090**
	10		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**4,940**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**7,000**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	15		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**4,990**	<3,300	<3,300	<3,300	<3,300	**9,830**	<3,300	**7,940**
	20		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**7,880**	**18,300**	<3,300	<3,300	<3,300	**8,630**	<3,300	**3,640**
	25		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**4,380**	<3,300	<3,300	<3,300	<3,300	6,720	<3,300	**7,070**
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB39	5	3/19/2019	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300
	11		<1,980	<1,980	<1,980	<1,980	<1,980	<1,980	<1,980	<1,980	<1,980	<1,980	<1,980	<1,980	**4,310**	<1,980	<1,980	<1,980	<1,980	**2,350**	<1,980	<1,980
	15		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**4,820**	<3,300	<3,300	<3,300	<3,300	<3,300	**4,050**	**3,490**	<3,300	<3,300	<3,300	<3,300	<3,300	**6,420**
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB40	5	3/19/2019	**4,040**	<3,300	<3,300	<3,300	<3,300	<3,300	**3,960**	<3,300	<3,300	**4,510**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**6,370**	<3,300	**3,930**
	10		<3,300	<3,300	<3,300	**4,200**	**5,620**	**5,870**	**5,180**	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	**3,660**	<3,300	<3,300	<3,300	**5,270**	<3,300	**6,500**
	15		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
SB41	5	3/12/2019	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	10		<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990
	15		<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320	**6,230**	<1,320	<1,320	<1,320	<1,320	<1,320	<1,320
	20		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	25		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	30		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
Protection of Groundwater SSLs			5,500	58,000	11	240	300	--	9,000	96	420	89,000	5,400	26	6	190	--	--	0.54	--	3,300	13,000
Source of DTSC-Recommended SL (RSL or HERO Note 3)			HERO	HERO	HERO	HERO	HERO	--	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	HERO	--	HERO	HERO
DTSC-Recommended SL (Commercial/Industrial)			23,000,000	130,000,000	12,000	1,300	13,000	--	1,300,000	310	11,000,000	18,000,000	17,000,000	1,600,000	30,000	1,300,000	26,000,000	26,000,000 / 53,000,000	6,500	--	160,000,000	13,000,000

Notes:

-- = Not Analyzed or Not Applicable

SVOCs= Semi volatile organic compounds - Only analytes detected are listed, refer to analytical report for full list.

Gray Highlight = Concentration of analyte is above screening limit

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - Industrial/commercial land use scenarios (April 2019 Referencing U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - April 2019).

TABLE 9
SUMMARY OF ANALYTICAL RESULTS FOR METALS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals [EPA Method 6010B, except Mercury by EPA Method 7471A and Hexavalent Chromium by EPA Method 7199]																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			milligrams per kilogram (mg/kg), equivalent to parts per million																	
SB20	5	3/15/2019	<0.50	**1.59**	**27.6**	<0.50	<0.50	**10.9**	<0.50	**2.66**	**3.42**	**7.43**	<0.05	<0.50	**5.55**	<0.50	<0.50	<0.50	**15.5**	**13.9**
	10		<0.50	**1.72**	**40.2**	<0.50	**0.536**	**14.9**	<0.50	**3.42**	**3.77**	**3.04**	<0.05	<0.50	**6.80**	<0.50	<0.50	<0.50	**16.2**	**12.8**
	15		<0.50	**1.59**	**19.8**	<0.50	<0.50	**10.2**	<0.50	**2.50**	**1.65**	**0.943**	<0.05	<0.50	**7.33**	<0.50	<0.50	<0.50	**10.9**	**8.94**
	20		<0.50	**2.08**	**13.2**	<0.50	<0.50	**11.9**	<0.50	**2.87**	**1.75**	**0.963**	<0.05	<0.50	**8.38**	<0.50	<0.50	<0.50	**12.5**	**10.1**
	25		<0.50	**1.62**	**12.3**	<0.50	<0.50	**10.4**	<0.50	**2.25**	**1.98**	**3.17**	<0.05	<0.50	**6.59**	<0.50	<0.50	<0.50	**9.82**	**9.32**
	30		<0.50	**2.31**	**11.1**	<0.50	<0.50	**9.61**	<0.50	**2.86**	**2.54**	**1.67**	<0.05	<0.50	**7.75**	<0.50	<0.50	<0.50	**15.4**	**11.2**
SB21	5		<0.50	**1.27**	**45.7**	<0.50	**0.543**	**18.0**	<0.50	**4.44**	**4.77**	**4.42**	<0.05	<0.50	**6.55**	<0.50	<0.50	<0.50	**20.6**	**14.6**
	10		<0.50	**1.69**	**48.6**	<0.50	**0.627**	**28.6**	<0.50	**8.33**	**4.24**	**2.05**	<0.05	<0.50	**11.7**	<0.50	<0.50	<0.50	**25.2**	**16.0**
	15		<0.50	**1.54**	**23.4**	<0.50	<0.50	**15.9**	<0.50	**2.92**	**1.71**	**0.820**	<0.05	<0.50	**8.67**	<0.50	<0.50	<0.50	**13.1**	**8.64**
	20		<0.50	**1.12**	**20.2**	<0.50	<0.50	**12.4**	<0.50	**2.73**	**1.75**	**0.829**	<0.05	<0.50	**8.23**	<0.50	<0.50	<0.50	**13.2**	**10.1**
SB22	5		<0.50	**1.46**	**46.9**	<0.50	**0.572**	**11.9**	<0.50	**4.01**	**4.55**	**15.4**	<0.05	**0.566**	**5.88**	<0.50	<0.50	<0.50	**16.6**	**14.9**
	10		<0.50	**1.26**	**41.2**	<0.50	<0.50	**12.1**	<0.50	**4.48**	**3.84**	**2.69**	<0.05	<0.50	**5.01**	<0.50	<0.50	<0.50	**17.3**	**12.6**
	15		<0.50	**1.88**	**63.5**	<0.50	**0.641**	**23.9**	<0.50	**5.11**	**7.16**	**12.8**	<0.05	<0.50	**9.26**	<0.50	<0.50	<0.50	**24.6**	**18.0**
	20		<0.50	**2.27**	**30.9**	<0.50	<0.50	**15.0**	<0.50	**3.40**	**2.47**	**1.97**	<0.05	<0.50	**9.07**	<0.50	<0.50	<0.50	**14.4**	**11.9**
	25		<0.50	**2.11**	**25.1**	<0.50	<0.50	**15.5**	<0.50	**2.68**	**2.20**	**1.49**	<0.05	**0.825**	**8.00**	<0.50	<0.50	<0.50	**12.0**	**10.6**
	30		<0.50	**5.47**	**33.8**	<0.50	**0.912**	**19.5**	<0.50	**5.77**	**6.35**	**2.64**	<0.05	**1.58**	**14.7**	<0.50	<0.50	<0.50	**35.5**	**24.3**
SB23	5	3/18/2019	<0.50	**1.55**	**62.7**	<0.50	**0.541**	**15.0**	<0.50	**4.05**	**7.78**	**6.37**	<0.05	**0.544**	**9.44**	<0.50	<0.50	<0.50	**16.0**	**22.3**
	10		<0.50	**1.04**	**26.4**	<0.50	<0.50	**9.03**	<0.50	**2.55**	**2.97**	**1.22**	<0.05	<0.50	**4.50**	<0.50	<0.50	<0.50	**12.3**	**9.72**
	15		**0.967**	**2.22**	**56.2**	<0.50	**0.710**	**23.5**	<0.50	**5.41**	**5.70**	**2.79**	<0.05	<0.50	**9.16**	<0.50	<0.50	<0.50	**26.6**	**19.1**
	20		<0.50	**2.10**	**50.6**	<0.50	**0.593**	**22.0**	<0.50	**4.55**	**4.39**	**1.74**	<0.05	<0.50	**10.3**	<0.50	<0.50	<0.50	**21.0**	**15.5**
	25		<0.50	**1.59**	**28.1**	<0.50	<0.50	**9.63**	<0.50	**2.65**	**1.72**	**0.810**	<0.05	<0.50	**7.07**	<0.50	<0.50	<0.50	**10.2**	**8.94**
	30		<0.50	**4.19**	**39.5**	<0.50	**0.707**	**20.1**	<0.50	**5.37**	**4.69**	**1.92**	<0.05	<0.50	**12.3**	<0.50	<0.50	<0.50	**27.2**	**19.3**
SB24	4	3/13/2019	**0.638**	**2.32**	**115**	<0.50	**0.759**	**150**	**5.82**	**4.72**	**27.8**	**258**	**0.555**	**5.85**	**15.6**	<0.50	<0.50	<0.50	**21.4**	**452**
	8		<0.50	**6.29**	**134**	<0.50	**3.05**	**115**	**4.72**	**9.65**	**46.4**	**2,900**	**0.921**	**15.3**	**32.9**	**1.37**	<0.50	<0.50	**24.1**	**1,100**
	15		<0.50	**1.84**	**28.7**	<0.50	<0.50	**10.2**	<0.50	**2.85**	**2.19**	**1.75**	<0.05	<0.50	**7.79**	<0.50	<0.50	<0.50	**10.4**	**11.1**
	20		<0.50	**2.77**	**26.0**	<0.50	**0.611**	**13.3**	<0.50	**4.04**	**3.25**	**2.81**	<0.05	**0.645**	**10.7**	<0.50	<0.50	<0.50	**20.8**	**17.1**
SB25	5	3/12/2019	<0.50	<0.25	**26.2**	<0.50	<0.50	**58.1**	**1.74**	**1.86**	**17.4**	**190**	**0.112**	**5.54**	**7.71**	<0.50	<0.50	<0.50	**51.0**	**43.6**
	10		**0.926**	**2.85**	**58.0**	<0.50	**0.681**	**24.8**	<0.50	**5.57**	**5.39**	**4.06**	<0.05	<0.50	**10.0**	<0.50	<0.50	<0.50	**26.0**	**15.2**
	15		<0.50	**1.83**	**35.5**	<0.50	**0.523**	**16.0**	<0.50	**3.38**	**4.13**	**3.98**	<0.05	<0.50	**8.75**	<0.50	<0.50	<0.50	**17.0**	**13.2**
	20		<0.50	**1.38**	**34.5**	<0.50	<0.50	**14.0**	<0.50	**3.06**	**3.84**	**3.74**	<0.05	<0.50	**7.85**	<0.50	<0.50	<0.50	**15.6**	**12.5**
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	--	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236
Protection of Groundwater SSLs			0.27	0.29	82	3.2	0.38	180,000	0.00067	0.27	46	14	0.1	2	0.26	0.26	0.8	0.14	86	370
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	RSL	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	0.36***	220,000	230	780	1,800,000	6.2	350	47,000	320	4.4	5,800	11,000	5,800	5,800	12	5,800	350,000
TTLC			500	500	10,000	75	100	2,500	500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC**			15	5	100	0.75	1	5	5	80	25	5	0.2	350	20	1	5	7	24	250
TCLP**			--	5	100	--	1	5	5	--	--	5	0.2	--	--	1	5	--	--	--

TABLE 9
SUMMARY OF ANALYTICAL RESULTS FOR METALS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals [EPA Method 6010B, except Mercury by EPA Method 7471A and Hexavalent Chromium by EPA Method 7199]																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			milligrams per kilogram (mg/kg), equivalent to parts per million																	
SB26	5	3/12/2019	<0.50	**1.28**	**59.5**	<0.50	<0.50	**11.9**	<0.50	**3.50**	**12.1**	**90.3**	<0.05	<0.50	**7.18**	<0.50	<0.50	<0.50	**15.9**	**16.5**
	10		<0.50	**1.19**	**37.5**	<0.50	<0.50	**8.16**	<0.50	**2.97**	**4.24**	**3.35**	<0.05	<0.50	**4.30**	<0.50	<0.50	<0.50	**12.3**	**10.3**
	15		<0.50	**1.83**	**41.4**	<0.50	**0.602**	**20.5**	<0.50	**3.65**	**4.87**	**2.26**	<0.05	<0.50	**9.22**	<0.50	<0.50	<0.50	**21.2**	**16.4**
	20		**0.849**	**0.830**	**28.8**	<0.50	<0.50	**12.1**	<0.50	**3.03**	**3.67**	**1.40**	<0.05	<0.50	**7.46**	<0.50	<0.50	<0.50	**13.4**	**12.0**
	25		<0.50	**2.77**	**37.7**	<0.50	**0.626**	**17.2**	<0.50	**3.95**	**4.55**	**1.87**	<0.05	<0.50	**10.4**	<0.50	<0.50	<0.50	**22.3**	**16.2**
SB27	4	3/13/2019	<0.50	**4.28**	**64.7**	<0.50	**1.52**	**60.3**	**1.32**	**7.42**	**55.1**	**261**	**0.171**	**18.0**	**33.5**	**0.568**	<0.50	<0.50	**27.4**	**121**
	10		<0.50	**1.95**	**44.4**	<0.50	**0.526**	**13.8**	<0.50	**4.86**	**5.58**	**5.06**	<0.05	**1.27**	**6.46**	<0.50	<0.50	<0.50	**20.7**	**16.1**
	15		<0.50	**2.70**	**37.8**	<0.50	**0.683**	**25.9**	<0.50	**4.13**	**4.54**	**2.22**	<0.05	<0.50	**12.0**	<0.50	<0.50	<0.50	**22.0**	**18.1**
	20		<0.50	**1.65**	**29.1**	<0.50	**0.506**	**16.0**	<0.50	**3.22**	**2.54**	**1.14**	<0.05	<0.50	**9.51**	<0.50	<0.50	<0.50	**13.4**	**12.8**
	25		<0.50	**0.636**	**30.8**	<0.50	**0.562**	**17.0**	<0.50	**4.63**	**4.57**	**1.66**	<0.05	<0.50	**11.3**	<0.50	<0.50	<0.50	**17.0**	**18.8**
SB28	4	3/18/2019	**0.970**	**4.60**	**169**	<0.50	**1.04**	**223**	**0.79**	**9.40**	**60.7**	**193**	**0.645**	**34.9**	**34.1**	**1.55**	<0.50	<0.50	**82.7**	**141**
	10		<0.50	**9.73**	**103**	<0.50	**0.517**	**282**	**3.05**	**4.63**	**26.5**	**65.9**	**0.319**	**4.90**	**18.9**	**0.577**	<0.50	<0.50	**30.0**	**55.5**
	15		**0.583**	**1.89**	**104**	<0.50	<0.50	**268**	**5.20**	**3.57**	**27.0**	**158**	**0.601**	**3.04**	**12.0**	**1.22**	<0.50	<0.50	**19.4**	**26.8**
	20		**1.17**	**0.960**	**316**	<0.50	**0.665**	**337**	**0.91**	**5.72**	**73.8**	**7,540**	**2.02**	**2.08**	**17.0**	**1.28**	<0.50	<0.50	**32.4**	**42.2**
	23.5		**1.72**	**1.99**	**374**	<0.50	**0.784**	**438**	<0.50	**5.32**	**114**	**14,600**	**0.872**	**5.61**	**19.3**	**1.80**	<0.50	<0.50	**30.0**	**52.1**
	30		<0.50	**2.82**	**28.8**	<0.50	**0.541**	**10.7**	<0.50	**3.72**	**3.25**	**2.54**	<0.05	<0.50	**9.15**	<0.50	<0.50	<0.50	**20.2**	**15.3**
SB29	5	3/13/2019	<0.50	**1.52**	**20.1**	<0.50	<0.50	**14.5**	<0.50	**3.06**	**3.67**	**13.4**	<0.05	<0.50	**8.02**	<0.50	<0.50	<0.50	**12.7**	**17.6**
	9		<0.50	**2.01**	**162**	<0.50	<0.50	**67.9**	**1.87**	**2.80**	**26.4**	**226**	**1.19**	**0.745**	**19.9**	**1.68**	<0.50	<0.50	**21.6**	**31.8**
	15		<0.50	**1.44**	**28.9**	<0.50	<0.50	**19.0**	<0.50	**3.42**	**2.79**	**8.38**	<0.05	<0.50	**11.3**	<0.50	<0.50	<0.50	**13.6**	**12.0**
	20		<0.50	**1.23**	**11.3**	<0.50	<0.50	**7.29**	<0.50	**1.81**	**1.22**	**0.628**	<0.05	<0.50	**5.28**	<0.50	<0.50	<0.50	**7.80**	**7.18**
	25		<0.50	**1.84**	**19.5**	<0.50	<0.50	**11.7**	<0.50	**2.69**	**2.03**	**11.8**	<0.05	<0.50	**7.73**	<0.50	<0.50	<0.50	**11.3**	**10.2**
	30		<0.50	**2.75**	**18.1**	<0.50	**0.559**	**11.2**	<0.50	**4.00**	**3.80**	**1.69**	<0.05	<0.50	**9.66**	<0.50	<0.50	<0.50	**20.9**	**17.1**
SB30	5	3/18/2019	**2.07**	**6.75**	**171**	<0.50	**1.20**	**217**	**7.20**	**8.64**	**204**	**652**	**1.47**	**175**	**33.2**	**1.48**	<0.50	<0.50	**60.1**	**109**
	10		<0.50	**1.35**	**30.3**	<0.50	**0.551**	**29.6**	<0.50	**3.48**	**2.77**	**3.19**	<0.05	<0.50	**11.2**	<0.50	<0.50	<0.50	**17.8**	**14.5**
	15		<0.50	**2.61**	**38.3**	<0.50	**0.564**	**23.1**	<0.50	**4.48**	**3.21**	**2.20**	<0.05	<0.50	**8.15**	<0.50	<0.50	<0.50	**22.9**	**12.3**
	20		<0.50	**1.93**	**22.3**	<0.50	<0.50	**16.5**	<0.50	**2.88**	**2.19**	**103**	<0.05	<0.50	**7.91**	<0.50	<0.50	<0.50	**12.9**	**10.2**
	25		<0.50	**1.48**	**15.3**	<0.50	<0.50	**13.0**	<0.50	**2.70**	**2.18**	**27.9**	<0.05	<0.50	**7.73**	<0.50	<0.50	<0.50	**11.4**	**10.1**
	30		<0.50	**2.92**	**19.7**	<0.50	**0.622**	**12.0**	<0.50	**3.03**	**2.87**	**1.64**	<0.05	**0.820**	**7.61**	<0.50	<0.50	<0.50	**20.7**	**12.2**
SB31	4	3/14/2019	**1.06**	**2.80**	**148**	<0.50	**0.872**	**90.1**	**2.49**	**5.30**	**25.5**	**214**	**0.483**	**4.91**	**25.6**	<0.50	<0.50	<0.50	**38.3**	**85.9**
	8		<0.50	**7.30**	**213**	<0.50	**1.79**	**194**	**2.63**	**7.23**	**122**	**5,140**	**0.661**	**17.2**	**39.9**	**1.84**	<0.50	<0.50	**58.8**	**125**
	15		**0.576**	**5.87**	**151**	<0.50	**0.983**	**106**	**0.64**	**6.01**	**71.9**	**571**	**0.258**	**8.90**	**32.9**	**7.43**	<0.50	<0.50	**20.1**	**44.2**
	20		**1.79**	**5.23**	**64.2**	<0.50	**1.95**	**259**	<0.50	**5.04**	**848**	**481**	**0.235**	**6.23**	**49.3**	**6.50**	<0.50	<0.50	**39.4**	**642**
	25		<0.50	**5.08**	**87.7**	<0.50	**0.586**	**2,920**	**0.84**	**4.33**	**69.6**	**697**	**3.21**	**3.32**	**31.2**	**3.15**	<0.50	<0.50	**18.9**	**39.0**
	30		<0.50	**5.92**	**22.9**	<0.50	**0.808**	**14.0**	<0.50	**4.49**	**4.04**	**1.91**	<0.05	**1.06**	**10.4**	<0.50	<0.50	<0.50	**30.3**	**18.7**
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	--	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236
Protection of Groundwater SSLs			0.27	0.29	82	3.2	0.38	180,000	0.00067	0.27	46	14	0.1	2	0.26	0.26	0.8	0.14	86	370
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	RSL	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	0.36***	220,000	230	780	1,800,000	6.2	350	47,000	320	4.4	5,800	11,000	5,800	5,800	12	5,800	350,000
TTLC			500	500	10,000	75	100	2,500	500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC**			15	5	100	0.75	1	5	5	80	25	5	0.2	350	20	1	5	7	24	250
TCLP**			--	5	100	--	1	5	5	--	--	5	0.2	--	--	1	5	--	--	--

TABLE 9
SUMMARY OF ANALYTICAL RESULTS FOR METALS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals [EPA Method 6010B, except Mercury by EPA Method 7471A and Hexavalent Chromium by EPA Method 7199]																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			milligrams per kilogram (mg/kg), equivalent to parts per million																	
SB32	5	3/18/2019	**1.33**	**4.85**	**274**	<0.50	**0.736**	**350**	**1.95**	**9.27**	**113**	**538**	**1.16**	**23.1**	**22.5**	**1.18**	<0.50	<0.50	**27.2**	**96.8**
	10	3/19/2018	<0.50	**3.19**	**33.8**	<0.50	**0.722**	**38.4**	<0.50	**4.40**	**2.27**	**2.03**	<0.05	**1.16**	**10.7**	<0.50	<0.50	<0.50	**32.6**	**12.5**
	15		<0.50	**2.34**	**32.1**	<0.50	<0.50	**22.0**	<0.50	**3.75**	**2.25**	**2.65**	<0.05	<0.50	**9.46**	<0.50	<0.50	<0.50	**16.9**	**10.7**
	20		<0.50	**2.68**	**29.7**	<0.50	**0.545**	**15.0**	<0.50	**3.83**	**2.53**	**1.47**	<0.05	<0.50	**10.9**	<0.50	<0.50	<0.50	**15.3**	**12.9**
	25		<0.50	**2.17**	**13.2**	<0.50	<0.50	**13.0**	<0.50	**3.08**	**1.93**	**1.40**	<0.05	<0.50	**8.86**	<0.50	<0.50	<0.50	**12.5**	**12.4**
SB33	4	3/13/2019	<0.50	**1.23**	**36.6**	<0.50	<0.50	**20.9**	**1.41**	**2.34**	**5.67**	**12.6**	**0.0864**	**1.23**	**5.86**	<0.50	<0.50	<0.50	**10.3**	**19.4**
	10		<0.50	**1.69**	**26.4**	<0.50	<0.50	**18.4**	<0.50	**3.76**	**2.34**	**1.55**	<0.05	<0.50	**8.30**	<0.50	<0.50	<0.50	**14.2**	**9.12**
	15		<0.50	**1.59**	**22.2**	<0.50	<0.50	**13.4**	<0.50	**3.06**	**2.90**	**4.10**	<0.05	<0.50	**7.53**	<0.50	<0.50	<0.50	**12.5**	**13.6**
	20		<0.50	**2.23**	**12.5**	<0.50	<0.50	**12.5**	<0.50	**3.00**	**2.39**	**1.19**	<0.05	<0.50	**8.45**	<0.50	<0.50	<0.50	**12.1**	**11.4**
	25		<0.50	**2.39**	**12.6**	<0.50	<0.50	**11.3**	<0.50	**2.84**	**2.26**	**1.45**	<0.05	<0.50	**8.36**	<0.50	<0.50	<0.50	**11.3**	**11.8**
	30		<0.50	**0.399**	**12.3**	<0.50	<0.50	**9.61**	<0.50	**2.66**	**1.97**	**1.14**	<0.05	<0.50	**7.05**	<0.50	<0.50	<0.50	**9.01**	**11.7**
SB34	5	3/19/2019	<0.50	**2.43**	**125**	<0.50	**0.672**	**103**	**1.44**	**4.85**	**35.3**	**277**	**0.204**	**7.91**	**21.6**	<0.50	<0.50	<0.50	**40.9**	**88.0**
	10		<0.50	**2.50**	**90.7**	<0.50	**0.790**	**30.4**	<0.50	**6.04**	**9.79**	**64.1**	**0.0838**	<0.50	**13.3**	<0.50	<0.50	<0.50	**33.0**	**32.5**
	15		<0.50	**1.67**	**151**	<0.50	**0.891**	**17.8**	<0.50	**4.51**	**18.1**	**148**	**0.117**	**0.847**	**10.2**	<0.50	<0.50	<0.50	**28.8**	**65.7**
	20		**0.569**	**2.93**	**75.9**	<0.50	**0.854**	**30.8**	<0.50	**6.14**	**12.2**	**23.9**	<0.05	<0.50	**16.9**	<0.50	<0.50	<0.50	**27.9**	**32.3**
	25		<0.50	**1.01**	**30.6**	<0.50	<0.50	**13.7**	**0.54**	**2.64**	**3.49**	**6.82**	<0.05	<0.50	**8.03**	<0.50	<0.50	<0.50	**12.6**	**12.3**
	30		<0.50	**2.26**	**28.0**	<0.50	**0.558**	**12.5**	<0.50	**3.54**	**3.23**	**2.16**	<0.05	<0.50	**10.2**	<0.50	<0.50	<0.50	**18.4**	**15.9**
SB35	5		**1.63**	**3.65**	**184**	<0.50	**1.33**	**114**	**2.08**	**8.91**	**55.4**	**516**	**0.653**	**85.2**	**59.6**	**0.828**	<0.50	<0.50	**132**	**239**
	10		**1.01**	**2.51**	**102**	<0.50	<0.50	**62.5**	**0.61**	**1.49**	**35.7**	**327**	**0.607**	**0.626**	**14.7**	**1.42**	<0.50	<0.50	**14.0**	**40.0**
	15		<0.50	**1.66**	**66.2**	<0.50	<0.50	**15.3**	**1.21**	**3.15**	**10.9**	**170**	<0.05	**1.99**	**14.1**	<0.50	<0.50	<0.50	**23.1**	**21.9**
	20		<0.50	**4.50**	**147**	<0.50	**0.704**	**19.6**	<0.50	**3.69**	**61.5**	**1,550**	**0.211**	**0.796**	**26.6**	**0.552**	<0.50	<0.50	**18.4**	**30.6**
	25		<0.50	**1.21**	**38.4**	<0.50	**0.528**	**18.6**	<0.50	**4.40**	**4.71**	**2.62**	<0.05	<0.50	**11.2**	<0.50	<0.50	<0.50	**18.6**	**17.9**
	30		**1.10**	**2.75**	**42.8**	<0.50	**0.740**	**23.5**	<0.50	**6.18**	**6.27**	**4.70**	<0.05	<0.50	**15.2**	<0.50	<0.50	<0.50	**30.5**	**26.9**
SB36	5	3/14/2019	**2.04**	**1.37**	**112**	<0.50	**0.771**	**139**	**1.93**	**7.01**	**33.2**	**622**	**1.24**	**1.62**	**23.2**	**2.05**	<0.50	<0.50	**49.0**	**79.2**
	10		<0.50	**22.4**	**163**	<0.50	**1.00**	**33.8**	<0.50	**2.26**	**122**	**4,310**	**0.923**	**1.14**	**12.5**	**2.44**	<0.50	<0.50	**12.2**	**56.3**
	15		**1.67**	**13.7**	**234**	<0.50	**0.894**	**20.7**	<0.50	**4.95**	**76.4**	**1,720**	**0.670**	**3.53**	**12.9**	**1.05**	<0.50	<0.50	**32.3**	**88.4**
	20		<0.50	**1.87**	**44.1**	<0.50	**0.570**	**22.5**	<0.50	**4.88**	**4.31**	**3.58**	<0.05	<0.50	**11.8**	<0.50	<0.50	<0.50	**19.9**	**19.2**
	25		<0.50	**1.60**	**37.9**	<0.50	**0.544**	**19.9**	<0.50	**3.70**	**6.73**	**51.5**	<0.05	**0.570**	**10.3**	<0.50	<0.50	<0.50	**18.5**	**20.2**
	30		<0.50	**1.31**	**28.0**	<0.50	<0.50	**14.7**	**0.52**	**2.95**	**5.52**	**49.3**	<0.05	**0.512**	**8.20**	<0.50	<0.50	<0.50	**15.1**	**14.5**
SB37	5	3/12/2019	<0.50	**3.85**	**103**	<0.50	**0.875**	**21.9**	**0.81**	**5.51**	**24.5**	**153**	**0.102**	**2.53**	**14.5**	<0.50	<0.50	<0.50	**26.4**	**53.1**
	10		**1.01**	**1.73**	**131**	<0.50	**0.763**	**19.0**	<0.50	**5.10**	**16.2**	**8.24**	**0.162**	**0.853**	**13.2**	<0.50	<0.50	<0.50	**26.4**	**23.7**
	15		<0.50	**1.93**	**33.8**	<0.50	<0.50	**14.5**	<0.50	**2.93**	**4.66**	**3.16**	<0.05	**0.526**	**7.83**	<0.50	<0.50	<0.50	**14.7**	**11.8**
	20		<0.50	**1.85**	**28.1**	<0.50	**0.506**	**13.5**	<0.50	**3.07**	**2.43**	**1.22**	<0.05	<0.50	**8.26**	<0.50	<0.50	<0.50	**14.6**	**10.5**
	25		<0.50	**1.00**	**15.0**	<0.50	<0.50	**10.5**	<0.50	**2.65**	**2.47**	**1.09**	<0.05	<0.50	**7.72**	<0.50	<0.50	<0.50	**11.6**	**10.7**
	30		<0.50	**3.16**	**17.9**	<0.50	**0.668**	**18.9**	<0.50	**3.63**	**4.17**	**1.51**	<0.05	<0.50	**10.8**	<0.50	<0.50	<0.50	**24.2**	**16.00**
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	--	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236
Protection of Groundwater SSLs			0.27	0.29	82	3.2	0.38	180,000	0.00067	0.27	46	14	0.1	2	0.26	0.26	0.8	0.14	86	370
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	RSL	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	0.36***	220,000	230	780	1,800,000	6.2	350	47,000	320	4.4	5,800	11,000	5,800	5,800	12	5,800	350,000
TTLC			500	500	10,000	75	100	2,500	500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC**			15	5	100	0.75	1	5	5	80	25	5	0.2	350	20	1	5	7	24	250
TCLP**			--	5	100	--	1	5	5	--	--	5	0.2	--	--	1	5	--	--	--

TABLE 9
SUMMARY OF ANALYTICAL RESULTS FOR METALS IN SOIL (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Title 22 Metals [EPA Method 6010B, except Mercury by EPA Method 7471A and Hexavalent Chromium by EPA Method 7199]																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			milligrams per kilogram (mg/kg), equivalent to parts per million																	
SB38	5	3/19/2019	**0.927**	**3.68**	**177**	<0.50	**0.944**	**133**	**2.16**	**5.99**	**126**	**1,530**	**0.849**	**7.53**	**29.9**	**1.59**	<0.50	<0.50	**58.5**	**164**
	10		**0.557**	**3.22**	**131**	<0.50	**1.21**	**39.2**	**0.56**	**4.23**	**85.8**	**1,520**	**0.0955**	**8.32**	**23.5**	**1.54**	<0.50	<0.50	**23.4**	**221**
	15		<0.50	**1.16**	**119**	<0.50	<0.50	**9.63**	<0.50	**1.15**	**53.6**	**7,920**	<0.05	<0.50	**4.03**	<0.50	<0.50	<0.50	**14.0**	**149**
	20		**1.36**	**2.59**	**192**	**0.567**	**1.18**	**23.6**	<0.50	**10.3**	**33.4**	**35.4**	<0.05	**1.63**	**21.4**	<0.50	<0.50	<0.50	**44.5**	**73.1**
	25		<0.50	**2.45**	**27.3**	<0.50	**0.507**	**13.1**	<0.50	**3.40**	**6.28**	**23.6**	<0.05	<0.50	**9.43**	<0.50	<0.50	<0.50	**14.4**	**13.6**
	30		<0.50	**2.36**	**21.2**	<0.50	**0.521**	**11.2**	<0.50	**3.45**	**3.84**	**5.01**	**0.849**	<0.50	**8.36**	<0.50	<0.50	<0.50	**17.0**	**14.1**
SB39	5		<0.50	**5.31**	**183**	<0.50	**1.33**	**42.3**	**0.62**	**7.57**	**175**	**764**	**0.484**	**7.66**	**28.5**	**1.07**	<0.50	<0.50	**45.0**	**310**
	11		**1.54**	<0.25	**120**	<0.50	<0.50	**148**	**1.96**	**1.62**	**5.79**	**143**	<0.05	**1.22**	**17.3**	<0.50	<0.50	<0.50	**21.9**	**29.5**
	15		<0.50	**3.17**	**183**	<0.50	**0.665**	**20.0**	<0.50	**4.90**	**66.4**	**76.1**	**0.0608**	**2.68**	**16.1**	**3.67**	<0.50	<0.50	**20.9**	**94.2**
	20		**0.580**	**2.99**	**61.1**	<0.50	**0.707**	**27.8**	<0.50	**5.31**	**4.95**	**6.28**	<0.05	<0.50	**12.2**	<0.50	<0.50	<0.50	**25.6**	**21.0**
	25		<0.50	**1.93**	**29.6**	<0.50	<0.50	**18.0**	<0.50	**3.12**	**2.84**	**1.74**	<0.05	<0.50	**8.56**	<0.50	<0.50	<0.50	**16.5**	**12.7**
	30		<0.50	**1.16**	**18.3**	<0.50	<0.50	**10.7**	<0.50	**2.80**	**2.70**	**1.33**	<0.05	<0.50	**8.37**	<0.50	<0.50	<0.50	**13.3**	**12.5**
SB40	5		**1.32**	**8.82**	**120**	<0.50	**3.41**	**61.3**	**0.82**	**14.9**	**113**	**304**	**0.695**	**9.08**	**64.6**	<0.50	<0.50	<0.50	**42.7**	**114**
	10		**2.10**	**6.99**	**163**	<0.50	**1.05**	**886**	**4.52**	**17.2**	**189**	**1,330**	**0.0955**	**69.0**	**21.9**	**4.05**	<0.50	<0.50	**30.9**	**101**
	15		<0.50	**3.00**	**53.8**	<0.50	**0.671**	**22.0**	<0.50	**5.17**	**4.68**	**2.65**	<0.05	<0.50	**10.4**	<0.50	<0.50	<0.50	**23.2**	**17.5**
	20		**0.999**	**2.77**	**41.0**	<0.50	**0.664**	**17.7**	<0.50	**4.11**	**3.37**	**1.77**	<0.05	<0.50	**11.9**	<0.50	<0.50	<0.50	**18.4**	**17.2**
	25		<0.50	**1.14**	**26.0**	<0.50	<0.50	**15.2**	<0.50	**3.47**	**3.39**	**1.80**	<0.05	<0.50	**9.81**	<0.50	<0.50	<0.50	**15.2**	**15.9**
SB41	5	3/12/2019	<0.50	**3.46**	**375**	<0.50	**1.40**	**41.3**	<0.50	**6.01**	**156**	**524**	**0.528**	**3.96**	**19.4**	<0.50	<0.50	<0.50	**36.9**	**164**
	10		<0.50	<0.25	**163**	<0.50	<0.50	**4.74**	<0.50	**1.18**	**11.7**	**42.7**	**0.0640**	<0.50	**13.2**	<0.50	<0.50	<0.50	**22.2**	**29.6**
	15		<0.50	**1.61**	**76.0**	<0.50	<0.50	**12.9**	<0.50	**2.22**	**32.8**	**193**	**0.173**	**1.93**	**7.77**	<0.50	<0.50	<0.50	**15.8**	**35.8**
	20		**0.865**	**1.75**	**43.3**	<0.50	**0.572**	**19.7**	<0.50	**2.95**	**11.0**	**13.0**	**0.0692**	**0.959**	**8.49**	<0.50	<0.50	<0.50	**15.5**	**21.7**
	25		<0.50	**0.984**	**25.6**	<0.50	<0.50	**11.0**	<0.50	**2.42**	**2.32**	**1.14**	<0.05	<0.50	**7.89**	<0.50	<0.50	<0.50	**11.4**	**9.64**
	30		<0.50	**1.68**	**20.7**	<0.50	<0.50	**12.6**	<0.50	**3.13**	**3.61**	**1.45**	<0.05	<0.50	**7.90**	<0.50	<0.50	<0.50	**15.4**	**11.5**
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	--	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236
Protection of Groundwater SSLs			0.27	0.29	82	3.2	0.38	180,000	0.00067	0.27	46	14	0.1	2	0.26	0.26	0.8	0.14	86	370
Source (RSL or HERO Note 3)			RSL	HERO	RSL	HERO	HERO	RSL	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	RSL	RSL	RSL	RSL
DTSC-Recommended SL (Commercial/Industrial)			470	0.36***	220,000	230	780	1,800,000	6.2	350	47,000	320	4.4	5,800	11,000	5,800	5,800	12	5,800	350,000
TTLC			500	500	10,000	75	100	2,500	500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC**			15	5	100	0.75	1	5	5	80	25	5	0.2	350	20	1	5	7	24	250
TCLP**			--	5	100	--	1	5	5	--	--	5	0.2	--	--	1	5	--	--	--

Notes:

bgs = below ground surface

* Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Fampton, J.A., and Wright, H., 1996, *Background Concentrations of Trace and Major Elements in California Soils,* Kearney Foundation of Soil Science Special Report, Division of Agriculture and Natural Resources, University of California.

** - Values in milligrams per liter (mg/L)

*** - The upper boundary of estimated Arsenic is 12 mg/kg per the California Department of Toxic Substances Control (DTSC)

Gray Highlight = Concentration of analyte is above screening limit

DTSC-Recommended SL = Screening Level as recommended in California DTSC, Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - Industrial/commercial land use scenarios (April 2019 Referencing U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - April 2019).

TTLC = Total Threshold Limit Concentration as identified in Title 22 of the California Code of Regulations. Wastes with concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

STLC = Soluble Threshold Limit Concentration, in mg/L, as identified in Title 22 of the California Code of Regulations. A concentration of ten times the STLC is sometimes used as a trigger to conduct further analysis (i.e., the soluble analysis) of a sample to determine disposal requirements. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

TCLP = Toxicity Characteristic Leaching Procedure concentration, in mg/L, as identified in the Code of Federal Regulations. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under federal regulations.

-- = Not Applicable

TABLE 10
SUMMARY OF ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES (SCS 2019)
TORRANCE NORTH POSSE - ADDITIONAL CHARACTERIZATION
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sampling Date	Volatile Organic Compounds (EPA Method 8260SV)*									Methane (EPA Method 8015M)
			Toluene	Ethylbenzene	Benzene	m,p-Xylene	o-Xylene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	n-Propylbenzene	1,1-Difluoroethane (LCC)**	Methane
			Micrograms per liter (µg/l)									ppmv
SB20	5.5	3/21/2019	<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**13**
	15		<0.80	<0.40	**0.28**	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**180**
	30		<10	<5.0	**12**	<5.0	<5.0	<5.0	<5.0	<5.0	<0.40	**2,700**
SB24	5.5	3/20/2019	<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<10
	15		<4.0	<2.0	<0.40	<2.0	<0.40	<2.0	<2.0	<2.0	<2.0	**1,100**
SB25	5.5		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<10
	5.5 REP		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<10
	15		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**4,200**
SB26	5.5		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<10
	15		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<10
	25		<4.0	<2.0	<0.40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**56,000**
SB27	5.5	3/21/2019	<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**29**
	15		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**270**
	25		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**3,600**
SB29	5.5		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<10
	15		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<10
	30		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**56**
	30 REP		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**62**
SB31	5.5	3/22/2019	**71**	**60**	<4.0	**110**	**52**	**24**	**76**	<20	<20	**40**
	11.5		<40	<20	<4.0	**69**	**47**	**35**	**65**	<20	<20	**39,000**
	30		<40	**51**	**16**	**120**	**71**	**44**	**140**	**29**	<20	**7,000**
SB33	5.5	3/21/2019	<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	**0.80**	<10
	15		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	**1.3**	<10
	30		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**29**
SB36	5.5	3/22/2019	<20	<10	<2.0	<10	<10	<10	<10	<10	<10	**1,200**
	5.5 REP		<20	<10	<2.0	<10	<10	<10	<10	<10	<10	--
	18		<40	<20	<4.0	<20	<20	<20	<20	<20	<20	**730**
	30		<100	<50	**44**	<50	<50	<50	<50	<50	<50	**65,000**
SB37	5.5	3/20/2019	<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**9,000**
	15		<10	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**42,000**
	30		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**16,000**
SB41	5.5		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**9,700**
	15		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**3,900**
	30		<0.80	<0.40	<0.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	**2,900**
DTSC-Recommended SL (Future Commercial/Industrial) - AF = 0.0005			2,600	9.8	0.84	880	880	520	520	8,800	--	--
DTSC-Recommended SL (Commercial/Industrial) - AF = 0.03			43	0.163	0.01	14.7	14.7	8.1	8.7	147	--	--

Notes:

bgs = below ground surface

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - Industrial/commercial land use scenarios (April 2019 Referencing U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - November 2018).

Three purge volumes were used for all sampling points.

* Only analytes deteced are listed, refer to analytical report for full list.

** LCC = Leak Check Compound

-- = Not Applicable

TABLE 11
SUMMARY OF ANALYTICAL RESULTS FOR ASBESTOS SAMPLES (SCS 2020)
TORRANCE NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Homogenous Material (HA ID)	Material Description & Sample Numbers	Locations of Homogenous Materials	Asbestos Content (% weight)	Material Quantity (Square Feet)	Friability	Condition	USEPA-NESHAP Waste Classification *
1	Black tar debris (1,2,3)	Area 1 & 5	None detected	---	---	---	---
2	Tan tile debris (4,5,6)	Area 2	None detected	---	---	---	---
3	Corrugated air-o-cell insulation debris (7,8,9)	Area 4	None detected	---	---	---	---
4	Carpet adhesive (yellow) debris (10,11,12)	Area 2	None detected	---	---	---	---
5	Red vinyl floor tile debris (13,14)	Area 2	None detected	---	---	---	---
6	Beige tile cementitious debris (15, 16)	Area 1	None detected	---	---	---	---
7	**Silver/black mastic debris (17,18,19)**	**Area 1**	**8% Chrysotile**	**174,000 SF (Area of surficial debris)**	**Friable**	**Significantly damaged**	**Regulated Asbestos Containing Material (RACM)**
8	**Woven fabric insulation debris (21,22,23)**	**Areas 1, 2 & 3**	**15% Chrysotile**	**320,000 SF (Area of surficial debris)**	**Friable**	**Significantly damaged**	**Regulated Asbestos Containing Material (RACM)**
9	**Pipe gasket debris (24,25,26)**	**Areas 1, 2, 3, 5 & 6**	**10% Chrysotile**	**367,400 SF (Area of surficial debris)**	**Friable**	**Significantly damaged**	**Regulated Asbestos Containing Material (RACM)**
10	**Gray thin underlayment debris (27,28,29)**	**Areas 1, 2, 3, 5 & 6**	**15% Chrysotile**	**367,400 SF (Area of surficial debris)**	**Friable**	**Significantly damaged**	**Regulated Asbestos Containing Material (RACM)**
11	**Green underlayment debris (30,31,32)**	**Area 2**	**25% Chrysotile**	**55,000 SF (Area of surficial debris)**	**Friable**	**Significantly damaged**	**Regulated Asbestos Containing Material (RACM)**
12	**Black insulation debris (33,34,35)**	**Areas 1, 2, 3 & 5**	**8% Chrysotile**	**360,000 SF (Area of surficial debris)**	**Friable**	**Significantly damaged**	**Regulated Asbestos Containing Material (RACM)**
13	Gray slurry debris (36,37,38)	Area 3	None detected	---	---	---	---
14	Stucco debris (39,40,41)	Area 4	None detected	---	---	---	---

TABLE 11
SUMMARY OF ANALYTICAL RESULTS FOR ASBESTOS SAMPLES (SCS 2020)
TORRANCE NORTH POSSE, 3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Notes:

- Please refer to **Figure 1** for corresponding sampling locations of homogenous materials identified above.
- (---) is utilized in the event no ACMs, ACCMs or trace amount of asbestos is identified.
- SF = approximate square footage of materials observed. All of the above quantities are rough approximations of impacted surface area and will need to be verified by the abatement contractor.
- Non-friable materials can be rendered friable when subjected to crushing, sanding, sawing, shot blasting, and use of mechanical methods or through other demolition or renovation activities.

The following condition types were used to assess materials found to contain asbestos:

- Good: No damage or deterioration, material is intact and shows little or no signs of damage or deterioration, and/or no debris was present.
- Damaged: Moderate damage or deterioration, material is breaking up into layers or beginning to come loose from the substrate, there are small areas where the material is deteriorating, and/or minor debris may be present.
- Significantly Damaged: Severe damage or deterioration, the material is non-cohesive, pieces are dislodged and debris is evident, and/or non-friable material has become friable.

NESHAP Waste Definitions:

- Category I non-friable ACM is any asbestos-containing packing, gasket, resilient floor covering or asphalt roofing product which contains more than one percent (1%) asbestos
- Category II non-friable ACM is any material (excluding Category I non-friable ACM) containing more than one percent asbestos as determined using the methods specified in Appendix A, subpart F, 40 Code of Federal Regulations (CFR) part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized or reduced to a powder by hand pressure.
- Regulated Asbestos-Containing Material (RACM) is any friable asbestos material or non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

TABLE 12
SUMMARY OF ANALYTICAL RESULTS FOR DATA GAP INVESTIGATION - SOIL SAMPLES (SCS 2022)
TORRANCE NORTH POSSE
3041 DEL AMO BOULEVARD, TORRANCE, CALIFORNIA

Boring ID	Sample Depth (feet bgs)	Sample Date	Total Petroleum Hydrocarbons [EPA Method 8015M]			Lead EPA Method 6010B	VOCs (EPA Method 8260B/5035)		SVOCs (EPA Method 8270C)	
			Gasoline Range (C_5-C_{12})	Diesel Range (C_{13}-C_{22})	Oil Range (C_{23}-C_{32})	Lead	Acetone	Naphthalene	Benzo (a) pyrene	Naphthalene
			mg/kg, equivalent to parts per million				µg/kg, equivalent to parts per billion			
SB42	5	10/11/2022	--	--	--	**701**	--	--	--	--
	10		--	--	--	**40.9**	--	--	--	--
	15		--	--	--	**232**	--	--	--	--
	20		--	--	--	<4.99	--	--	--	--
	25		--	--	--	<4.99	--	--	--	--
	29		--	--	--	<4.99	--	--	--	--
SB43	5	10/12/2022	<0.20	**1,950**	**2,680**	**400**	--	<9.7	--	--
	10		**3,840**	**19,700**	**7,830**	**176**	--	<3,900	--	--
	15		**6,180**	**104,000**	<100,000	**1,100**	--	<60,000	--	--
	20		**3,690**	**19,700**	**5,320**	**8,720**	--	<37,300	--	--
	25		**261**	**1,220**	<2,480	**5.09**	--	<1,820	--	--
	28		**5,970**	**21,700**	<19,600	<4.93	--	<41,800	--	--
SB44	5	10/13/2022	--	--	--	--	--	--	<0.50	--
	10		--	--	--	--	--	--	<0.50	--
	15		--	--	--	--	--	--	<0.50	--
	17		--	--	--	--	--	--	<0.50	--
SB45	5	10/11/2022	--	--	--	--	--	<9.4	--	--
	10		--	--	--	--	--	<5,500	--	--
	15		--	--	--	--	--	**14,200**	--	--
	20		--	--	--	--	--	**16.8**	--	--
	25		--	--	--	--	--	**28.1**	--	--
	30		--	--	--	--	--	**31.7**	--	--
	35		--	--	--	--	--	<9.4	--	--
SB46	6	10/14/2022	--	--	--	**2,170**	--	--	<5.0	--
	10		--	--	--	**216**	--	--	**12.4**	--
	15		--	--	--	**168**	--	--	**6.65**	--
	20		--	--	--	<4.97	--	--	<0.50	--
	25		--	--	--	<4.95	--	--	<0.50	--
	27		--	--	--	<4.93	--	--	<0.50	--
SB47	5	10/10/2022	<0.29	**482**	**1,810**	**85.7**	<26	<1.3	<2.5	<2.5
	10		<0.17	**1,740**	**2,620**	**385**	**22.0**	<9.5	<2.5	<2.5
	15		<0.17	<9.8	<98	<4.99	<15	<7.69	<0.50	<0.50
	20		<0.20	<9.9	<99	**231**	<19	<9.6	<0.50	<0.50
	25		<0.19	<9.9	<99	<4.97	**20.5**	<9.6	<0.50	<0.50
	28		<0.18	<9.9	<99	<4.98	<21	<11	<0.50	<0.50
LARWQCB SSLs (20-150 feet above groundwater)			**500**	**1,000**	**10,000**	**--**	--	--	--	--
DTSC-Recommended SL (Commercial/Industrial)			**--**	**--**	**--**	**500***	--	**6,500**	**1,300**	**6,500**

Notes:

'-- = Not analyzed or not applicable.
BOLD = Detected at or above laboratory detection limits; **RED** = Detected at or above commercial/industrial screening level
VOCs = volatile organic compounds
SVOCs = semi-volatile organic compounds
bgs = below ground surface
LARWQCB SSLs (20-150 feet) = Los Angeles Regional Water Quality Control Board (LARWQCB) Interim Site Assessment & Cleanup Guidebook Maximum Soil Screening Level (SSL; 1996)

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - Residential and industrial/commercial land use scenarios (June 2020, Revised May 2020), Referencing U.S. Environmental Protection Agency Regional Screening Level Summary Table - November 2022).

*Background lead in California soil ranges from 12.4 to 97.1 mg/kg; Background Concentrations of Trace and Major Elements in California Soils, March 1996

Table 13. Summary of Analytical Results for Data Gap Investigation - Soil Samples (AECOM 2022)
Torrance North Posse
3041 Del Amo Boulevard, Torrance, California

Well (Work Plan Borehole Name in Parenthesis)	Depth (ft bgs)	Elevation (ft msl)	Sampling Date	Sample Type	EPA 6010B (mg/kg)	Mod. EPA 8015B (mg/kg)				EPA 8260B (µg/kg)				EPA 8270C (mg/kg)	
					lead	TPH-g (C_4-C_{12})	TPH-d (C_{13}-C_{22})	TPH-o (C_{23}-C_{32})	TPH-mo (C_{17}-C_{44})	acetone	ethylbenzene	naphthalene	1,2,4-trimethylbenzene	benzo(a)pyrene	naphthalene
SB43	28	61	10/12/2022	TBB		4,160	21,700	<19,600	--	--	--	<41,800	--	--	--
	34	55	10/12/2022	N	--	1,800 (J)	8,700 (J)	1,100	--	--	--	<23,000	--	--	--
				FR	--	950 (J)	4,100 (J)	830	--	--	--	<12,000	--	--	--
	39	50	10/12/2022	N	--	1,400 (J)	4,400	830	--	--	--	14,000	--	--	--
	44	45	10/12/2022	N	--	1,900	5,900	1,100	--	--	--	<15,000	--	--	--
	49	40	10/12/2022	N	--	2,100	9,600	2,000	--	--	--	16,000	--	--	--
	54	35	10/12/2022	N	--	410 (J)	7,300	1,400	--	--	--	5,000	--	--	--
	59	30	10/12/2022	N	--	0.32 (J)	<5.0	<5.0	--	--	--	<10	--	--	--
	64	25	10/12/2022	N	--	0.54 (J)	<4.9	<4.9	--	--	--	<9.6	--	--	--
SB44	17	61	10/13/2022	TBB	--	--	--	--	--	--	--	--	--	<1.0	--
SB47	28	61	10/10/2022	TBB	<4.98	<0.183	<9.92	<99.2	--	<21.4	<1.07	<10.7	<1.07	<0.5	<0.5
SWP-SB-P16 (BH-3)	35	60	10/18/2022	N	--	0.29	<5.0	--	--	--	--	--	--	--	--
SWP-MW-P08 (BH-2)	35	56	10/18/2022	N	--	--	7.9	--	--	--	--	--	--	--	--
	40	51	10/18/2022	N	--	--	23	--	--	--	--	--	--	--	--
	45	46	10/18/2022	N	--	--	14	--	--	--	--	--	--	--	--
	50	41	10/18/2022	N	--	--	5.6	--	--	--	--	--	--	--	--
	55	36	10/18/2022	N	--	--	400	--	--	--	--	--	--	--	--
	60	31	10/18/2022	N	--	--	7,800	--	--	--	--	--	--	--	--
	65	26	10/18/2022	N	--	--	14	--	--	--	--	--	--	--	--
	69.5	21.5	10/18/2022	N	--	--	<4.9	--	--	--	--	--	--	--	--
SWP-MW-P09 (BH-5)	27	64	10/14/2022	TBB	<4.93	--	--	--	--	--	--	--	--	<0.5	--
SWP-MW-P10 (BH-6)	30		11/2/2022	N	<2.02	<0.13	<5.0	--	<25	33	<1.3	<13	<2.6	<0.50	<0.50
				FR	2.02	<0.12	<5.0	--	<25	44	<1.5	<15	<3.1	<0.50	<0.50
	65		11/2/2022	N	<2.02	0.38	<5.0	--	<24	40	1.6	14	2.9	<0.50	<0.50
SWP-VMP-P01 (BH-1)	35		10/20/2022	N	--	11	570	--	--	--	--	13	--	--	--
	40		10/20/2022	N	--	1.0	54	--	--	--	--	<11	--	--	--
	45		10/20/2022	N	--	1.8	<4.7	--	--	--	--	--	--	--	--
	50		10/20/2022	N	--	1.5	--	--	--	--	--	--	--	--	--
	55		10/20/2022	N	--	2,100	--	--	--	--	--	--	--	--	--
	60		10/20/2022	N	--	1,600	--	--	--	--	--	--	--	--	--
	65		10/20/2022	N	--	1.2	--	--	--	--	--	--	--	--	--
	70		10/20/2022	N	--	0.42	--	--	--	--	--	--	--	--	--
SWP-VMP-P02 (BH-4)	35		11/1/2022	N	2.59	0.21 (J)	<5.0	--	--	--	--	<12	--	<0.50	--
				FR	2.12	<0.12 (UJ)	<4.8	--	--	--	--	<12	--	<0.50	--
	40		11/1/2022	N	<1.97	<0.12	--	--	--	--	--	--	--	--	--

Notes:

Grey values indicate sample not detected at or above the reporting limit.

<	not detected at or above the reporting limit	ppb v/v	parts per billion by volume
% v/v	percent by volume	ppm v/v	parts per million by volume
ASTM	American Society for Testing and Materials	TBB	Torrance Black Beauty LLC
EPA	(United States) Environmental Protection Agency	TPH-d	total petroleum hydrocarbons as diesel
FD	field duplicate	TPH-g	total petroleum hydrocarbons as gasoline
ft bgs	feet below ground surface	TPH-mo	total petroleum hydrocarbons as motor oil
N	normal environmental sample	TPH-o	total petroleum hydrocarbons as oil

Data Validation Qualifiers

(J) Estimated value.

(UJ) The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Source: AECOM 2022 Investigation conducted on behalf of Torrance Refining Company LLC,

TABLE 14

Calculation of Soil Non-Cancer Hazard and Cancer Risk - Commercial Use - Metals

Torrance North Posse
3041 Del Amo Boulevard
Torrance, California

Metal	Max Conc[1] (mg/kg)	Commercial Use Soil Screening Level (mg/kg)		Screening Level Reference	Cancer Risk	Hazard Quotient
		Cancer	Non-Cancer			
Antimony	42	NC	4.7E+02	EPA (2022)		8.94E-02
Arsenic	54	3.6E-01	4.2E+00	DTSC (2022b)	1.50E-04	1.29E+01
Barium	1100	NC	2.2E+05	EPA (2022)		5.00E-03
Cadmium	3.41	4.0E+03	7.9E+01	DTSC (2022b)	8.53E-10	4.32E-02
Chromium (Total)[2]	2400	NC	1.8E+06	EPA (2022)		1.33E-03
Chromium (Hexavalent)	19.1	6.2E+00	3.5E+03	DTSC (2022b)	3.08E-06	5.46E-03
Cobalt	941	1.9E+03	3.5E+02	EPA (2022)	4.95E-07	2.69E+00
Copper	1400	NC	4.7E+04	EPA (2022)		2.98E-02
Lead	14,000	NC	5.0E+02	DTSC (2022b)		See text.
Mercury	36.8	NC	4.4E+00	DTSC (2022b)		8.36E+00
Molybdenum	175	NC	5.8E+03	EPA (2022)		3.02E-02
Nickel	64.6	6.4E+04	1.1E+04	DTSC (2022b)	1.01E-09	5.87E-03
Selenium	4.7	NC	5.8E+03	EPA (2022)		8.10E-04
Thallium	107	NC	1.2E+01	EPA (2022)		8.92E+00
Vanadium	301	NC	5.8E+03	EPA (2022)		5.19E-02
Zinc	1100	NC	3.5E+05	EPA (2022)		3.14E-03
Hazard Index						3.31E+01
Cumulative Cancer Risk					1.54E-04	

Yellow highlight indicates metals with Hazard Quotients exceeding 1, or cancer risk exceeding 1E-06.

NC = not carcinogenic.

[1]Maximum concentration between 0 and 10 ft bgs.

[2]Assumed to be trivalent chromium as there are no screening levels for total chromium.

TABLE 15

Calculation of Soil Non-Cancer Hazard and Cancer Risk - Commercial Use
Organochlorine Pesticides (OCPs) and Polychlorinated Biphenyls (PCBs)

Torrance North Posse
3041 Del Amo Boulevard
Torrance, California

Chemical	Max Conc[1] (µg/kg)	Max Conc (mg/kg)	Commercial Use Soil Screening Level (mg/kg)		Screening Level Reference	Cancer Risk	Hazard Quotient
			Cancer	Non-Cancer			
Aroclor 1260	651	0.651	6.0E-01	NA	DTSC (2022b)	1.09E-06	
Chlordane (Total)	18.1	0.0181	6.1E+00	3.6E+02	DTSC (2022b)	2.97E-09	5.03E-05
DDD	27.2	0.0272	6.2E+00	1.6E+01	DTSC (2022b)	4.39E-09	1.70E-03
DDE	141	0.141	9.3E+00	3.4E+02	DTSC (2022b)	1.52E-08	4.15E-04
DDT	170	0.17	7.1E+00	4.3E+02	DTSC (2022b)	2.39E-08	3.95E-04
Dieldrin	1.11	0.00111	9.3E-02	2.6E+01	DTSC (2022b)	1.19E-08	4.27E-05
Heptachlor	61	0.061	6.3E-01	5.1E+02	DTSC (2022b)	9.68E-08	1.20E-04
Heptachlor epoxide	11.1	0.0111	3.3E-01	1.4E+01	DTSC (2022b)	3.36E-08	7.93E-04
Hazard Index							3.5E-03
Cumulative Cancer Risk						1.27E-06	

[1]Maximum concentration between 0 and 10 ft bgs.

NA = screening level not available.

TABLE 16

Calculation of Soil Non-Cancer Hazard and Cancer Risk - Commercial Use - Volatile Organic Compounds (VOCs)

Torrance North Posse
3041 Del Amo Boulevard
Torrance, California

Chemical	Max Conc[1] (µg/kg)	Max Conc (mg/kg)	Commercial Use Soil Screening Level (mg/kg)		Screening Level Reference	Cancer Risk	Hazard Quotient
			Cancer	Non-Cancer			
Acetone	182	0.182	NC	1.1E+06	EPA (2022)		1.65E-07
Benzene	2,300	2.3	1.4E+00	4.6E+01	DTSC (2022b)	1.64E-06	5.00E-02
tert-Butyl alcohol	890	0.89	6.5E+03	2.7E+05	EPA (2022)	1.37E-10	3.30E-06
n-Butylbenzene	6,000	6	NC	5.8E+04	EPA (2022)		1.03E-04
sec-Butylbenzene	3,500	3.5	NC	1.2E+05	EPA (2022)		2.92E-05
tert-Butylbenzene	365	0.365	NC	1.2E+05	EPA (2022)		3.04E-06
Ethylbenzene	26,000	26	2.5E+01	1.7E+04	EPA (2022)	1.04E-06	1.53E-03
Isopropylbenzene	4,600	4.6	NC	9.9E+03	EPA (2022)		4.65E-04
4-Isopropyltoluene[2]	4,200	4.2	NC	5.3E+03	DTSC (2022b)		
Methyl tert butyl ether	160	0.16	2.1E+02	6.4E+04	EPA (2022)	7.62E-10	2.50E-06
Methylene chloride	41	0.041	2.6E+01	2.5E+03	DTSC (2022b)	1.58E-09	1.64E-05
Naphthalene	180,000	180	6.5E+00	5.7E+02	DTSC (2022b)	2.77E-05	3.16E-01
n-Propylbenzene	7,760	7.8	NC	2.4E+04	EPA (2022)		3.23E-04
Toluene	24,600	24.6	NC	5.3E+03	DTSC (2022b)		4.64E-03
1,2,4-Trichlorobenzene	678	0.678	3.5E+01	2.6E+02	DTSC (2022b)	1.94E-08	2.61E-03
1,1,2-Trichloroethane	19.1	0.0191	5.0E+00	6.3E+00	EPA (2022)	3.82E-09	3.03E-03
1,2,4-Trimethylbenzene	127,000	127	NC	1.8E+03	EPA (2022)		7.06E-02
1,3,5-Trimethylbenzene	37,000	37	NC	1.5E+03	EPA (2022)		2.47E-02
m, p-Xylene	99,900	100	NC	2.4E+03	EPA (2022)		4.16E-02
o-Xylene	48,900	48.9	NC	2.4E+03	EPA (2022)		2.04E-02
Hazard Index							5.4E-01
Cumulative Cancer Risk						3.04E-05	

Yellow highlight indicates chemicals with Hazard Quotients exceeding 1, or cancer risk exceeding 1E-06.

NC = not carcinogenic.

NA = not available.

[1]Maximum concentration between 0 and 10 ft bgs.

[2]Screening levels are not available for 4-ispropyltoluene so the screening levels for toluene as a toxicological surrogate were used.

TABLE 17

Calculation of Soil Non-Cancer Hazard and Cancer Risk - Commercial Use - Semi-Volatile Organic Compounds (SVOCs)

Torrance North Posse
3041 Del Amo Boulevard
Torrance, California

Chemical	Max Conc[1] (µg/kg)	Max Conc (mg/kg)	Commercial Use Soil Screening Level (mg/kg)		Screening Level Reference	Cancer Risk	Hazard Quotient
			Cancer	Non-Cancer			
Acenapthene	10,500	10.5	NC	2.3E+04	DTSC (2022b)		4.57E-04
Anthracene	7,650	7.7	NC	1.3E+05	DTSC (2022b)		5.88E-05
Benzo(a)anthracene	21,700	21.7	1.2E+01	NA	DTSC (2022b)	1.81E-06	
Benzo(a)pyrene	10,400	10.4	1.3E+00	1.3E+02	DTSC (2022b)	8.00E-06	8.00E-02
Benzo(b)fluoranthene	5,620	5.6	1.3E+01	NA	DTSC (2022b)	4.32E-07	
Benzo(g,h,i) perylene	6,900	6.9	NC	NA			
Benzo(k)fluoranthene	8,440	8.4	1.3E+02	NA	DTSC (2022b)	6.49E-08	
Benzoic acid	975	0.975	NC	2.1E+06	DTSC (2022b)		4.64E-07
Carbazole	2,350	2.4	NC	NA			
Chrysene	71,000	71	1.3E+03	NA	DTSC (2022b)	5.46E-08	
Dibenz(a,h)anthracene	5,880	5.9	3.1E-01	NA	DTSC (2022b)	1.90E-05	
2,4-Dimethylphenol	47,900	47.9	NC	1.1E+04	DTSC (2022b)		4.35E-03
Fluoranthene	15,400	15.4	NC	1.8E+04	DTSC (2022b)		8.56E-04
Fluorene	26,400	26.4	NC	1.7E+04	DTSC (2022b)		1.55E-03
Indeno(1,2,3,C,D)pyrene	12,100	12.1	1.3E+01	NA	DTSC (2022b)	9.31E-07	
1-Methylnapthalene	180,000	180	3.0E+01	2.2E+04	DTSC (2022b)	6.00E-06	8.18E-03
2-Methylnapthalene	376,000	376	NC	1.3E+03	DTSC (2022b)		2.89E-01
2-Methylphenol	15,500	15.5	NC	2.6E+04	DTSC (2022b)		5.96E-04
3- or 4-Methylphenol	14,500	14.5	NC	2.6E+04	DTSC (2022b)		5.58E-04
Naphthalene	155,000	155	6.5E+00	5.7E+02	DTSC (2022b)	2.38E-05	2.72E-01
N-Nitrosodiphenylamine	11,000	11	3.0E+02	NA	DTSC (2022b)	3.67E-08	
Phenanthrene	142,000	142	NC	NA			
Phenol	5,470	5.5	NC	1.6E+05	DTSC (2022b)		3.42E-05
Pyrene	79,700	79.7	NC	1.3E+04	DTSC (2022b)		6.13E-03
Hazard Index							6.6E-01
Cumulative Cancer Risk						6.01E-05	

Yellow highlight indicates chemicals with Hazard Quotients exceeding 1, or cancer risk exceeding 1E-06.
NC = not carcinogenic.
NA = not available.
[1]Maximum concentration between 0 and 10 ft bgs.

TABLE 18

Vapor Intrusion Risk Calculations - Commercial Receptor

Torrance North Posse
3014 Del Amo Boulevard
Torrance, California

Chemical	Soil Vapor Max Conc[1] (µg/m^3)	Cancer-Based Ambient Air Screening Level (µg/m^3)	Non-Cancer-Based Ambient Air Screening Level (µg/m^3)	Screening Level Reference	Cancer-Based Soil Vapor Screening Level[3] (µg/m^3)	Non-Cancer-Based Soil Vapor Screening Level[4] (µg/m^3)	Cancer Risk	Hazard Quotient
sec-Butylbenzene	1,930	NC	1.2E+04	DTSC (2022b)		4.00E+05		4.83E-03
Chloroform	24	5.3E-01	4.3E+02	EPA(2024)	1.77E+01	1.43E+04	1.36E-06	1.67E-03
1,1-Difluoroethane	800	NC	1.8E+05	EPA(2024)		6.00E+06		1.33E-04
Ethylbenzene	60,000	4.9E+00	4.4E+03	EPA(2024)	1.63E+02	1.47E+05	3.67E-04	4.09E-01
Isopropylbenzene	210	NC	1.8E+03	EPA(2024)		6.00E+04		3.50E-03
4-Isopropyltoluene[2]	299	NC	1.3E+03	DTSC (2022b)		4.33E+04		6.90E-03
n-Propylbenzene	385	NC	4.4E+03	EPA(2024)		1.47E+05		2.63E-03
Tetrachloroethene	1,000	2.00E+00	1.8E+02	DTSC (2022b)	6.67E+01	6.00E+03	1.50E-05	1.67E-01
Toluene	71,000	NC	1.3E+03	DTSC (2022b)		4.33E+04		1.64E+00
1,2,4-Trimethylbenzene	9,430	NC	2.6E+02	EPA(2024)		8.67E+03		1.09E+00
1,3,5-Trimethylbenzene	8,037	NC	2.6E+02	EPA(2024)		8.67E+03		9.27E-01
m,p-Xylene	110,000	NC	4.4E+02	EPA(2024)		1.47E+04		7.50E+00
o-Xylene	52,000	NC	4.4E+02	EPA(2024)		1.47E+04		3.55E+00
Hazard Index								1.53E+01
Cumulative Cancer Risk							3.84E-04	

Shallow Soil Vapor Data Only - 5' bgs

Yellow highlight indicates chemicals with Hazard Quotients exceeding 1, or cancer risk exceeding 1E-06.

NC = not carcinogenic.

NA = not available.

[1]Maximum concentration at a nominal depth of 5' bgs except for 1,2,4-TMB and 1,3,5-TMB, where a 95UCLM was calculated.

[2]Non-cancer-based screening level for toluene used for isopropyltoluene.

[3]Calculated as the cancer-based ambient air screening level divided by an attenuation factor of 0.03.

[4]Calculated as the non-cancer-based ambient air screening level divided by an attenuation factor of 0.03.

TABLE 19

Cumulative Health Risks from All Exposure Pathways

Torrance North Posse
3041 Del Amo Boulevard
Torrance, California

Exposure Pathways	Cumulative Cancer Risk[1]	Hazard Index[2]
Direct Soil Contact Exposure Pathways		
Metals	1.54E-04	3.31E+01
OCPs and PCBs	1.27E-06	3.52E-03
VOCs	3.04E-05	5.36E-01
SVOCs	6.01E-05	6.64E-01
Vapor Intrusion	3.84E-04	1.53E+01
Cumulative Hazard Index - All Exposure Pathways		4.96E+01
Cumulative Cancer Risk - All Exposure Pathways	6.29E-04	

[1]A cumulative cancer risk of 1E-06 (one in a million) indicates negligible cancer risk.

[2]A Hazard Index of 1 or less indicates negligible risk of non-cancer health effects.

Appendix A

Stantec 2017 Data Tables

Table 1
Summary of TPH and VOC Data
North Posse Parcel, Torrance, CA

Sample ID	Sample Date	Sample Depth (feet bgs)	TPH (mg/Kg)					VOCs (ug/Kg)[a]													
			C_4-C_{12}	C_{13}-C_{22}	C_{23}-C_{32}	C_{33}-C_{40}	C_4-C_{40}	Benzene	Ethylbenzene	Toluene	p/m-Xylene	o-Xylene	1,2,4-TMB	1,3,5-TMB	Napthalene	4-isopropylytoluene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	sec-butylbenzene	Other VOCs
Hollow Stem Auger Borings																					
HSA-1-5	9/6/2017	5	**2.9**	**16000.0**	**5500.0**	**1200.0**	**22,703**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-1-10	9/6/2017	10	**2,100**	**48,000**	**19,000**	**3,500**	**72,600**	<250	**1,500**	<250	**1,800**	**1,600**	**7,200**	**1,900**	**14,000**	**1,600**	**470**	**2,100**	**1,300**	**970**	<varies
HSA-1-15	9/6/2017	15	**290**	**2,800**	**4,300**	**1,300**	**8,690**	<250	<250	<250	<500	<250	<250	<250	<250	<250	<250	<250	<250	<250	<varies
HSA-1-20	9/6/2017	20	**1.3**	<10	<10	<10	**1**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-1-25	9/6/2017	25	**2.7**	**260**	**95**	<10	**358**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	**6.7**	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-2-5	9/7/2017	5	<1.0	**250**	**450**	**270**	**970**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-2-10	9/7/2017	10	**2,000**	**25,000**	**8,400**	**1,900**	**37,300**	**650**	**8,100**	<250	<500	<250	<250	<250	**23,000**	<200	**4,600**	**3,400**	**6,900**	**3,500**	<varies
HSA-2-15	9/7/2017	15	**3,400**	**46,000**	**12,000**	**3,500**	**64,900**	**1,300**	**12,000**	**3,700**	**16,000**	**8,100**	**32,000**	**8,800**	**37,000**	**3,500**	**4,700**	**6,300**	**7,300**	**3,400**	<varies
HSA-2-20	9/7/2017	20	**2,700**	**6,400**	**1,800**	**590**	**11,490**	<250	**2,100**	<250	**2,000**	**1,000**	**4,300**	**990**	**29,000**	**370**	**4,200**	**4,300**	**7,000**	**3,300**	<varies
HSA-3-5	9/6/2017	5	<1.0	**1,700**	**1,700**	<500	**3,400**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-3-10	9/6/2017	10	<1.0	**61**	**110**	**38**	**209**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-3-15	9/6/2017	15	<1.0	**130**	**59**	<10	**189**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-3-20	9/6/2017	20	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-4-10	9/6/2017	10	**300**	**15,000**	**6,000**	**1,100**	**22,400**	<250	**2,500**	**380**	**3,700**	**3,600**	**6,100**	**1,400**	**6,200**	**340**	**890**	**610**	**1,600**	**320**	<varies
HSA-4-15	9/6/2017	15	**210**	**480**	**290**	**280**	**1,260**	<250	**1,800**	<250	**1,300**	**1,100**	**2,500**	**420**	**2,100**	<250	**520**	**300**	**900**	<250	<varies
HSA-4-20	9/6/2017	20	**640**	**16,000**	**4,000**	**650**	**21,290**	<250	**6,300**	<250	**770**	**400**	**480**	<250	**20,000**	**660**	**760**	**700**	**2,200**	<250	<varies
HSA-4-25	9/6/2017	25	**970**	**3,600**	**1,200**	**290**	**6,060**	<250	**5,400**	<250	**3,600**	**1,800**	**5,300**	**1,100**	**14,000**	**1,000**	**1,100**	**960**	**2,300**	**680**	<varies
HSA-5-5	9/7/2017	5	<1.0	<10	**41**	**12**	**53**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-5-10	9/7/2017	10	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-5-15	9/7/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-6-5	9/7/2017	5	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-6-10	9/7/2017	10	<1.0	<10	<10	<10	<10	**16**	<5.0	<5.0	<10	<5.0	**13**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**MTBE: 47**
HSA-6-15	9/7/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**MTBE: 30**
HSA-7-5	9/7/2017	5	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-7-15	9/7/2017	15	**2.1**	**210**	**21**	<10	**233**	<5.0	<5.0	<5.0	<10	<5.0	**17**	<5.0	<5.0	<5.0	<5.0	<5.0	**6.9**	<5.0	<varies
HSA-7-20	9/7/2017	20	<1.0	**14**	<10	<10	**14**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-8-5	9/7/2017	5	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-8-10	9/7/2017	10	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
HSA-8-15	9/7/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies

Table 1
Summary of TPH and VOC Data
North Posse Parcel, Torrance, CA

Sample ID	Sample Date	Sample Depth (feet bgs)	TPH (mg/Kg)					VOCs (ug/Kg)[a]													
			C_4-C_{12}	C_{13}-C_{22}	C_{23}-C_{32}	C_{33}-C_{40}	C_4-C_{40}	Benzene	Ethylbenzene	Toluene	p/m-Xylene	o-Xylene	1,2,4-TMB	1,3,5-TMB	Napthalene	4-isopropylytoluene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	sec-butylbenzene	Other VOCs
Geoprobe Borings																					
GP-1-5	9/8/2017	5	<1.0	**100**	**270**	**330**	**700**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-1-10	9/8/2017	10	**1,800**	**19,000**	**4,000**	**1,200**	**26000**	**1,800**	**11,000**	**6,000**	**34,000**	**14,000**	**53,000**	**15,000**	**40,000**	**4,200**	**3,200**	**6,000**	**6,100**	**2,700**	<varies
GP-1-15	9/8/2017	15	**2,300**	**15,000**	**3,200**	**1,200**	**21700**	**3,200**	**13,000**	**490**	**11,000**	**2,200**	**39,000**	**12,000**	**51,000**	**4,500**	<250	**6,500**	**6,900**	**3,200**	**tert-Butylbenzene: 260**
GP-1-20	9/8/2017	20	**4,900**	**10,000**	**2,200**	**760**	**17860**	**1,100**	**13,000**	**2,600**	**36,000**	**11,000**	**60,000**	**25,000**	**28,000**	**6,600**	**3,500**	**7,400**	**7,500**	**2,800**	**Chloroform: 1,100 tert-Butylbenzene: 1,000**
GP-2-5	9/8/2017	5	<1.0	**1,000**	**2,000**	**2,200**	**5200**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-2-10	9/8/2017	10	<1.0	**5,000**	**3,600**	**780**	**9380**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	**5.0**	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-2-15	9/8/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	**5.5**	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-2-20	9/8/2017	20	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	**5.5**	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-3-5	9/8/2017	5	<1.0	**1,900**	**4,200**	**4,500**	**10600**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-3-10	9/8/2017	10	**1,800**	**130,000**	**63,000**	**23,000**	**217800**	**2,300**	**12,000**	**360**	**7,600**	**2,400**	**24,000**	**6,600**	**35,000**	**3,700**	**4,600**	**4,200**	**6,700**	**2,900**	<varies
GP-3-15	9/8/2017	15	**680**	**3,500**	**990**	**340**	**5510**	<250	**1,700**	<250	<500	<250	**370**	<250	**4,900**	**950**	**440**	**820**	**1,300**	**480**	<varies
GP-3-20	9/8/2017	20	**420**	**1,100**	**330**	**70**	**1920**	<250	**630**	<250	<500	<250	<250	<250	**790**	**310**	<250	<250	**640**	<250	<varies
GP-4-5	9/8/2017	5	**270**	**120,000**	**11,000**	**6,300**	**137570**	<25	<25	<25	<50	<25	**140**	<25	<25	<25	<25	<25	<25	<25	<varies
GP-4-10	9/8/2017	10	**570**	**50,000**	**17,000**	**4,500**	**72070**	<25	**30**	<25	<50	**63**	**120**	<25	**920**	<25	<25	<25	**27**	<25	<varies
GP-4-15	9/8/2017	15	**72**	**310**	**150**	<10	**532**	<250	<250	<250	<500	<250	<250	<250	<250	<250	<250	<250	<250	<250	<varies
GP-4-20	9/8/2017	20	**1.7**	**100**	**40**	<10	**142**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-5-5	9/8/2017	5	<1.0	**6,300**	**15,000**	**8,000**	**29300**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**Methylene Chloride: 41**
GP-5-10	9/8/2017	10	**1,300**	**95,000**	**29,000**	**6,400**	**131700**	<250	**13,000**	**1,600**	**8,700**	**4,200**	**12,000**	**4,700**	**29,000**	**1,000**	**4,200**	**2,200**	**5,600**	**1,900**	<varies
GP-5-15	9/8/2017	15	**1,100**	**19,000**	**4,500**	**730**	**25330**	**780**	**5,700**	**8,100**	**19,000**	**9,500**	**23,000**	**8,100**	**31,000**	**2,000**	**1,400**	**2,800**	**3,500**	**1,000**	<varies
GP-5-20	9/8/2017	20	**670**	**3,000**	**7,400**	**780**	**11850**	**670**	**10,000**	**980**	**12,000**	**2,500**	**50,000**	**5,900**	**40,000**	**4,600**	**3,400**	**3,900**	**6,900**	**1,900**	<varies
GP-6-5	9/8/2017	5	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-6-10	9/8/2017	10	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-6-15	9/8/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-7-5	9/8/2017	5	<1.0	**2,400**	**2,000**	**520**	**4,920**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-7-10	9/8/2017	10	**58**	**4,700**	**3,200**	<500	**7,958**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-7-15	9/8/2017	15	**540**	**7,500**	**3,600**	**1,400**	**13,040**	<250	**12,000**	<250	<500	**270**	<250	<250	**19,000**	<250	**3,000**	**1,700**	**6,900**	**1,100**	<varies
GP-7-20	9/8/2017	20	**4.5**	**93**	<10	<10	**98**	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	**27**	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-8-5	9/8/2017	5	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-8-10	9/8/2017	10	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-8-15	9/8/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-9-5	9/8/2017	5	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-9-10	9/8/2017	10	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-9-15	9/8/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-10-5	9/8/2017	5	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-10-10	9/8/2017	10	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
GP-10-15	9/8/2017	15	<1.0	<10	<10	<10	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<varies
Los Angeles Regional Water Quality Control Board - Maximum Soil Screening Level[1]			$_{100}$(2)	1,000	10,000	NE	NE	$_{33}$(5)	7,000[5]	2000[5]	20,000[5][6]	20,000[5,6]	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes: (1) Maximum soil screening levels for TPH and BTEX above drinking water aquifers (LARWQCB, 1996)
(2) Soil screening level for carbon chain C4-C12 concentrations 20-150 feet above groundwater
(3) Soil screening level for carbon chain C13-C22 concentrations 20-150 feet above groundwater
(4) Soil screening level for carbon chain C23-C32 concentrations 20-150 feet above groundwater
(5) Soil screening level for concentrations 80-150 feet above groundwater in gravel
(6) reported soil screening level is for combine p/m-xylene and o-xylene concentrations

µg/Kg - micrograms per kilogram
mg/Kg - milligrams per kilogram
NE - not established
NA-not analyzed
a - Analyzed following EPA Method 8260B
b - analyzed following modified EPA method 8015B

Table 2

Summary of Soil Lead Analytical Results

Torrance Refinery - North Posse Parcel

Sample ID	Sample Date	Sample Depth (feet bgs)	Lead Concentrations		
			Total Lead[(1)] (mg/Kg)	STLC Lead[(2)] (mg/L)	TCLP Lead (mg/L)
Hollow Stem Auger Borings					
HSA-1-5	9/6/2017	5	**220**	**15**	**0.62**
HSA-1-10	9/6/2017	10	**130**	**2.6**	<0.25
HSA-1-15	9/6/2017	15	**690**	---	---
HSA-1-20	9/6/2017	20	**1.3**	---	---
HSA-2-5	9/7/2017	5	**400**	**33**	**1.4**
HSA-2-10	9/7/2017	10	**720**	**11**	<0.25
HSA-2-15	9/7/2017	15	**480**	<1.0	<0.25
HSA-3-5	9/6/2017	5	**120**	**10**	<0.25
HSA-3-10	9/6/2017	10	**24**	---	---
HSA-3-15	9/6/2017	15	**17**	---	---
HSA-4-5	9/6/2017	5	**150**	**4.5**	<0.25
HSA-4-10	9/6/2017	10	ND	---	---
HSA-4-15	9/6/2017	15	**340**	**21**	<0.25
HSA-4-20	9/6/2017	20	**3,200**	---	---
Geoprobe Borings					
GP-1-5	9/8/2017	5	**92**	---	---
GP-1-10	9/8/2017	10	**23**	---	---
GP-1-15	9/8/2017	15	**82**	---	---
GP-2-5	9/8/2017	5	**740**	**35**	**3.0**
GP-2-10	9/8/2017	10	**200**	**20**	**0.62**
GP-3-5	9/8/2017	5	**460**	**15**	**0.40**
GP-4-5	9/8/2017	5	**210**	**19**	<0.25
GP-4-10	9/8/2017	10	**86**	---	---
GP-5-5	9/8/2017	5	**14,000**	**1,000**	**21**
GP-5-10	9/8/2017	10	**230**	**1.6**	<0.25
GP-7-5	9/8/2017	5	**22**	---	---

Notes: (1) Total Lead by EPA method 6010B

(2) STLC - Soluble Threshold Limit Conentration following California Waste

(3) TCLP - Toxicity Characteristic Leaching Procedure

mg/Kg - milligrams per kilogram mg/L - milligrams per liter

--- not analyzed

<0.25 - analyte not detected above stated laboratory reporting limit

Table 3
Summary of Soil Vapor Analytical Results
VOCs
Torrance Refinery - North Posse Parcel

Sample ID	Sample Date	Sample Depth (feet bgs)	VOCs (ug/m^3)[a]													
			Benzene	Ethylbenzene	Toluene	p/m-Xylene	o-Xylene	1,2,4-TMB	1,3,5-TMB	Napthalene	4-isopropylytoluene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	sec-butylbenzene	Chloroform	Other VOCs
GP-1-5	9/12/2017	5	<80	<80	<80	<80	<80	**1,150**	**869**	<400	<80	<80	<80	<80	**1,930**	<80	<varies
GP-1-15	9/12/2017	15	**81,500**	**28,600**	<800	**9,470**	<800	**20,000**	<800	<4,000	<800	<800	<800	<800	<800	<800	<varies
GP-2-5	9/12/2017	5	<8	<8	<8	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-2-15	9/12/2017	15	<80	<80	<80	<80	<80	<80	<80	<400	<80	<80	<80	<80	<80	<80	<varies
GP-3-5	9/12/2017	5	<8	**384**	<8	<8	<8	**864**	**354**	<40	**288**	**204**	<8	**330**	**235**	**24**	<varies
GP-3-5 DUP	9/12/2017	5	<8	**385**	<8	<8	<8	**876**	**383**	<40	**299**	**210**	<8	**385**	<8	**22**	<varies
GP-3-15	9/12/2017	15	447	**42**	**114**	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-4-5	9/12/2017	5	<80	<80	<80	<80	<80	<80	<80	<400	<80	<80	<80	<80	<80	<80	<varies
GP-4-15	9/12/2017	15	<80	**1,000**	<80	<80	<80	<80	<80	<400	<80	<80	<80	<80	<80	<80	<varies
GP-5-5	9/12/2017	5	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	**39**	<8	<varies
GP-5-15	9/12/2017	15	**7,900**	**27,300**	**8,000**	**26,700**	**11,500**	**25,000**	<800	**7,450**	<800	<800	**6,800**	<800	<800	<800	<varies
GP-5-15 DUP	9/12/2017	15	**7,350**	**25,500**	**8,050**	**25,100**	**10,900**	**21,300**	<800	<4,000	<800	<800	<800	<800	<800	<800	<varies
GP-6-5	9/12/2017	5	<8	<8	<8	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-6-15	9/12/2017	15	**2,280**	**1,850**	<8	**373**	<8	**130**	**187**	<40	**336**	**271**	<8	**321**	**120**	<8	**styrene: 35**
GP-7-5	9/12/2017	5	<8	<8	<8	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-7-15	9/12/2017	15	<160	**59,700**	<160	**66,100**	<160	**12,000**	**3,540**	**807**	**2,410**	**16,100**	**8,020**	**36,500**	**5,830**	<160	<varies
GP-8-5	9/12/2017	5	<8	<8	<8	<8	<8	<8	<8	<40	<8	<8	<8	<8	**29**	<8	<varies
GP-8-15	9/12/2017	15	<8	<8	<8	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-9-5	9/12/2017	5	<8	<8	<8	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-9-15	9/12/2017	15	<8	<8	**39**	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-10-5	9/12/2017	5	<8	<8	<8	<8	<8	<8	<8	<40	<8	<8	<8	<8	<8	<8	<varies
GP-10-15	9/12/2017	15	**98**	**139**	**47**	**47**	<8	**51**	<8	<40	<8	<8	<8	**38**	<8	**27**	**dichlordiflouromethane: 38**

Notes: $\mu g/m^3$ - micrograms per cubic meter

NE - not established

NA-not analyzed

a - Analyzed following EPA Method 8260B

<8 - analyte not detected above stated laboratory reporting limit

VOCs - volatile organic compounds

bgs - below ground surface

TMB - trimethylbenzene

Table 4
Summary of Metals
North Posse Parcel, Torrance, CA

Sample ID	Sample Date	Sample Depth (feet bgs)	Total Metals (mg/Kg)[a]																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Hollow Stem Auger Borings																			
HSA-1-10	9/6/2017	10	<2.0	<1.0	**63**	<1.0	<1.0	**130**	**2.0**	**29**	**160**	**4.3**	<1.0	**12**	**1.8**	<1.0	<1.0	**16**	**27**
HSA-1-15	9/6/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-1-20	9/6/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-1-25	9/6/2017	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-2-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-2-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-2-15	9/7/2017	15	<2.0	**7.5**	**180**	<1.0	<1.0	**39**	**7.2**	**160**	**750**	**53**	**1.7**	**60**	<1.0	<1.0	<1.0	**27**	**350**
HSA-2-20	9/7/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-3-5	9/6/2017	5	<2.0	**5.1**	**140**	<1.0	<1.0	**45**	**4.7**	**71**	**150**	**1.1**	**2.4**	**32**	<1.0	<1.0	<1.0	**39**	**91**
HSA-3-10	9/6/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-3-15	9/6/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-3-20	9/6/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-4-10	9/6/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-4-15	9/6/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-4-20	9/6/2017	20	**7.1**	<1.0	**190**	<1.0	<1.0	**440**	**3.0**	**250**	**3200**	**2.5**	<1.0	**16**	**1.2**	<1.0	<1.0	**15**	**91**
HSA-4-25	9/6/2017	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-5-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-5-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-5-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-6-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-6-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-6-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-7-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-7-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-7-20	9/7/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-8-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-8-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-8-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Geoprobe Borings																			
GP-1-5	9/8/2017	5	<2.0	**2.6**	**73**	<1.0	<1.0	**21**	**5.1**	**37**	**320**	**1.3**	**1.8**	**13**	<1.0	<1.0	<1.0	**24**	**84**
GP-1-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-1-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-1-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-2-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-2-10	9/8/2017	10	<2.0	**1.1**	**110**	<1.0	<1.0	**65**	**4.8**	**24**	**1,900**	**1.2**	**1.4**	**24**	<1.0	<1.0	<1.0	**32**	**120**
GP-2-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-2-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-3-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-3-10	9/8/2017	10	<2.0	**5.9**	**86**	<1.0	<1.0	**15**	**3.1**	**130**	**4,700**	**1.4**	**3.5**	**36**	**3.5**	<1.0	<1.0	**100**	**57**
GP-3-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-3-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 4
Summary of Metals
North Posse Parcel, Torrance, CA

Sample ID	Sample Date	Sample Depth (feet bgs)	Total Metals (mg/Kg)[a]																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
GP-4-5	9/8/2017	5	<2.0	**1.4**	**98**	<1.0	<1.0	**30**	**6.3**	**36**	**200**	**1.5**	**1.7**	**18**	<1.0	<1.0	<1.0	**34**	**59**
GP-4-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-4-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-4-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-5-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-5-10	9/8/2017	10	**42**	<1.0	**1,100**	<1.0	<1.0	**2,400**	**5.6**	**1,400**	**1,200**	**1.6**	**5.7**	**46**	**4.7**	<1.0	<1.0	**39**	**550**
GP-5-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-5-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-6-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-6-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-6-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-7-5	9/8/2017	5	<2.0	**54**	**83**	<1.0	<1.0	**52**	**4.8**	**56**	**250**	**6.2**	**13**	**33**	<1.0	<1.0	<1.0	**72**	**510**
GP-7-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-7-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-7-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-8-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-8-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-8-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-9-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-9-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-9-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-10-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-10-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-10-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Catalyst Sample																			
Cat-1	9/14/2017	---	<76.5	<76.5	**229**	<25.5	<51	**67.2**	<25.5	<51	**155**	**0.913**	<25.5	<25.5	<76.5	<25.5	<76.5	**33.4**	**141**

Notes: mg/Kg - milligrams per kilogram
bgs - below ground surface
--- not analyzed
a - Analyzed following EPA Method 6010B; mercury by 7471A
<1.0 - analyte not detected above stated laboratory reporting limit

Table 5
Summary of PCBs and SVOCs
North Posse Parcel, Torrance, CA

Sample ID	Sample Date	Sample Depth (feet bgs)	PCBs (ug/Kg)[a]									SVOCs (ug/Kg)[a]								
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Benzo(a)pyrene	Chrysene	Fluoranthene	Fluorene	2-Methylnaphthalene	Napthalene	Phenanthrene	Pyrene	Other SVOCs
Hollow Stem Auger Borings																				
HSA-1-5	9/6/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-1-10	9/6/2017	10	<16	<16	<16	<16	<16	<16	<16	<16	<16	<8,200	**71,000**	<8,200	<8,200	**71,000**	<8,200	**24,000**	**13,000**	**Benzo(a)anthracene: 16,000** **N-Nitrosodiphenylamine: 11,000**
HSA-1-15	9/6/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-1-20	9/6/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-1-25	9/6/2017	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-2-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-2-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-2-15	9/7/2017	15	<16	<16	<16	<16	<16	<16	<16	<16	<16	<8,200	<8,200	<8,200	<8,200	**35,000**	**9,200**	<8,200	<8,200	**N-Nitrosodiphenylamine: 9,100**
HSA-2-20	9/7/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-3-5	9/6/2017	5	<16	<16	<16	<16	<16	<16	<16	<16	<16	<8,200	<8,200	<8,200	<8,200	<8,200	<8,200	<8,200	<8,200	<Varies
HSA-3-10	9/6/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-3-15	9/6/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-3-20	9/6/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-4-10	9/6/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-4-15	9/6/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-4-20	9/6/2017	20	<16	<16	<16	<16	<16	<16	<16	<16	<16	<3,300	<3,300	<3,300	<3,300	**8,800**	**4,400**	**8,800**	<3,300	<Varies
HSA-4-25	9/6/2017	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-5-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-5-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-5-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-6-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-6-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-6-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-7-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-7-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-7-20	9/7/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-8-5	9/7/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-8-10	9/7/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HSA-8-15	9/7/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 5
Summary of PCBs and SVOCs
North Posse Parcel, Torrance, CA

Sample ID	Sample Date	Sample Depth (feet bgs)	PCBs (ug/Kg)[a]									SVOCs (ug/Kg)[b]								
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Benzo(a)pyrene	Chrysene	Fluoranthene	Fluorene	2-Methylnaphthalene	Napthalene	Phenanthrene	Pyrene	Other SVOCs
Sample ID	Sample Date	Sample Depth (feet bgs)	PCBs (ug/Kg)[a]									SVOCs (ug/Kg)[b]								
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Benzo(a)pyrene	Chrysene	Fluoranthene	Fluorene	2-Methylnaphthalene	Napthalene	Phenanthrene	Pyrene	Other SVOCs
Geoprobe Borings																				
GP-1-5	9/8/2017	5	<16	<16	<16	<16	<16	<16	<16	<16	<16	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	<6,600	<Varies
GP-1-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-1-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-1-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-2-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-2-10	9/8/2017	10	<16	<16	<16	<16	<16	<16	<16	<16	<16	<3,300	**5,600**	<3,300	<3,300	**4,400**	<3,300	**13000**	**6,500**	**Benzo(a)anthracene: 4,500**
GP-2-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-2-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-3-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-3-10	9/8/2017	10	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16,000	**36,000**	<16,000	<16,000	**71,000**	**19,000**	**18,000**	<16,000	<Varies
GP-3-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-3-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-4-5	9/8/2017	5	<16	<16	<16	<16	<16	<16	<16	<16	<16	<3,300	<3,300	<3,300	**4,900**	<3,300	<3,300	**16,000**	<3,300	<Varies
GP-4-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-4-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-4-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-5-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-5-10	9/8/2017	10	<16	<16	<16	<16	<16	<16	<16	<16	<16	<33,000	<33,000	<33,000	<33,000	**79,000**	<33,000	<33,000	<33,000	<Varies
GP-5-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-5-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-6-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-6-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-6-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-7-5	9/8/2017	5	<16	<16	<16	<16	<16	<16	<16	<16	<16	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<Varies
GP-7-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-7-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-7-20	9/8/2017	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-8-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-8-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-8-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-9-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-9-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-9-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-10-5	9/8/2017	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-10-10	9/8/2017	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GP-10-15	9/8/2017	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes: a - Analyzed following EPA method 8082 ug/Kg - micrograms per kilogram b - Analyzed following EPA method 8270C bgs - below ground surface

--- not analyzed PCBs - polychlorinated biphynels

<1.0 - analyte not detected above stated laboratory reporting limit SVOCs - semi-volatile organic compounds

Table 6

Field Methane Measurements

Torrance Refinery - North Posse Parcel

Sample ID	Sample Date	Sample Depth (feet bgs)	Percent Methane[a]
GP-1-5	9/12/2017	5	0.1
GP-1-15	9/12/2017	15	1.0
GP-2-5	9/12/2017	5	0.0
GP-2-15	9/12/2017	15	1.4
GP-3-5	9/12/2017	5	0.1
GP-3-15	9/12/2017	15	0.0
GP-4-5	9/12/2017	5	0.2
GP-4-15	9/12/2017	15	0.4
GP-5-5	9/12/2017	5	0.2
GP-5-15	9/12/2017	15	23.0
GP-6-5	9/12/2017	5	0.0
GP-6-15	9/12/2017	15	0.2
GP-7-5	9/12/2017	5	0.0
GP-7-15	9/12/2017	15	3.1
GP-8-5	9/12/2017	5	0.0
GP-8-15	9/12/2017	15	0.0
GP-9-5	9/12/2017	5	0.0
GP-9-15	9/12/2017	15	0.0
GP-10-5	9/12/2017	5	0.0
GP-10-15	9/12/2017	15	0.0

Notes: a - measured using a GEM 2000 Landfill Meter

bgs - below ground surface

Appendix B

Lead ProUCL Output

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.111/2/2022 1:25:47 PM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

LEAD

General Statistics

Total Number of Observations	125	Number of Distinct Observations	91
Number of Detects	90	Number of Non-Detects	35
Number of Distinct Detects	88	Number of Distinct Non-Detects	3
Minimum Detect	1.22	Minimum Non-Detect	0.05
Maximum Detect	14000	Maximum Non-Detect	2
Variance Detects	2912984	Percent Non-Detects	28%
Mean Detects	627.2	SD Detects	1707
Median Detects	178.5	CV Detects	2.721
Skewness Detects	6.033	Kurtosis Detects	43.49
Mean of Logged Detects	4.607	SD of Logged Detects	2.241

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.391	Normal GOF Test on Detected Observations Only
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.357	Lilliefors GOF Test
5% Lilliefors Critical Value	0.0936	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	451.6	KM Standard Error of Mean	132
KM SD	1467	95% KM (BCA) UCL	731.3
95% KM (t) UCL	670.3	95% KM (Percentile Bootstrap) UCL	685
95% KM (z) UCL	668.7	95% KM Bootstrap t UCL	895.4
90% KM Chebyshev UCL	847.6	95% KM Chebyshev UCL	1027
97.5% KM Chebyshev UCL	1276	99% KM Chebyshev UCL	1765

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.098	Anderson-Darling GOF Test
5% A-D Critical Value	0.852	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.125	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.101	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.364	k star (bias corrected MLE)	0.36
Theta hat (MLE)	1722	Theta star (bias corrected MLE)	1744
nu hat (MLE)	65.57	nu star (bias corrected)	64.72
Mean (detects)	627.2		

Gamma ROS Statistics using Imputed Non-Detects

53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58						Minimum	0.01			Mean	451.6	
59						Maximum	14000			Median	40.9	
60						SD	1473			CV	3.263	
61						k hat (MLE)	0.183			k star (bias corrected MLE)	0.184	
62						Theta hat (MLE)	2472			Theta star (bias corrected MLE)	2459	
63						nu hat (MLE)	45.67			nu star (bias corrected)	45.91	
64						Adjusted Level of Significance (β)	0.0481					
65						Approximate Chi Square Value (45.91, α)	31.37			Adjusted Chi Square Value (45.91, β)	31.23	
66						95% Gamma Approximate UCL (use when n>=50)	661			95% Gamma Adjusted UCL (use when n<50)	664	
67												
68	Estimates of Gamma Parameters using KM Estimates											
69						Mean (KM)	451.6			SD (KM)	1467	
70						Variance (KM)	2153334			SE of Mean (KM)	132	
71						k hat (KM)	0.0947			k star (KM)	0.0978	
72						nu hat (KM)	23.68			nu star (KM)	24.44	
73						theta hat (KM)	4768			theta star (KM)	4619	
74						80% gamma percentile (KM)	303.2			90% gamma percentile (KM)	1191	
75						95% gamma percentile (KM)	2624			99% gamma percentile (KM)	7255	
76												
77	Gamma Kaplan-Meier (KM) Statistics											
78						Approximate Chi Square Value (24.44, α)	14.19			Adjusted Chi Square Value (24.44, β)	14.1	
79						95% Gamma Approximate KM-UCL (use when n>=50)	778.1			95% Gamma Adjusted KM-UCL (use when n<50)	783.2	
80												
81	Lognormal GOF Test on Detected Observations Only											
82						Shapiro Wilk Approximate Test Statistic	0.936			Shapiro Wilk GOF Test		
83						5% Shapiro Wilk P Value	2.8340E-4			Detected Data Not Lognormal at 5% Significance Level		
84						Lilliefors Test Statistic	0.149			Lilliefors GOF Test		
85						5% Lilliefors Critical Value	0.0936			Detected Data Not Lognormal at 5% Significance Level		
86	Detected Data Not Lognormal at 5% Significance Level											
87												
88	Lognormal ROS Statistics Using Imputed Non-Detects											
89						Mean in Original Scale	451.9			Mean in Log Scale	3.202	
90						SD in Original Scale	1473			SD in Log Scale	3.035	
91						95% t UCL (assumes normality of ROS data)	670.3			95% Percentile Bootstrap UCL	697	
92						95% BCA Bootstrap UCL	792.4			95% Bootstrap t UCL	909.6	
93						95% H-UCL (Log ROS)	8495					
94												
95	Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution											
96						KM Mean (logged)	2.493			KM Geo Mean	12.1	
97						KM SD (logged)	3.888			95% Critical H Value (KM-Log)	5.673	
98						KM Standard Error of Mean (logged)	0.35			95% H-UCL (KM -Log)	168161	
99						KM SD (logged)	3.888			95% Critical H Value (KM-Log)	5.673	
100						KM Standard Error of Mean (logged)	0.35					
101												
102	DL/2 Statistics											
103	DL/2 Normal									DL/2 Log-Transformed		
104						Mean in Original Scale	451.7			Mean in Log Scale	2.545	

	A	B	C	D	E	F	G	H	I	J	K	L
105					SD in Original Scale	1473				SD in Log Scale		3.917
106				95% t UCL (Assumes normality)		670				95% H-Stat UCL		203712
107	DL/2 is not a recommended method, provided for comparisons and historical reasons											
108												
109	Nonparametric Distribution Free UCL Statistics											
110	Data do not follow a Discernible Distribution at 5% Significance Level											
111												
112						Suggested UCL to Use						
113					95% KM (Chebyshev) UCL	1027						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

	0	1
	LEAD	D_LEAD
1	7.43	1
2	3.04	1
3	4.42	1
4	2.05	1
5	15.4	1
6	2.69	1
7	6.37	1
8	1.22	1
9	258	1
10	2,900	1
11	190	1
12	4.06	1
13	90.3	1
14	3.35	1
15	261	1
16	5.06	1
17	193	1
18	65.9	1
19	13.4	1
20	226	1
21	652	1
22	3.19	1
23	214	1
24	5,140	1
25	538	1
26	2.03	1
27	12.6	1
28	1.55	1
29	277	1
30	64.1	1
31	516	1
32	327	1
33	622	1
34	4,310	1
35	153	1
36	8.24	1
37	1,530	1
38	1,520	1
39	764	1
40	304	1
41	1,330	1
42	524	1
43	42.7	1
44	165	1
45	903	1
46	2.55	1
47	14.6	1
48	181	1
49	126	1
50	7.09	1
51	2.75	1

	0	1
	LEAD	D_LEAD
52	2.42	1
53	2	0
54	392	1
55	205	1
56	84.1	1
57	195	1
58	158	1
59	135	1
60	344	1
61	24.3	1
62	418	1
63	2.04	1
64	82	1
65	2	0
66	9.28	1
67	2	0
68	2	0
69	2	0
70	2	0
71	2	0
72	2	0
73	220	1
74	160	1
75	400	1
76	720	1
77	150	1
78	24	1
79	150	1
80	1	0
81	320	1
82	23	1
83	740	1
84	1,900	1
85	460	1
86	4,700	1
87	210	1
88	86	1
89	14000	1
90	1,200	1
91	250	1
92	0.05	0
93	0.05	0
94	0.05	0
95	0.05	0
96	0.05	0
97	0.05	0
98	0.05	0
99	0.05	0
100	0.05	0
101	0.05	0
102	0.05	0

	0	1
	LEAD	D_LEAD
103	0.05	0
104	0.05	0
105	0.05	0
106	0.05	0
107	0.05	0
108	0.05	0
109	0.05	0
110	0.05	0
111	0.05	0
112	0.05	0
113	0.05	0
114	0.05	0
115	0.05	0
116	0.05	0
117	0.05	0
118	701	1
119	40.9	1
120	400	1
121	176	1
122	2170	1
123	216	1
124	85.7	1
125	385	1

Appendix C

SESOIL Models

SESOIL MODEL OUTPUT FOR LEAD

SESOIL Profile and Load Report

Layer No.	Number of Sub-Layers	Thickness		Intrinsic Permeability	Organic Carbon Content	Adsorption Coefficient	Cation Exchange Capacity	Freundlich Exponent	Solid Phase Degradation Rate	Liquid Phase Degradation Rate	Soil pH
		cm	feet	cm^2	percent	µg/g / µg/mL	mEq / 100 g soil	unitless	1/day	1/day	pH
1	10	366.0	12.01	1.00E-8	0.50	900.00	0.00	1.00	0.00E+00	0.00E+00	7.00
2	10	304.0	9.97	5.00E-11	0.50	900.00	0.00	1.00	0.00E+00	0.00E+00	7.00
3	10	1460.0	47.90	1.00E-8	0.01	900.00	0.00	1.00	0.00E+00	0.00E+00	7.00
4		0.0	0.00	.0	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00

Soil Parameters

Bulk Density (g/cm^3)	1.70
Effective Porosity (fraction)	0.25
Soil Pore Disconnectedness	4.00

Application Parameters

Area	cm^2	3.00E+6
	ft^2	3229.17
Latitude	degrees	33.8
Spill Index		1

Chemical Parameters

Water Solubility	(µg/mL)	9.58E+3	**Moles Ligand / Moles Chemical**	0.00
Henry's Law	(M^3-atm/mol)	2.44E-2	**Ligand Molecular Weight** (g/mol)	0.00
K_{oc} Adsorp	(µg/g)/(µg/mL)	0.00		
K_d Adsorp	(µg/g)/(µg/mL)	900.00		
Valence	(g/mole)	0.00	**Ligand Dissociation Constant**	0.00
Air Diffusion	(cm^2/sec)	0.00	**Base Hydrolysis Rate** (L/mol/day)	0.00
Water Diffusion	(cm^2/sec)	0.00	**Neutral Hydrolysis** (L/mol/day)	0.00
Molecular Weight	(g/mol)	207.00	**Acid Hydrolysis** (L/mol/day)	0.00

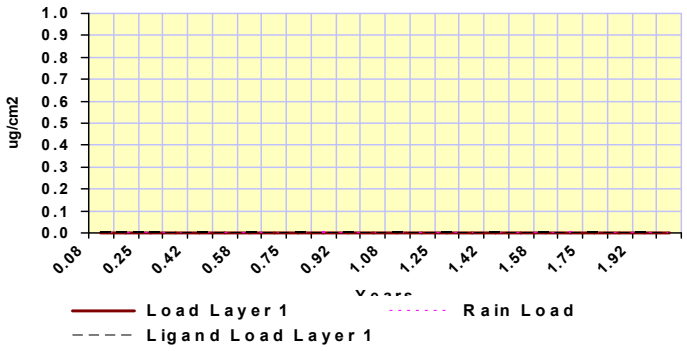
Output File: N. Posse
C:\SEV7 WIN7\S01.OUT

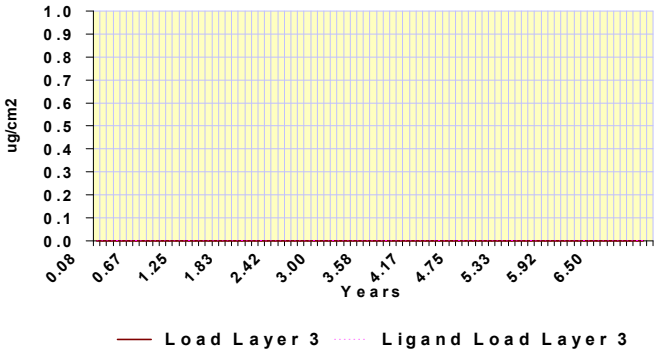
Chemical File: Lead And Compounds (Kd)
c:\sev7 win7\LEAD AND COMPOUNDS (KD).CHM

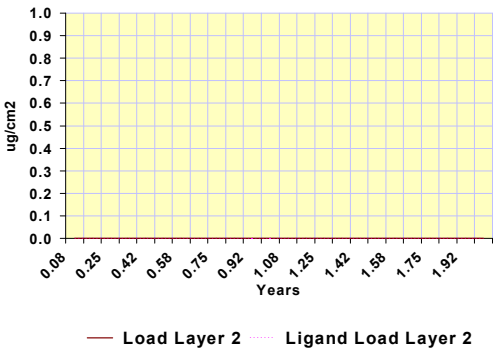
Soil File: Sand, Perm = 1.00E-3 cm/sec
C:\SEV7 WIN7\SAND.SOI

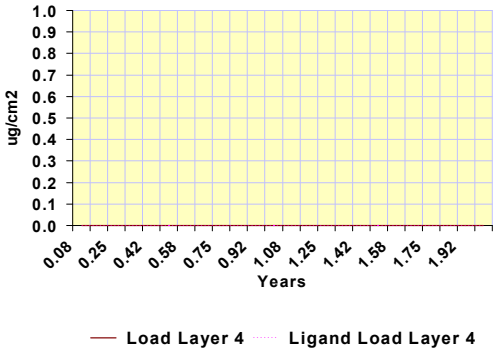
Application File: SEVIEW Default Application Parameters
C:\SEV7 WIN7\SB28.APL

Sublayer Loads	1	2	3	4	5	6	7	8	9	10
Layer 1 (ug/g)				1.93E+02					6.59E+01	
Layer 2 (ug/g)		1.58E+02		7.50E+03		1.40E+04			2.54E+00	
Layer 3 (ug/g)										
Layer 4 (ug/g)										









SESOIL Pollutant Cycle Report

Scenario Description: N. Posse

SESOIL Output File: C:\SEV7 WIN7\S01.OUT

SESOIL Process	Pollutant Mass (µg)	Percent of Total
Volatilized	0.000E+00	0.00
In Soil Air	4.249E+08	0.01
Sur. Runoff	0.000E+00	0.00
In Washld	0.000E+00	0.00
Ads On Soil	3.387E+12	99.27
Hydrol Soil	0.000E+00	0.00
Degrad Soil	0.000E+00	0.00
Pure Phase	0.000E+00	0.00
Complexed	0.000E+00	0.00
Immobile CEC	0.000E+00	0.00
Hydrol CEC	0.000E+00	0.00
In Soil Moi	1.284E+08	0.00
Hydrol Mois	0.000E+00	0.00
Degrad Mois	0.000E+00	0.00
Other Trans	0.000E+00	0.00
Other Sinks	0.000E+00	0.00
Gwr. Runoff	0.000E+00	0.00
Total Output	3.387E+12	99.29
Total Input	3.412E+12	
Input - Output	2.428E+10	

Maximum leachate concentration: 0.000E+00 **mg/l**

Climate File: TORRANCE

C:\SEV7 WIN7\TORRANCE.CLM

Chemical File: Lead And Compounds (Kd)

c:\sev7 win7\LEAD AND COMPOUNDS (KD).CHM

Soil File: Sand, Perm = 1.00E-3 cm/sec

C:\SEV7 WIN7\SAND.SOI

Application File: SEVIEW Default Application Parameters

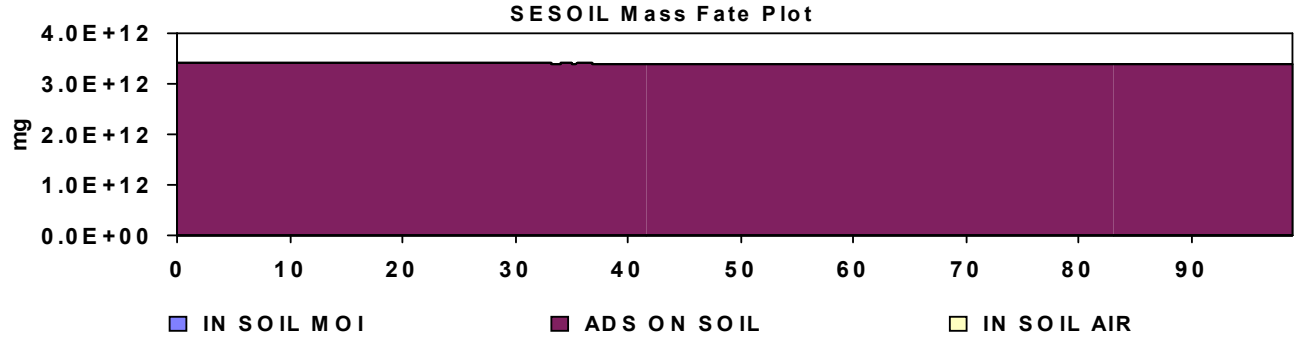
C:\SEV7 WIN7\SB28.APL

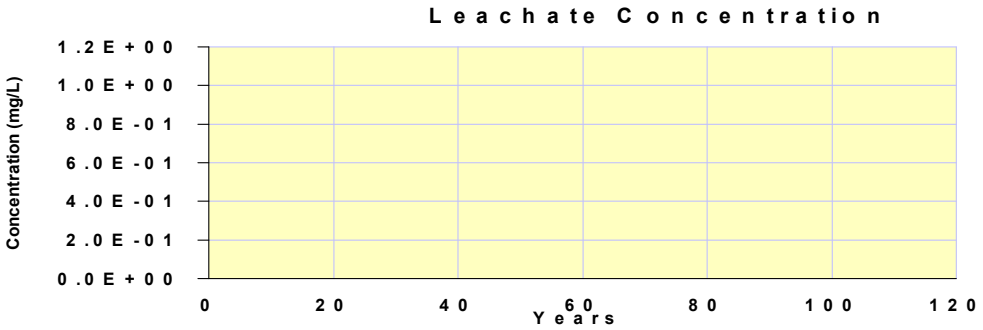
Time to Groundwater: 5914.07 **years**

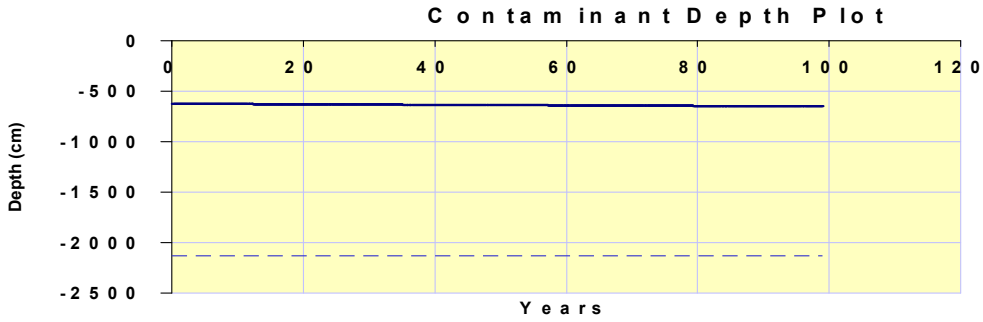
Starting Depth: 624.60 **cm**

Ending Depth: 649.80 **cm**

Total Depth: 2130.00 **cm**







SESOIL MODEL OUTPUT FOR TPH-g

SESOIL Pollutant Cycle Report

Scenario Description: N. Posse

SESOIL Output File: C:\SEV7 WIN7\S03.OUT

SESOIL Process	Pollutant Mass (µg)	Percent of Total
Volatilized	3.409E+09	0.00
In Soil Air	5.706E+09	0.00
Sur. Runoff	0.000E+00	0.00
In Washld	0.000E+00	0.00
Ads On Soil	4.590E+13	24.34
Hydrol Soil	0.000E+00	0.00
Degrad Soil	0.000E+00	0.00
Pure Phase	1.424E+14	75.55
Complexed	0.000E+00	0.00
Immobile CEC	0.000E+00	0.00
Hydrol CEC	0.000E+00	0.00
In Soil Moi	5.641E+09	0.00
Hydrol Mois	0.000E+00	0.00
Degrad Mois	0.000E+00	0.00
Other Trans	0.000E+00	0.00
Other Sinks	0.000E+00	0.00
Gwr. Runoff	0.000E+00	0.00
Total Output	1.884E+14	99.90
Total Input	1.886E+14	
Input - Output	1.882E+11	

Maximum leachate concentration: 0.000E+00 **mg/l**

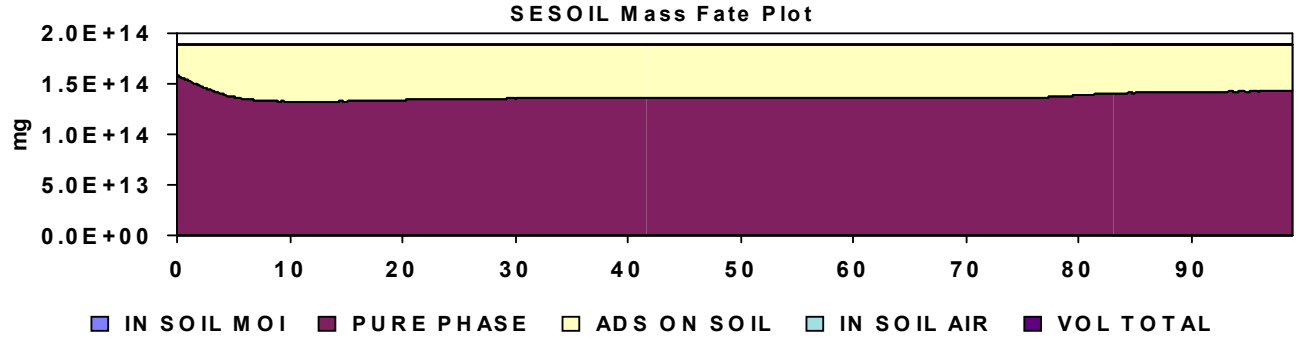
Climate File: TORRANCE
C:\SEV7 WIN7\TORRANCE.CLM

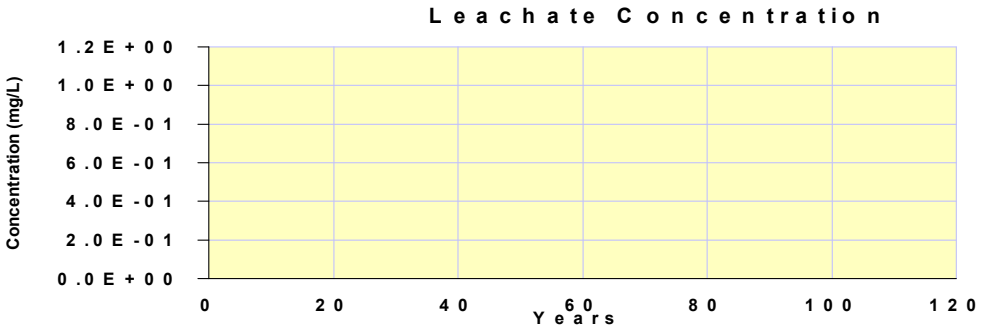
Chemical File: TPH - D OEPA 2003
C:\SEV7 WIN7\TPH - D OEPA 2003.CHM

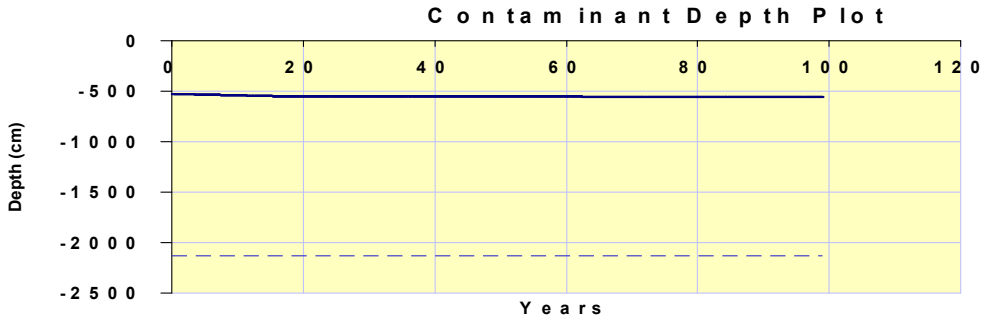
Soil File: Loamy Sand
C:\SEV7 WIN7\LOAMY SAND.SOI

Application File: SB-35
C:\SEV7 WIN7\SB-35.APL

Time to Groundwater: 4910.77 **years**
Starting Depth: 525.80 **cm**
Ending Depth: 558.10 **cm**
Total Depth: 2128.00 **cm**







SESOIL Profile and Load Report

Layer No.	Number of Sub-Layers	Thickness		Intrinsic Permeability	Organic Carbon Content	Adsorption Coefficient	Cation Exchange Capacity	Freundlich Exponent	Solid Phase Degradation Rate	Liquid Phase Degradation Rate	Soil pH
		cm	feet	cm^2	percent	µg/g / µg/mL	mEq / 100 g soil	unitless	1/day	1/day	pH
1	10	396.0	12.99	5.00E-8	3.50	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
2	10	152.0	4.99	8.50E-11	12.25	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
3	10	1580.0	51.84	1.00E-8	2.35	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
4		0.0	0.00	.0	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00

Soil Parameters

Bulk Density (g/cm^3)	1.50
Effective Porosity (fraction)	0.28
Soil Pore Disconnectedness	3.90

Application Parameters

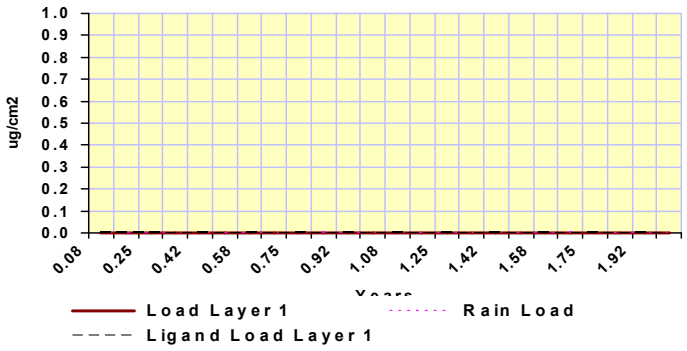
Area	cm^2	2.40E+7
	ft^2	2.58E+4
Latitude	degrees	33.8
Spill Index		1

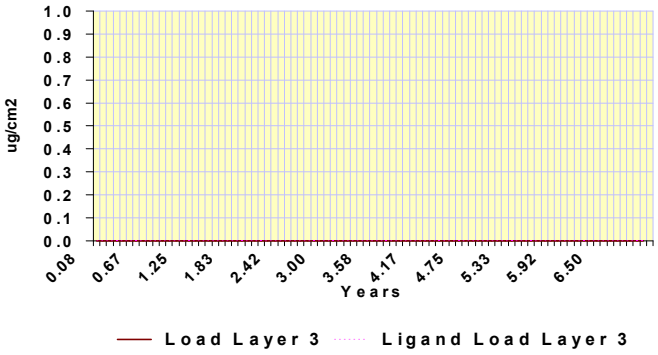
Chemical Parameters

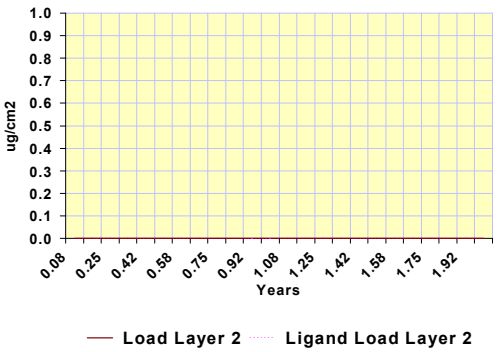
Water Solubility	(µg/mL)	32.0	**Moles Ligand / Moles Chemical**	0.00
Henry's Law	(M^3-atm/mol)	5.37E-3	**Ligand Molecular Weight** (g/mol)	0.00
K_{oc} Adsorp	(µg/g)/(µg/mL)	2510.00		
K_d Adsorp	(µg/g)/(µg/mL)	0.00		
Valence	(g/mole)	0.00	**Ligand Dissociation Constant**	0.00
Air Diffusion	(cm^2/sec)	2.72E-2	**Base Hydrolysis Rate** (L/mol/day)	0.00
Water Diffusion	(cm^2/sec)	7.24E-6	**Neutral Hydrolysis** (L/mol/day)	0.00
Molecular Weight	(g/mol)	130.00	**Acid Hydrolysis** (L/mol/day)	0.00

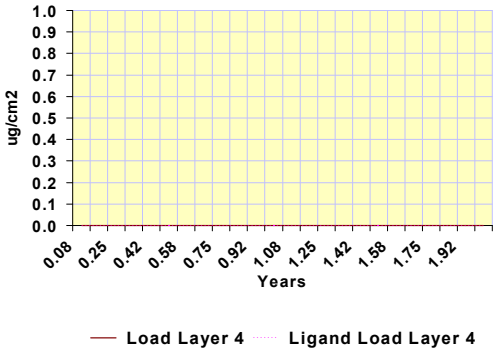
Output File: N. Posse
C:\SEV7 WIN7\S03.OUT
Chemical File: TPH - D OEPA 2003
C:\SEV7 WIN7\TPH - D OEPA 2003.CHM
Soil File: Loamy Sand
C:\SEV7 WIN7\LOAMY SAND.SOI
Application File: SB-35
C:\SEV7 WIN7\SB-35.APL

Sublayer Loads	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Layer 1 (ug/g)					6.90E+03				5.30E+04	
Layer 2 (ug/g)		1.20E+05		2.90E+04		1.90E+04			2.00E+04	
Layer 3 (ug/g)										
Layer 4 (ug/g)										









SESOIL MODEL OUTPOUT FOR NAPHTHALENE

SESOIL Profile and Load Report

Layer No.	Number of Sub-Layers	Thickness		Intrinsic Permeability	Organic Carbon Content	Adsorption Coefficient	Cation Exchange Capacity	Freundlich Exponent	Solid Phase Degradation Rate	Liquid Phase Degradation Rate	Soil pH
		cm	feet	cm^2	percent	µg/g / µg/mL	mEq / 100 g soil	unitless	1/day	1/day	pH
1	10	488.0	16.01	2.00E-09	2.00	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
2	10	427.0	14.01	1.00E-8	0.50	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
3	10	1520.0	49.87	1.00E-8	0.20	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
4		0.0	0.00	.0	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00

Soil Parameters

Bulk Density (g/cm^3)	1.50
Effective Porosity (fraction)	0.25
Soil Pore Disconnectedness	4.00

Application Parameters

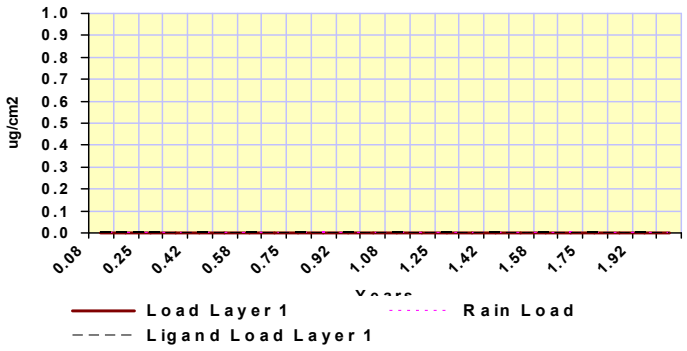
Area	cm^2	1.20E+7
	ft^2	1.29E+4
Latitude	degrees	33.8
Spill Index		1

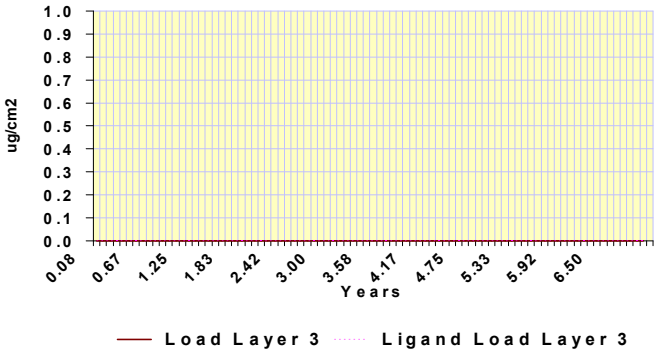
Chemical Parameters

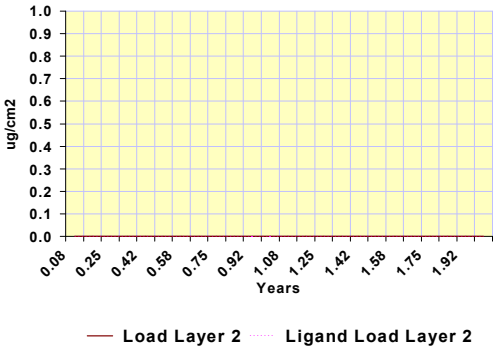
Water Solubility	(µg/mL)	31.0	**Moles Ligand / Moles Chemical**	0.00
Henry's Law	(M^3-atm/mol)	4.83E-4	**Ligand Molecular Weight** (g/mol)	0.00
K_{oc} Adsorp	(µg/g)/(µg/mL)	2000.00		
K_d Adsorp	(µg/g)/(µg/mL)	0.00		
Valence	(g/mole)	0.00	**Ligand Dissociation Constant**	0.00
Air Diffusion	(cm^2/sec)	5.90E-2	**Base Hydrolysis Rate** (L/mol/day)	0.00
Water Diffusion	(cm^2/sec)	7.50E-6	**Neutral Hydrolysis** (L/mol/day)	0.00
Molecular Weight	(g/mol)	128.00	**Acid Hydrolysis** (L/mol/day)	0.00

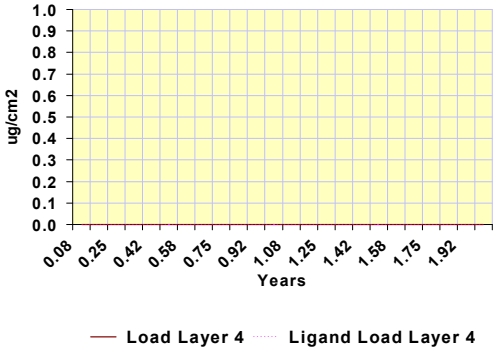
Output File: N. Posse
C:\SEV7 WIN7\S01.OUT
Chemical File: Naphthalene MA DEP
C:\SEV7 WIN7\NAPHTHALENE MA DEP.CHM
Soil File: Sandy Loam
C:\SEV7 WIN7\SANDY LOAM.SOI
Application File: SEVIEW Default Application Parameters
C:\SEV7 WIN7\SB-36.APL

Sublayer Loads	1	2	3	4	5	6	7	8	9	10
Layer 1 (ug/g)							1.55E+02			1.16E+02
Layer 2 (ug/g)			2.53E+01				5.81E+00			4.34E+01
Layer 3 (ug/g)										
Layer 4 (ug/g)										









SESOIL Pollutant Cycle Report

Scenario Description: N. Posse

SESOIL Output File: C:\SEV7 WIN7\S01.OUT

SESOIL Process	Pollutant Mass (µg)	Percent of Total
Volatilized	2.103E+08	0.07
In Soil Air	4.394E+07	0.01
Sur. Runoff	0.000E+00	0.00
In Washld	0.000E+00	0.00
Ads On Soil	2.924E+11	99.11
Hydrol Soil	0.000E+00	0.00
Degrad Soil	0.000E+00	0.00
Pure Phase	0.000E+00	0.00
Complexed	0.000E+00	0.00
Immobile CEC	0.000E+00	0.00
Hydrol CEC	0.000E+00	0.00
In Soil Moi	3.324E+08	0.11
Hydrol Mois	0.000E+00	0.00
Degrad Mois	0.000E+00	0.00
Other Trans	0.000E+00	0.00
Other Sinks	0.000E+00	0.00
Gwr. Runoff	0.000E+00	0.00
Total Output	2.930E+11	99.31
Total Input	2.951E+11	
Input - Output	2.050E+09	

Maximum leachate concentration: 0.000E+00 **mg/l**

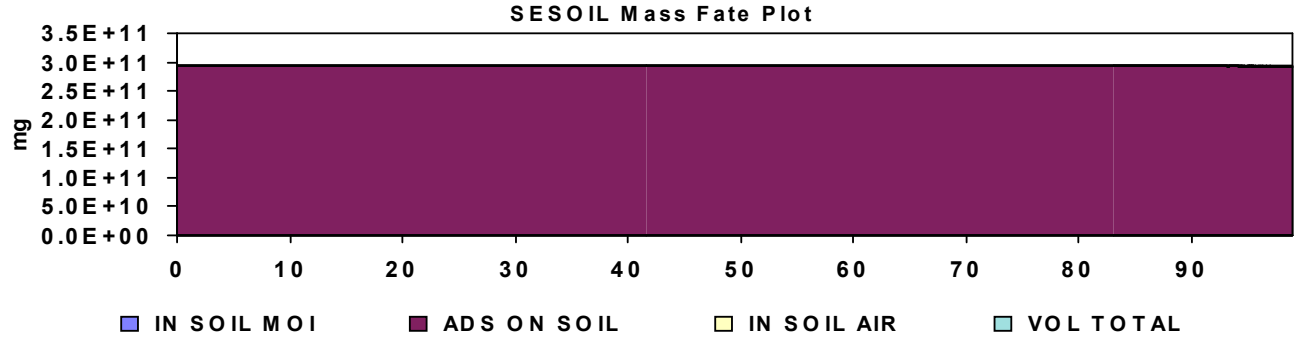
Climate File: TORRANCE
C:\SEV7 WIN7\TORRANCE.CLM

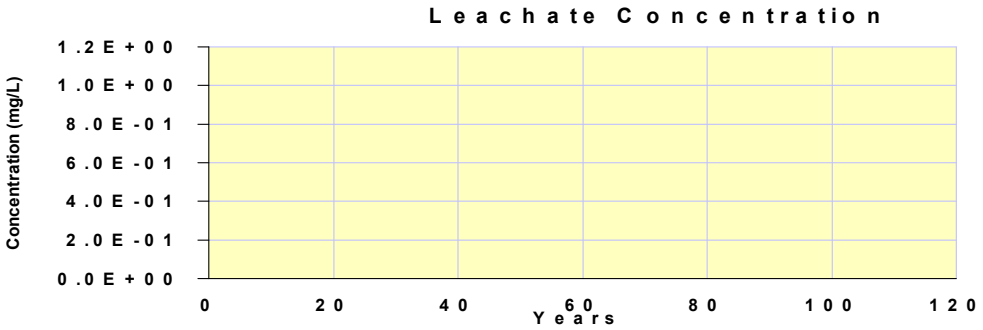
Chemical File: Naphthalene MA DEP
C:\SEV7 WIN7\NAPHTHALENE MA DEP.CHM

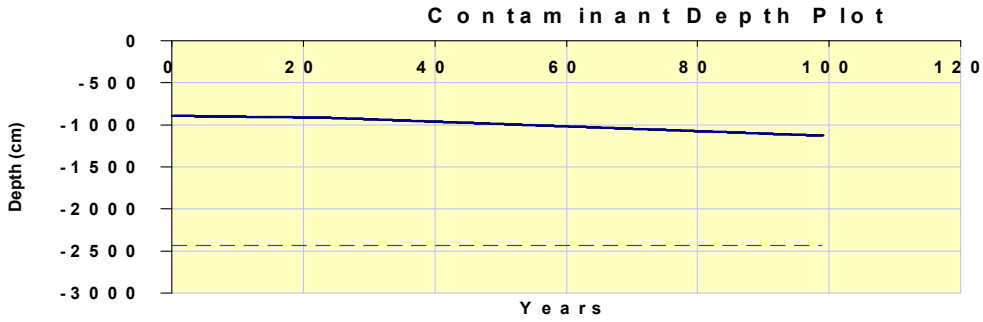
Soil File: Sandy Loam
C:\SEV7 WIN7\SANDY LOAM.SOI

Application File: SEVIEW Default Application Parameters
C:\SEV7 WIN7\SB-36.APL

Time to Groundwater: 649.84 **years**
Starting Depth: 893.10 **cm**
Ending Depth: 1128.00 **cm**
Total Depth: 2435.00 **cm**







SESOIL MODEL OUTPOUT FOR ETHYL BENZENE

SESOIL Profile and Load Report

Layer No.	Number of Sub-Layers	Thickness		Intrinsic Permeability	Organic Carbon Content	Adsorption Coefficient	Cation Exchange Capacity	Freundlich Exponent	Solid Phase Degradation Rate	Liquid Phase Degradation Rate	Soil pH
		cm	feet	cm^2	percent	µg/g / µg/mL	mEq / 100 g soil	unitless	1/day	1/day	pH
1	10	732.0	24.02	2.00E-09	2.00	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
2	10	183.0	6.00	1.00E-8	2.00	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
3	10	1220.0	40.03	1.00E-8	0.04	0.00	0.00	1.00	0.00E+00	0.00E+00	7.00
4		0.0	0.00	.0	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	0.00

Soil Parameters

Bulk Density (g/cm^3)	1.50
Effective Porosity (fraction)	0.25
Soil Pore Disconnectedness	4.00

Application Parameters

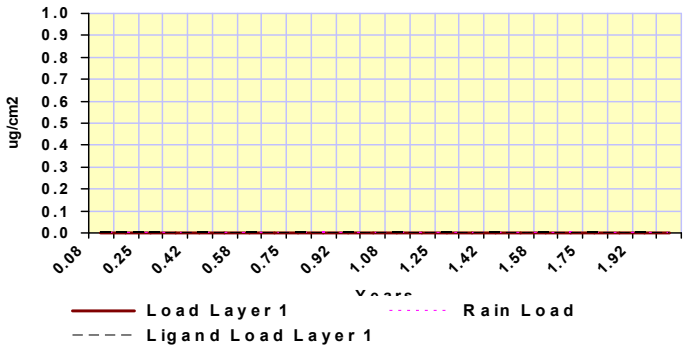
Area	cm^2	3.00E+6
	ft^2	3229.17
Latitude	degrees	33.8
Spill Index		1

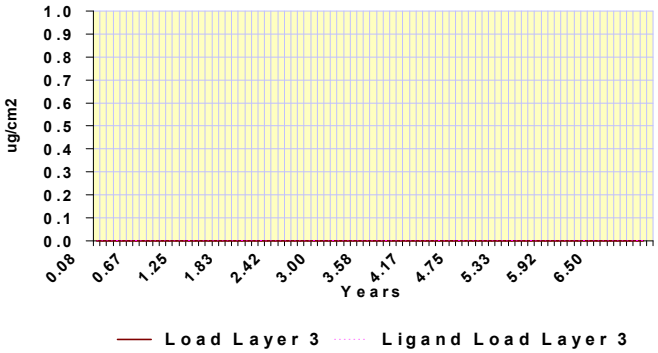
Chemical Parameters

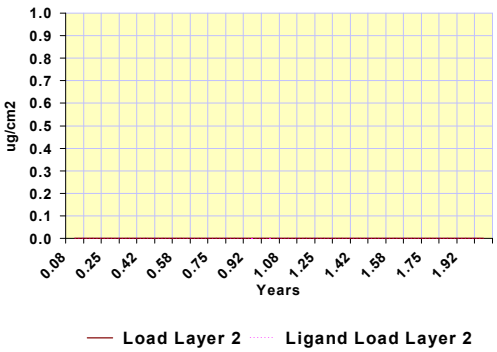
Water Solubility	(µg/mL)	169.0	**Moles Ligand / Moles Chemical**	0.00
Henry's Law	(M^3-atm/mol)	7.87E-3	**Ligand Molecular Weight** (g/mol)	0.00
K_{oc} Adsorp	(µg/g)/(µg/mL)	518.00		
K_d Adsorp	(µg/g)/(µg/mL)	0.00		
Valence	(g/mole)	0.00	**Ligand Dissociation Constant**	0.00
Air Diffusion	(cm^2/sec)	7.50E-2	**Base Hydrolysis Rate** (L/mol/day)	0.00
Water Diffusion	(cm^2/sec)	7.80E-6	**Neutral Hydrolysis** (L/mol/day)	0.00
Molecular Weight	(g/mol)	106.00	**Acid Hydrolysis** (L/mol/day)	0.00

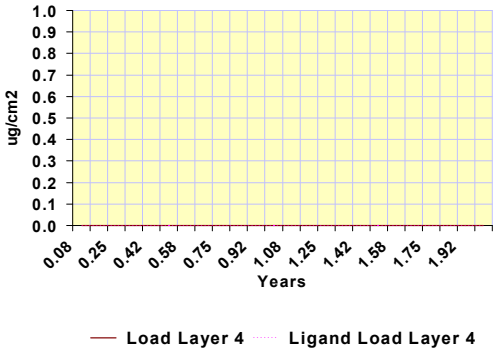
Output File: N. Posse
c:\SEV7 WIN7\S02.OUT
Chemical File: Ethylbenzene
c:\sev7 win7\ETHYLBENZENE.CHM
Soil File: Sandy Loam
C:\SEV7 WIN7\SANDY LOAM.SOI
Application File: SEVIEW Default Application Parameters
C:\SEV7 WIN7\SB31.APL

Sublayer Loads	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Layer 1 (ug/g)			6.90E-02		1.38E-01		6.90E+00		3.97E+00	
Layer 2 (ug/g)		4.12E+01								
Layer 3 (ug/g)										
Layer 4 (ug/g)										









SESOIL Pollutant Cycle Report

Scenario Description: N. Posse

SESOIL Output File: c:\SEV7 WIN7\S02.OUT

SESOIL Process	Pollutant Mass (µg)	Percent of Total
Volatilized	4.822E+09	68.48
In Soil Air	9.737E+06	0.14
Sur. Runoff	0.000E+00	0.00
In Washld	0.000E+00	0.00
Ads On Soil	2.168E+09	30.80
Hydrol Soil	0.000E+00	0.00
Degrad Soil	0.000E+00	0.00
Pure Phase	0.000E+00	0.00
Complexed	0.000E+00	0.00
Immobile CEC	0.000E+00	0.00
Hydrol CEC	0.000E+00	0.00
In Soil Moi	4.698E+06	0.07
Hydrol Mois	0.000E+00	0.00
Degrad Mois	0.000E+00	0.00
Other Trans	0.000E+00	0.00
Other Sinks	0.000E+00	0.00
Gwr. Runoff	0.000E+00	0.00
Total Output	7.005E+09	99.49
Total Input	7.042E+09	
Input - Output	3.606E+07	

Maximum leachate concentration: 0.000E+00 **mg/l**

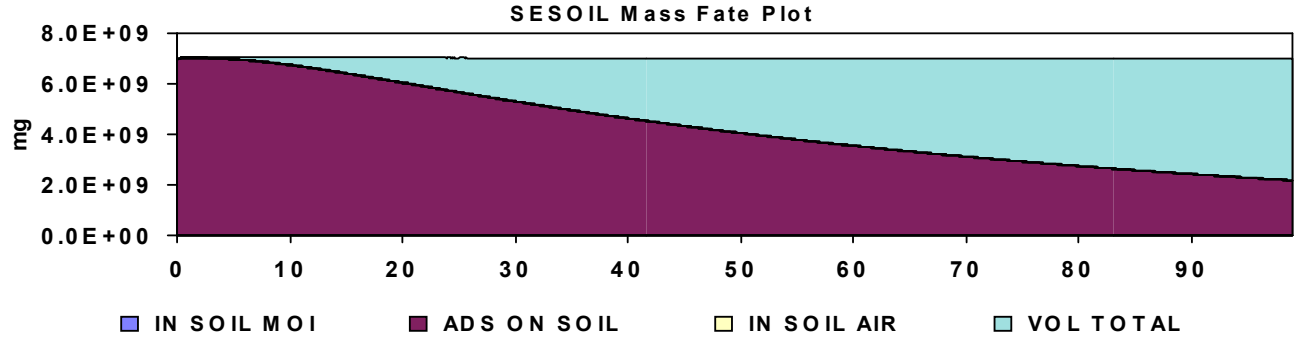
Climate File: TORRANCE
C:\SEV7 WIN7\TORRANCE.CLM

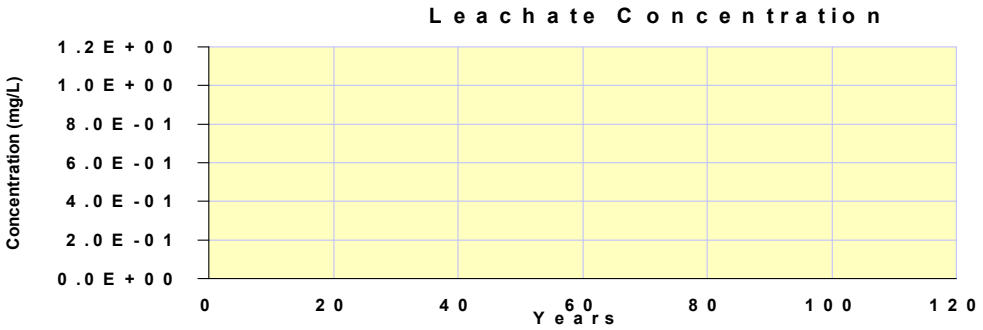
Chemical File: Ethylbenzene
c:\sev7 win7\ETHYLBENZENE.CHM

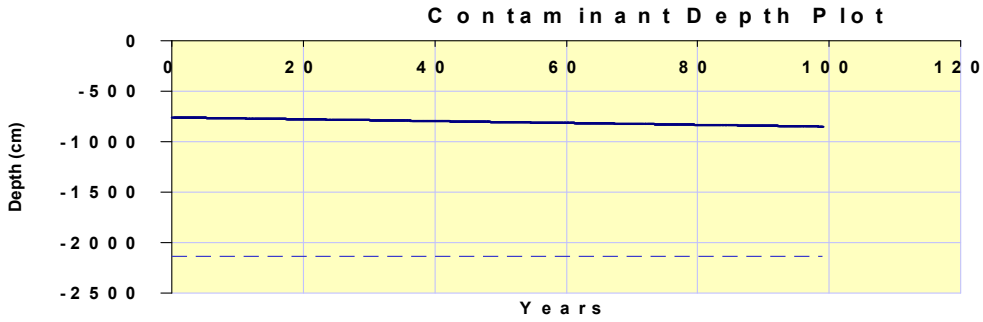
Soil File: Sandy Loam
C:\SEV7 WIN7\SANDY LOAM.SOI

Application File: SEVIEW Default Application Parameters
C:\SEV7 WIN7\SB31.APL

Time to Groundwater: 1506.36 **years**
Starting Depth: 759.50 **cm**
Ending Depth: 849.90 **cm**
Total Depth: 2135.00 **cm**







Appendix D

Feasibility Study and RWQCB Communication

From: Orr, Rebecca@Waterboards
To: Manasi Chavan (mchavansharma@prologis.com)
Cc: Hutchens, Ashley; Jenkins, Chad
Subject: North Posse Update Call Follow-Up
Date: Friday, October 25, 2024 4:26:29 PM

This email originated from outside of SCS Engineers. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Manasi,

To follow up on your request during our call this past Wednesday, I am writing to confirm that we had an internal call with Jillian Ly, our Assistant Executive Officer, and Art Heath, our Remediation Section Manager on September 9, 2024, to discuss the updated cleanup proposal put forth in the *Second Revised Feasibility Screening Evaluation* dated August 23, 2023, and prepared by your consultant, SCS Engineers. During that call, Jillian and Art agreed in concept with the cleanup proposed (excavation and reuse of excavated soil in accordance with an SMP: ex-situ stabilization (ESS) of shallow soil to 5 feet below project grade and emplacement 5 feet or more bgs within disposal area + 5 feet clean fill/reused soil; ESS of soil up to 15 feet bgs outside in-situ stabilization (ISS) areas for placement of ESS and swell material; and ISS of soil 5 feet to the Development Depth). The specific details of the cleanup, including soil reuse sampling criteria, will need to be submitted in a Response Plan for our review and final approval.

Sincerely,

Rebecca Orr
Water Resource Control Engineer | Site Cleanup Unit II

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

(213) 576-6811 | rebecca.orr@waterboards.ca.gov

Second Revised Feasibility Screening Evaluation

North Posse Site
3041 Del Amo Boulevard
Torrance, California 90503
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This Second Revised Feasibility Screening Evaluation for the facility located at 3041 Del Amo Boulevard, Torrance, California, dated August 23, 2023, was prepared and reviewed by the following:

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LIMITATIONS/DISCLAIMER

This Revised Feasibility Screening Evaluation has been prepared for Torrance Black Beauty, LLC, with specific application to the site located at 3041 Del Amo Boulevard, Torrance, California.

The document has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, express or implied, is made as to the professional opinions presented herein. No other party, known or unknown to SCS Engineers, is intended as a beneficiary of this work product, its content or information embedded therein. Third parties use this document at their own risk.

Changes in site conditions may occur due to variation in rainfall, temperature, water usage, or other factors. Moreover, change in site use may alter the conclusions of this report. Additional information that was not available to the consultant at the time of investigations or changes that may occur on the site or in the surrounding area may result in modification to the site that would impact the summary and recommendations presented herein. This document is not a legal opinion.

1.0 INTRODUCTION

SCS Engineers (SCS) was retained by Torrance Black Beauty, LLC (TBB), to perform a Feasibility Screening Evaluation of potential response actions for the Property at 3041 Del Amo Boulevard, Torrance, California (the "Property"). The Property consists of approximately 31 acres of predominately undeveloped land with horse stables located on approximately 1.5 acres in the southeastern portion of the Property. Historically the Property was an out-parcel ancillary to the Torrance Oil Refinery (3700 West 190th Street) ("Refinery"). A site location map showing the general location of the Property and surrounding area is provided as **Figure 1;** a site map showing Property features is included as **Figure 2**.

Per the Agreement between Torrance Refining Company (TORC; the former owner of the Property and the current owner and operator of the Refinery) and the current owner of the Property (TBB), TBB is responsible for remediation of impacts to the Development Depth, defined as 60 feet above mean sea level ("Development Depth"), or approximately 30 feet below ground surface (bgs) in the northwest portion of the Property. TORC retained responsibility for impacts below the Development Depth, including groundwater beneath the Property below that depth. TBB, also entered into a California Land Reuse and Revitalization Act (CLRRA) agreement, dated August 31, 2018, with the Los Angeles Regional Water Quality Control Board (LARWQCB) for oversight of investigation and cleanup of impacts above the Development Depth at the Property.

Please refer to the *Data Gap Investigation Report* dated December 23, 2022, for additional background information, including historic uses and current operations, physiographic and hydrogeologic conditions, past and current environmental investigations, and an evaluation of the extent of impacts to soil and groundwater.

1.1 OBJECTIVE

This Feasibility Screening Evaluation has been prepared to initiate review and discussion of potential response actions with the LARWQCB, presenting a preferred remedial alternative prior to submittal of a Response Plan for the purpose of expediting review and approval. The objective of this Feasibility Screening Evaluation is to identify response actions that are consistent with the long-term protection of human health and the environment, compatible with the redevelopment objectives of TBB, and are sufficient to attain regulatory agency case closure.

The evaluation was performed by screening potential remediation technologies against site-specific criteria to develop a list of feasible alternatives at the Property, eliminating remediation technologies identified as being unsuitable to meet remediation objectives (**Table 1**). Further evaluation was focused on remedial alternatives designed to meet remedial objectives established for the Property using the selected remedial technologies, evaluating the most cost effective response action to mitigate potential risk resulting from impacted media at the Property (**Table 2**).

2.0 PROPOSED SITE DEVELOPMENT

The current redevelopment plan for the Property includes the construction of a 405,870 square foot single story slab-on-grade concrete tilt-up building to be used a logistics center and warehouse. The building is proposed in the central portion of the Property, with paved parking areas surrounding the building and with entrances from Del Amo Blvd and Prairie Avenue. The building will be constructed with a vapor intrusion mitigation system (VIMS) due to known methane and soil vapor impacts in the subsurface of the Property. A conceptual site plan for the proposed development is included in **Appendix A.**

3.0 REMEDIAL ACTION OBJECTIVES

Selection of a response action involves determining the most feasible and cost effective remedial action(s) to mitigate potential risk resulting from impacted media currently existing at the Property. The first step in determining feasibility is to develop remedial action objectives (RAOs). The RAOs for the Property include the reduction and/or stabilization of constituents of concern (COCs) to the maximum extent possible for the purpose of protecting human health and groundwater resources.

- Protection of Human Health – At a minimum the remedial technology selected should mitigate COCs for potential exposure pathways to within the U.S. EPA and National Contingency Plan (NCP), 40 CFR 300, cancer "risk management range" of 1×10^{-6} to 1×10^{-4} and an acceptable hazard index (1) for future occupants at the Property (U.S. EPA, 1991). A commercial/industrial scenario was used assuming that a Land Use Covenant will be established limiting the Property to commercial/industrial use. Therefore, applicable commercial screening levels (SLs), which are based on a cancer risk and hazard index of 1×10^{-6} and 1, respectively, would equal or exceed this level of health protection when used as cleanup standards. The potential complete exposure pathways at the Property that were evaluated in developing the RAOs are as follows:

    - Protect human health through prevention of direct contact with soil exceeding SLs.

    - Mitigate potential risks associated with methane or volatile organic compounds (VOCs) that could migrate upward and affect indoor air in the building(s) proposed for the Property.

- Protection of Groundwater resources – Groundwater has been historically reported below the Development Depth and has been documented to be impacted by petroleum hydrocarbons; TORC is responsible for remediation below the Development Depth. This RAO only addresses the remediation of the vadose zone to the Development Depth to assure that impacts above the Development Depth do not contribute to underlying groundwater contamination. This RAO is to mitigate COCs in soil and soil vapor to the extent technologically and economically feasible for the protection of underlying groundwater.

3.1 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Applicable or Relevant and Appropriate Requirements (ARARs) are defined in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations ("CFR") Part 300.430(e)(2)(i), as follows:

> *Applicable Requirements: Cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") site.*
>
> *Relevant and Appropriate Requirements: Cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not applicable to a hazardous substance, pollutant, contaminant,*

remedial action, location, or other circumstance at CERCLA site, address problems or situations sufficiently similar to those encountered at the site that their use is well-suited to the particular site.

Remedial actions must attain a degree of cleanup that assures protection of human health and the environment. Additionally, remedial actions that leave any hazardous substance, pollutant, or contaminant must meet a cleanup level or standard of control that at least attains federal and/or more stringent state standards, requirements, criteria, or limitations that are "applicable or relevant and appropriate" under the circumstances of the release.

In sum, "applicable" requirements are those standards, criteria, or limitations promulgated under federal or state environmental law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site (Comprehensive Environmental Response, Compensation, and Liability act of 1980). Where a promulgated standard, criteria, or limitation is not directly applicable, it may be "relevant and appropriate" if, in the exercise of the LARWQCB's discretion, it addresses problems or situations sufficiently similar to those encountered and are deemed to be well-suited to a particular site.

ARAR's may be (a) "chemical-specific", which are generally health- or risk-based numerical values or methodologies that set limits upon concentrations of specific contaminants in the environment; (b) "location-specific", which are generally restrictions upon certain types of activities because of existing site characteristics (e.g. wetland, floodplain, historic site); or (c) "action-specific", which are technology or activity based restrictions triggered by the type of remedial action under consideration. In addition to ARARs, the USEPA or the State may, as appropriate, identify other advisories, criteria, or guidance, whether or not promulgated, to be considered for a particular site.

A list of potential Federal and State action-specific, location-specific, or chemical-specific ARARs have been identified for the Property and are included in **Tables B-1 and B-2** in **Appendix B**.

3.2 WATER BOARD RESOLUTION 92-49

The State Water Board Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* (Resolution 92-49), directs regional water boards to require complete cleanup of all waste discharged to background conditions to the extent feasible (i.e., the water quality that existed before the discharge). Resolution 92-49 ensures that dischargers shall have the opportunity to select cost-effective cleanup methods, and consider the effectiveness, feasibility, and relative costs of applicable alternative methods for cleanup and abatement. Resolution 92-49 also states that the regional water boards shall establish cleanup levels greater than the background conditions only if it is technologically or economically infeasible and will not pose a substantial present or potential hazard to human health or the environment; this exception is referenced under California Code of Regulations, Title 23, Section 2550.4.

This feasibility study includes an evaluation of the technical constraints and additional cost burdens to cleanup environmental impacts to background conditions in a former refinery "disposal area" at the Property. Property history information identified this area on the northwest portion of the Property that was used by the Refinery for the placement or disposal of Refinery wastes from at least 1947 until sometime between 1963 and 1970. This disposal area occupies approximately 9.2 acres (400,250 square feet) and has been the principal focus of soil investigations conducted on behalf of TBB. Impacts to soil exceeding background levels have been reported throughout the disposal area, with COCs exceeding SLs within a smaller footprint than the entire fill area. The COCs reported in the disposal area include heavy-range hydrocarbons and lead, and the only technically feasible remedial

approach to achieve background conditions for these COCs would require the excavation and off-site disposal of all fill material, an estimated approximately 360,000 cubic yards (CY).

The remediation of all fill soil within the disposal area to achieve background conditions would require an order of magnitude increase in the volume of soil (and associated costs) excavated and transported for off-site disposal compared to the other alternatives. It is estimated that achieving background conditions would require up to 575,000 tons of additional soil disposal as RCRA hazardous waste, non-RCRA California hazardous waste (due to asbestos impacts), and non-hazardous waste, resulting in up to $102,000,000 ($102M) in additional costs at average of $177/ton when compared to the other feasible alternatives. In addition to cost considerations, logistical considerations have also been identified related to traffic impacts through the city streets of Torrance, and health and safety concerns related to asbestos and lead impacted soil due the extended time period required to excavate and transport all impacted fill material.

Alternative remedial approaches have been identified that attain the RAOs at a substantially lower cost, proposing off-site disposal or ex-situ treatment technologies for shallow excavated soil exceeding SLs, and in-situ treatment of deeper soil exceeding SLs to the Development Depth. All alternatives also propose the placement of a 5 foot thick layer of excavated soil testing below SLs and/or imported clean fill (plus pavement) above treated soil for the protection of future construction workers, a VIMS for the future building(s) at the Property to protect occupants from potential soil vapor intrusion, and the preparation of a Land Use Covenant for the Property limiting land use to only commercial/industrial, thus providing multiple lines of protection for the future land use and associated occupants/workers, in addition to the protection of underlying groundwater from the potential migration of COCs.

In summary, this feasibility study has identified alternative remedial technologies that would provide a comparable level of environmental and human health protection for a substantially lower cost. Based on this evaluation, the excavation and disposal of all Refinery disposal area fill to achieve background concentrations is not cost effective and cleanup levels greater than the background conditions should be considered for the Property as permitted within Resolution 92-49.

3.3 TARGET CLEANUP GOALS

The target cleanup goals for COCs in soil and soil vapor were developed for the Property based on the RAOs, ARARs, and policy goals of Resolution No. 92-49 discussed above, which will be used to guide the remedial actions to meet the RAOs and attain closure. The appropriate target cleanup goal for all reported COCs at the Property are the published regulatory SLs for a commercial/industrial land use scenario, including the Department of Toxic Substances Control (DTSC) Human and Ecological Rick Office (HERO) Note 3 Screening Levels (SL; June 2020; Revised May 2022), Environmental Protection Agency (EPA) Regional Screening Levels (RSL; November 2023), LARWQCB Soil Screening Levels (SSLs; May 1996), and/or San Francisco Bay Regional Water Quality Control Board's (SFRWQCB) Environmental Screening levels (ESLs; January 2019)

4.0 IDENTIFICATION OF POTENTIAL REMEDIAL TECHNOLOGIES

Multiple COCs impacting soil exceeding background levels have been reported throughout the Refinery disposal area, including metals, total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), and petroleum-related volatile organic compounds (VOCs). Initial screening of potential remedial technologies indicates that metals and heavy-range hydrocarbons, and their relative immobility in soil, are likely limiting factors in selecting feasible and cost effective remedial technologies. For the purpose of identifying feasible remedial technologies, SCS focused initially on

recommended technologies for addressing metals, and then subsequently evaluated their feasibility in remediating TPH, VOCs, and SVOCs.

The DTSC has developed the following guidance: "Proven Technologies and Remedies Guidance – Remediation of Metals in Soil" (PT&R guidance). The DTSC's Proven Technologies and Remedies (PT&R) documents are designed to use DTSC's experience at hundreds of cleanup sites to help streamline remedy selection and site cleanup, while ensuring full protection of public health, safety, and the environment without diminishing public input. The streamlined remedy includes screening, evaluation, and selection phases by limiting the number of potential remedial alternatives.

DTSC identified two PT&R alternatives by conducting a study that reviewed and screened data for 188 sites throughout California where the primary contaminants were metals in soil and the DTSC provided oversight of the soil cleanup. Based upon the DTSC study, "containment by capping" and "excavation and off-site disposal" were identified as the proven technologies for sites with metals contamination within the vadose zone. These two PT&R proven technologies were identified from the following cleanup options; no action and/or institutional controls (ICs); excavation/disposal, containment by capping (including consolidation/capping and corrective Action Management Units [CAMU]); solidification/stabilization and/or chemical fixation; reuse or recovery; soil washing; vitrification; and "other treatment options".

Evaluation of the two PT&R alternatives on **Tables 1 and 2**, however, indicated that while excavation and off-site disposal would directly address all COCs at the Property, and is technologically feasible, it is likely economically infeasible resulting in up to $102M in additional costs. It is SCS' understanding that "containment by capping" has been preemptively rejected by the LARWQCB based on previous discussions regarding the contamination at the Property. Investigations indicate that the contamination appears to be immobile within the former disposal area and containment by capping would likely be protective of human health and the environment, although it only passed feasibility screening for shallow soil up to 5 feet bgs. Containment by capping did not pass screening for intermediate soil from 5 feet bgs to the Development Depth based on its potential long term effectiveness relative to the protection of groundwater resources, soil vapor migration by VOCs, as well as not being acceptable to the LARWQCB.

Since the two PT&R technologies do not appear to be feasible at the Property, additional evaluation of other viable cleanup options presented in the PT&R guidance was conducted (**Tables 1 and 2**). These technologies included solidification/stabilization and chemical fixation of soil exceeding SLs; "No Action" was also included in the evaluation for comparison. The current feasibility evaluation indicated that solidification/stabilization was likely a feasible remediation technology for all COCs exceeding SLs at the Property, particularly with the addition of an overlaying 5-foot soil containment layer that would prevent direct contact with treated soil. The solidification/stabilization of COCs would meet the RAOs by mitigating the migration of COCs to groundwater and soil vapor, with an overlaying 5-foot containment layer of excavated soil testing below SLs (and imported clean fill) preventing direct contact while increasing the long-term effectiveness of underlying solidified/stabilized soils.

5.0 SCREENING AND SELECTION OF REMEDIAL ALTERNTIVES

Under State and Federal law, an analysis of alternatives is required for sites undergoing remediation. The evaluation process was performed in accordance with the nine screening criteria defined in the 1988 USEPA Feasibility Study (FS) Guidance document (USEPA, 1988). The nine screening criteria for effectiveness, implementability, and cost, are detailed below. SCS also included other considerations such as sustainability and community acceptance in the evaluation. SCS screened

remediation technologies against the nine criteria in a matrix presented as Table 1, and performed additional evaluation of three remedial alternatives using viable technologies (Table 2).

5.1 EFFECTIVENESS CONSIDERATIONS

- Overall Protection of Human Health and the Environment – This evaluation considers whether a specific alternative achieves reduction, elimination, or control of risk associated with exposure pathways.

- Compliance with Applicable Requirements – This evaluation considers how each remedial alternative will meet action-specific, chemical-specific, and location-specific applicable requirements as established by state and federal (if applicable) regulatory agencies.

- Long Term Effectiveness and Permanence – This evaluation considers the magnitude of residual chemical concentrations with respect to toxicity and mobility. The criteria must also evaluate the impacts to long-term human and environmental receptors, if applicable.

- Reduction of Toxicity, Mobility, or Volume Through Treatment – This evaluation considers the degree to which a remedial alternative can reduce COCs at the Property with respect to toxicity, mobility, and volume.

- Short Term Effectiveness – This evaluation considers the effectiveness of the remedial alternative during implementation, including: health and safety of neighboring facilities, on-site workers, control of adverse effects, and time to achieve target remediation

- Regulatory Agency Acceptance – This evaluation considers the acceptance of the remedial alternative by the regulatory agency.

5.2 IMPLEMENTATION CONSIDERATIONS

- Technical Feasibility – This evaluation considers the construction and operation, reliability, and ease of undertaking additional remedial actions with respect to the proposed remedial alternative.

- Administrative Feasibility – This evaluation considers activities required to coordinate with agencies to comply and obtain necessary permits for the remedial alternative.

5.3 COST CONSIDERATIONS

- Cost – This evaluation considers capital costs, including but not limited to: construction, equipment, and utility costs. Also included are operation and maintenance (O&M) costs for the lifetime of the remedial alternative and the cost of uncertainty associated with the alternative. Cost typically plays a limited role in this initial screening process. In this evaluation, each technology is screened as to whether its costs are high, low, or moderate relative to other technologies.

5.4 OTHER CONSIDERATIONS

- Community Acceptance – While public participation and therefore community acceptance is incorporated into the preceding regulatory agency criteria, this additional consideration considers the known direct impact of remedial actions on the community, such as degradation of air quality or increased traffic burdens.

- Sustainability – This evaluation considers remediation strategies aim to reduce total energy use and increase the percentage of energy from renewable resources; reduce air pollutants and greenhouse gas emissions; reduce water use and preserve water quality; conserve material resources and reduce waste; and protect land and ecosystem services.

6.0 REMEDIATION TECHNOLOGY FEASIBILITY SCREENING

Based on the considerations above, each remedial technology was assessed with a rating and associated numerical score for each of the screening criteria (**Table 1**); Very Poor (1), Poor (2), Fair (3), Good (4), Excellent (5). Based on site logistics and feasibly, the potential remediation technologies were evaluated for both *shallow soils,* generally to a depth of 5 feet bgs, and *intermediate soils,* from approximately 5 feet bgs to the Development Depth. The screening included remediation technologies recommended for the cleanup of TPH/VOCs/SVOCs in addition to technologies presented in the PT&R guidance for metals in soil; "No Action" was also included in the screening for comparison.

The comparative analysis of alternatives reflects the scope and complexity of Property conditions and considers the relative significance within each screening criteria. For the purpose of screening out potential remedial technologies that scored high in implementability and/or cost criterion, but may not meet RAOs, a weighting factor of 2 was assigned to effectiveness criterion. The comparative analysis of alternatives reflects the scope and complexity of Property conditions and considers the relative significance within each screening criteria. The selected weighting factor and remedial alternative ratings/scores are based on professional experience as well as site-specific criteria.

For the purpose of screening, an average weighted score was calculated for each remedial technology; remedial technologies ranking higher than fair (3.0) were considered viable and worthy of further evaluation. The following remedial technologies passed the screening:

- Shallow Soil – Excavation with off-site disposal; excavation with ex-situ stabilization/solidification (ESS) and on-site reuse; containment in place.

    - Excavated soils testing below SLs and ESS soils are proposed for reuse only *within the disposal area*.

- Intermediate Soil – Excavation with off-site disposal and in-situ stabilization/solidification (ISS).

Several remedial technologies ranked lower than the established threshold of fair (3.0) and are not considered viable for further evaluation. It should be noted that these technologies were given relatively lower scores based the evaluation performed in **Section 4.0**, indicating that metals and heavy-range hydrocarbons, and their relative immobility in soil, are limiting factors in selecting feasible and cost-effective remedial technologies. Additional details on remedial technologies that were not evaluated further, and justification for their assigned ratings, are provided below:

- Thermal Treatment – This remedial technology received the highest score of the technologies that did not pass the initial screening for intermediate soils. While this technology is likely

feasible to address TPH/SVOC/VOC contamination at depth, due to the anticipated mobilization of these COCs using various subsurface heating methods such as thermal conduction heating (TCH), electric resistance heating (ERH), and/or steam enhanced extraction (SEE), it is not considered a viable remedial technology for metals. This option was generally assigned a rating of fair for most criteria due to addressing a significant amount of the COCs at the Property, while receiving a poor rating for compliance with ARARs due to leaving metals in-place and for sustainability due to the high energy costs for operation. The projected timeframe for implementation also resulted in a lower score for this alternative, particularly since remediation would not be complete prior to the scheduled development of the Property. Additionally, SCS' evaluation indicated that the cost to implement this technology using TCH at temperatures sufficient to address heavy hydrocarbons was approximately $38M, which is considered a relatively high cost in consideration of likely requiring additional remedial technologies for all COCs in shallow soil in additional to metals in intermediate soils.

- Soil Vapor Extraction – Similar to thermal treatment, this technology is anticipated to only partially treat the known COCs at the Property, primarily treating VOCs, while leaving metals, SVOCs, and heavier TPH compounds in-place. This technology generally received poor ratings for effectiveness criteria due to not addressing most COCs. Unlike thermal remediation technologies, there also would be not adequate mobilization and volatilization of VOCs/SVOCs/TPH in the subsurface for extraction and treatment. Also, investigations indicate that VOCs are primarily situated within areas of relatively immobile TPH within the disposal area fill, therefore it is anticipated that preferential pathways would also likely inhibit the remediation of even the VOCs. While this technology was rated good for cost criteria, additional remedial technologies for shallow soil in addition to TPH, SVOCs, and metals in intermediate soils would be required. Additionally, the projected timeframe for implementation was also considered negatively for this technology in the scoring due to the proposed development of the Property scheduled prior to the anticipated completion of remediation.

- In-Situ Chemical Oxidation/Fixation - Similar to thermal treatment and SVE technologies, this option is also anticipated to only partially treat the known COCs at the Property, primarily due to the challenges associated with addressing a wide range of COCs simultaneously using in-situ amendments. While the in-situ chemical oxidation of VOCs, or fixation of metals, are often done independently using these remedial technologies, addressing all COCs at the Property simultaneously using these methods did not appear feasible in SCS' evaluation. Additional potential challenges were also identified related to the unwanted mobilization of COCs below the Development Depth and groundwater following the direct injection of certain amendments, as well as the heterogenous nature of fill within the disposal area likely affecting the distribution of amendments within the subsurface when utilizing direct injection technologies. Therefore, this technology generally received poor ratings for effectiveness criteria and was not evaluated further.

- Containment in Place (Intermediate Soils) – While this remedial technology is noted in the PT&R guidance, it received poor ratings due to compliance with ARARs and SCS' understanding of regulatory acceptance. As noted in **Section 4.0,** "containment by capping" as a standalone remediation technology has been preemptively rejected by the LARWQCB based on previous discussions regarding the contamination at the Property.

- No Action – Similarly to containment in Place this option received poor ratings due to lack of compliance with ARARs and unlikely regulatory or community acceptance.

The remedial alternative screening matrix for shallow and intermediate soils is provided in **Table 1**.

7.0 ISS/ESS BENCH SCALE STUDY

In January and February 2023, ENTACT conducted an ISS and ESS Bench Scale Study using material sampled from the Property. Three of the samples, collected by SCS, were from the disposal area, as follows:

- BT-1. Composite sample of fill from depths of approximately 0 to 10 feet bgs at a location in which relatively high concentrations of COCs (including lead, hydrocarbons, naphthalene, ethylbenzene, benzo(a)pyrene; 1-methyl naphthalene) had been detected. This sample is considered representative of ESS in areas with high concentrations of COCs.

- BT-2. Composite sample of fill from depths of approximately 0 to 12 feet bgs at a location in which generally average concentrations of COCs had been detected. This sample is considered representative of ESS in areas with average concentrations of COCs.

- BT-3. Composite sample of fill from greater depths (approximately 10 to 30 feet bgs). In this location and depth, relatively high concentrations of COCs had been detected. This sample is considered representative of ISS proposed in areas exceeding screening levels.

Amendments, consisting of various proportions of Type I/II Portland Cement (PC) or PC plus Ground Granulated Blast Furnace Slag (BFS), were mixed with each sample. Water was added and the subsequent mixture allowed to cure for up to 28 days. Samples BT-1 through BT-3 were tested for various performance criteria after 7 to 28 days of cure, including the following:

- Unconfined Compressive Strength (UCS) by ASTM D1633;

- Hydraulic Conductivity by ASTM D5084;

- Synthetic Precipitation Leaching Procedure (SPLP) for VOCs (EPA 8260D), SVOCs (8270D), TPH (8015D), and Metals (6010C/7471B)

In addition, a composite soil sample (BT-4) was collected at a depth of approximately 0 to 8 feet bgs from the bottom of the Borrow Pit (BP) at the Property, an area without COC impacts. This sample was also amended and only tested for UCS for geotechnical purposes.

The three disposal samples BT-1 through BT-3 were subsampled and amended with the following reagent dosages:

- 5% total reagent dosage, 100% PC;

- 10% total reagent dosage, 100% PC;

- 5% total reagent dosage (25% PC, 75% BFS);

- 10% total reagent dosage (25% PC, 75% BFS).

Sufficient water was added to each sample to allow homogenization of the soil/amendment mixtures. Following mixing, each of the amended samples was packed into cylindrical plastic molds and allowed to cure in a temperature-controlled environment for periods up to 28 days.

The principal environmental performance property that was assessed in the amended and cured disposal area samples was hydraulic conductivity. This is to evaluate whether the stabilized mix would pose a risk to groundwater from long term leaching of the metals in the material. The design of the bench test was such that an amended sample needed to achieve an average hydraulic conductivity of less than $1x10^{-6}$ cm/sec in order to pass. The $1x10^{-6}$ permeability criteria is what is used for landfill liners and referenced in EPA guidance for typical solidification/stabilization evaluation specifications (EPA, 2009). Across all 12 treatments of disposal areas samples, 83.3% met this criterion after 28 days of curing. Of the samples that met the criterion, hydraulic conductivities after 28 days of curing ranged from $4.9x10^{-7}$ centimeters per second (cm/sec) to $6.2x10^{-8}$ cm/sec with an average of $2.5x10^{-7}$ cm/sec.

The SPLP analytical results for VOCs, SVOCs, TPH and metals indicated that the ESS/ISS mixes were similar to the baseline composite SPLP analytical results with the exception of what appears to be an anomalous result for acetone from the mix for BT-2 using 10% total reagent and 100% PC. The similar results for ESS/ISS mixes to baseline composite SPLP analytical results are likely due to the conservative nature of the SPLP procedure, which is designed to simulate waste exposure to acid rain, and indicates that as a worst-case scenario the ESS/ISS treatment would not increase leaching of the COCs.

Note that prior SESOIL modeling of leaching, for the COCs lead, TPH as diesel, and naphthalene, using existing soil properties (that is prior to any treatment), indicated no significant depth of leaching would occur over the 99 years that were modeled. In fact, SESOIL modeling indicated that it would take hundreds to thousands of years for even trace amounts of these COCs to reach the level of perched groundwater at the Property.

The UCS results indicated that all reagent mixes for BT-2, and mixes using 10% total reagent with 100% PC for BT-1 and BT-3 met the criteria of 50 psi at 28-days of cure.

Based on the test results, ENTACT recommended the following regarding additives for disposal area materials:

- ESS - Amendment with 10% total reagent dosage or greater, using 100% PC for treatment of material with relatively high concentrations of COCs; or 25% PC and 75% BFS, or greater, for treatment of material with approximately average concentrations of COCs;

- ISS - Amendment with 10% total reagent dosage, using 100% PC in all cases.

In summary, at least one mix per disposal area sample group achieved the performance criteria for both UCS and hydraulic conductivity, and SPLP analytical results for the ESS/ISS samples were on average similar to the baseline composite SPLP analytical results. As composite BT-1 was used to model the “worst” case ESS scenario (relatively high concentrations of COCs), comingling with materials representing average concentrations (BT-2) or adding more than 10% total reagent would increase outcomes for the ESS treatment. For ISS, amendment with 10% total reagent dosage, using 100% PC, is recommended.

8.0 SELECTION AND EVAULATION OF REMEDIAL ALTERNATIVES

Based on the remedial technologies passing the feasibility screening analysis, three remedial alternatives were selected for further evaluation using a combination of remediation technologies for shallow and intermediate soil. The three remedial alternatives are detailed below and presented on Table 2:

- Alternative 1 – Excavation and off-site disposal of all fill in the disposal area to the development depth, estimated at 360,000 CY; backfilling of disposal area with imported clean fill overlain with pavement. Estimated cost of $124M.

- Alternative 2 – Excavation and off-site disposal of shallow soil to 5 feet below final project grade; additional excavation and off-site disposal of shallow soil up to 15 feet below final project grade outside ISS areas for placement of ISS swell/expansion material; ISS of intermediate soils to the development depth; containment of disposal area with a minimum of 5 feet of clean imported fill and pavement; Estimated cost of $32M.

- Alternative 3 – Excavation and management/reuse of excavated soil in accordance with a soil management plan (SMP); ESS of shallow soil exceeding SLs to 5 feet below final project grade with ESS soils placed 5 feet or more below final project grade within the disposal area; additional excavation and ESS of shallow soil exceeding SLs up to 15 feet outside ISS areas for placement of ESS and swell/expansion material; ISS of intermediate soils to the development depth; reuse of excavated soil testing below SLs (along with clean imported fill) as geotechnical fill within the former disposal area and/or containment in the disposal area with 5 feet of soil and pavement above; Estimated cost of $22M.

Alternatives 2 and 3 can be considered "enhanced encapsulation", augmenting the DTSC PT&R alternative of containment in place by the placement of at least 5 feet of fill (excavated soil testing below SLs and/or clean imported fill) over the entire disposal area, overlain by pavement, combined with an additional remedial technology (ex-situ and in-situ stabilization/solidification). Additionally, for all alternatives a VIMS will be incorporated into future building(s) design, and a Land Use Covenant (specific to the Property) will be established limiting the Property to commercial/industrial use. The cost of the VIMS is included in the total estimated cost to implement Alternatives 1 through 3 on Table 2.

To compare the alternatives, the average score of the combined shallow and intermediate remedial technologies for each criterion was summed from Table 1, generating a composite score for each alternative. The composite score was then divided by the estimated cost in order to generate a metric for cost effectiveness. The results indicate an order of magnitude difference in cost effectiveness between Alternative 1 (0.26) and Alternatives 2 and 3 (1.16 and 1.70, respectively). Based on these results, Alternative 1 was rejected as it is not cost effective.

Alternative 1 also ranked lower in several criterion relative to Alternatives 2 and 3 primarily due to significantly increased soil handling requirements needed for off-site disposal, which is estimated to require up to 32,000 truckloads. On-site soil handling is anticipated to have potential air quality impacts to on-site workers and the community during implementation due to known asbestos and lead contamination in the disposal area fill. The significantly longer timeframe to implement Alternative 1, estimated at 450 working days, is considered to have increased impacts to the surrounding community than Alternatives 2 and 3 which are estimated at a duration of less than 200 working days. SCS' evaluation also indicates that the potential health risks from COCs to on-site

workers, the community, and general air quality from an excavation of the scale proposed in Alternative 1 would be significantly more difficult to mitigate due to required excavation and direct loading of generally unwetted soil for transportation, whereas Alternative 2 proposes significantly less excavation combined with in-situ technologies, and Alternative 3 proposes treating all soil exceeding SLs on-site, allowing for additional mitigation measures in areas with elevated COCs to reduce potential air quality impacts. Alternative 1 would require approximately 32,000 trucks (at 71 trucks per day) for loading and for transport of excavated soil for off-site disposal. Additionally, excavation and off-site disposal of impacted soil is generally less acceptable than perhaps it has been in the past due to considerations of potential fugitive emissions, transport distances and routes through populated areas of the proposed 32,000 loads, limited disposal options (particularly in California), and the ultimate fate, and associated liability, with the long-term management of waste at Confined Disposal Facilities (CDFs).

Alternative 2 also ranked lower than Alternative 3 due to similar considerations as noted above for the proposed excavation, transportation, and off-site disposal of shallow impacted soil. In comparison, Alternative 3 proposes the reuse of excavated soils on-site per an SMP, either treated by ESS (if exceeding SLs) and placed 5 feet or more below final project grade within the disposal area (either as geotechnical fill within the former disposal area and/or as containment of disposal area with 5 feet of soil on top), reducing impacts from soil handling and transportation, which is estimated at approximately 3,500 loads and an average of 19 trucks per day. Additionally, SCS' evaluation indicates that ESS can be implemented on areas exceeding SLs using procedures that reduce potential fugitive emissions and air quality impacts to on-site workers and the community by prioritizing wetting soils and mixing in-place prior to handling and reuse. Additionally, Alternative 3 also presents a significant cost differential savings of $10M for implementation relative to Alternative 2.

9.0 SELECTED RESPONSE ACTION

Based on the feasibility screening evaluation, Alternative 3, which includes a combination of ESS and ISS to treat soil exceeding SLs within the former disposal area, and excavated soils testing below SLs reused on-site (within the former disposal area), has been selected as the preferred response action to be proposed in the forthcoming Response Plan. The ESS and ISS treatments will be performed by the addition of reagents consisting of recycled granular steel refinery slag and Type I/II Portland cement. Excavation and the treatment/reuse (or disposal if necessary) of excavated materials will be conducted according to an approved SMP.

The selected alternative consists of removing and re-grading of all waste fill in the disposal area to a depth of 5 feet below the planned final project grade (**Figure 3**), with additional excavation up to 15 feet below the planned final project grade in an additional area designated for the subsequent placement of ESS and ISS swell/expansion materials (**Figure 4**). All excavated soil would either be subject to ESS (if exceeding SLs) or, if identified below SLs, reused as geotechnical fill or as part of the 5-foot soil containment cap across the disposal area; all excavated soil treated by ESS or reused as fill would remain within the disposal area. Soil exceeding SLs and subject to ESS treatment will be placed within designated areas (**Figure 4**) at least 5 feet below the planned final project grade, but no deeper than the "development depth" of approximately 30 feet bgs; these areas are also a minimum of 25 feet from the proposed building. The remaining impacts below excavated areas (generally greater than 5 feet bgs, but no greater than the development depth) reported with concentrations of COCs exceeding SLs will be addressed by ISS using soil mixing equipment. **Figure 5** depicts the areas planned for ISS/ESS. Additional swell/expansion material generated by the ISS will also be placed in the designated areas at least 5 feet below the planned final project grade. **Figure 6**

depicts COCs in shallow soil exceeding SLs, anticipated ESS/ISS remediation zones, and the designated areas for placement of ESS and ISS swell/expansion materials.

Figures depicting the distribution and concentrations of COCs exceeding SLs in shallow soil up to a depth of 5 feet bgs are included in **Appendix C**. Figures depicting the maximum concentration of COCs in the ISS treatment zones are included as **Appendix D**. The distribution indicates that large portions of shallow soil in the disposal area have relatively limited impacts (**Appendix C and Figure 6**), therefore the implementation of an SMP during the excavation of shallow soil is intending to minimize potential ESS. Additionally, an area of deeper excavation, with relatively limited impacts, up to 15 feet below final project grade has been identified as the primary area for placement of ESS and ISS swell/expansion materials generated during the remediation activities (**Figure 4**).

- A total of approximately 9,000 CY of soil is anticipated to be excavated in the former disposal area for re-grading of all waste fill to a depth of 5 feet below the planned final project grade (**Figure 3**). An additional 13,000 to 23,000 CY will be excavated up to 15 feet to construct a primary designated area for the subsequent placement of ESS and ISS swell/expansion materials (colored green on **Figure 4**). A secondary placement area (colored blue on **Figure 4**) designated for additional ESS and ISS swell/expansion materials, if necessary, is estimated to have a capacity of approximately 5,000 CY.

- The estimated volume of ESS material is approximately 5,000 CY based on COCs exceeding SLs in shallow soil as depicted on **Figure 5**. The estimated ISS volume to address COCs exceeding SLs in deeper soil is approximately 88,000 CY, with an anticipated swell volume of approximately 20 to 25%, for an additional 17,600 to 22,000 CY of ISS material generated during the ISS remediation activities. Therefore, there is an estimated total of up to 27,000 CY of ESS/ISS material that will be generated during the remediation activities needing placement in the designated areas, up to 5 feet below the planned final project grade (as described above), which have an estimated capacity of up to 28,000 CY.

In consideration of the technological and economic difficulties of addressing the multiple contaminants reported at the Property, including TPH, VOCs, SVOCs, metals, and asbestos, this feasibility evaluation indicates that solidification/fixation is the most appropriate technology to address the associated risks in a cost-efficient manner.

This feasibility evaluation also considered environmental impacts to the surrounding neighborhood and risks to potential receptors during implementation, in addition to the estimated carbon footprints from greenhouse gas emissions. The fixation being considered will involve both ESS and ISS methodologies that will treat the impacted soil and essentially immobilize the contaminants, thus impeding the volatilization and preventing migration of contaminates to groundwater or other media where there could be contact with potential receptors.

The fixation of impacts identified at the Property using ESS and ISS remedial technologies will be protective of groundwater as required by State Water Resources Control Board Resolution 92-49; Section III(E) of the resolution specifically recommends the consideration of fixation as one of the potential cleanup and abatement methods. Per Section III(C), the effectiveness, feasibility, and relative costs of various cleanup and abatement technologies, including the cost effectivity of those options, were evaluated. Due to the nature of the former disposal area, treatment to background conditions would require the removal and off-site disposal of all fill material, which is not cost effective, and would result in serious environmental consequences, as detailed in Sections 5.2 and 8.0.

SCS' review indicates that removal of all fill in the former disposal area is not only economically infeasible but that excavation and off-site disposal generally presents additional risks related to increased traffic to and from the Property as well as on-site soil moving operations, including health risks that result from lead and asbestos contamination potentially becoming airborne. In addition, there would be environmental impacts from elevated greenhouse gas emissions due to increased truck and excavation equipment operations. Per Resolution 92-49 Section III(G), SCS considered the attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored. The fixation option will stabilize the fill so that there is no potential for contaminants to leach to groundwater and therefore, would be consistent with the spirit of Resolution 92-49.

10.0 RECOMENDATION

Based on the feasibility screening evaluation presented above, SCS recommends, as the next step, preparation of a Response Plan proposing Alternative 3 as the remedial alternative at the Property and detailing the planned mitigation measures to address the COCs exceeding SLs that have been detected above the Development Depth within the Refinery disposal area.

11.0 REFERENCES

California Department of Toxic Substances Control and Regional Water Quality Control Board, July 2015. Advisory – Active Soil Gas Investigations.

California Department of Toxic Substances Control (DTSC) and California Environmental Protection Agency (CalEPA), October 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance).

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California Department of Toxic Substances Control (DTSC), August 29, 2008; Proven Technologies and Remedies Guidance – Remediation of Metals in Soil.

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RWQCB (Los Angeles Region), May 1996. Remediation Guidance for Petroleum and VOC Impacted Sites

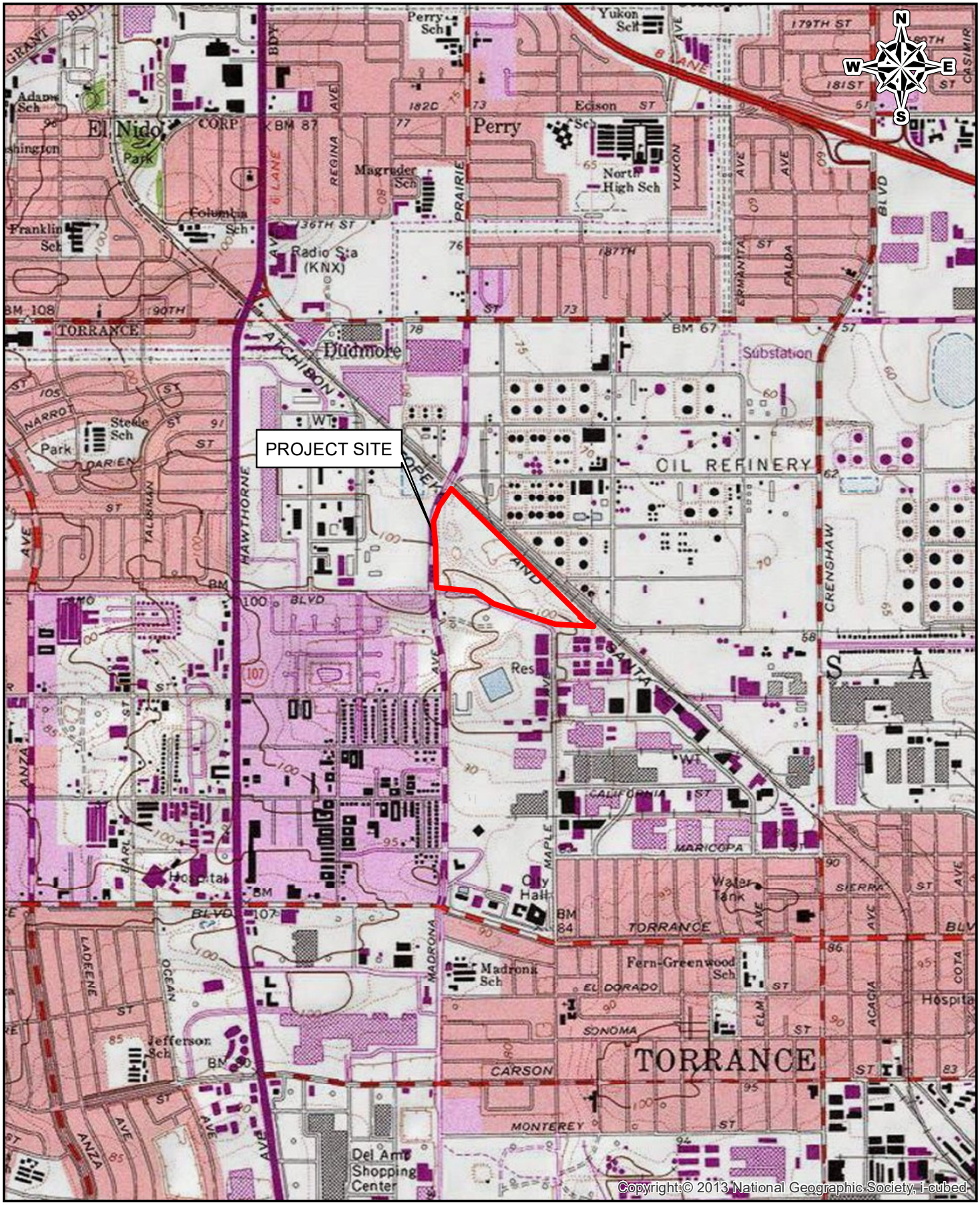
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SCS Engineers. December 23, 2022. Data Gap Investigation Report, North Posse Site, 3041 Del Amo Boulevard, Torrance, California 90503.

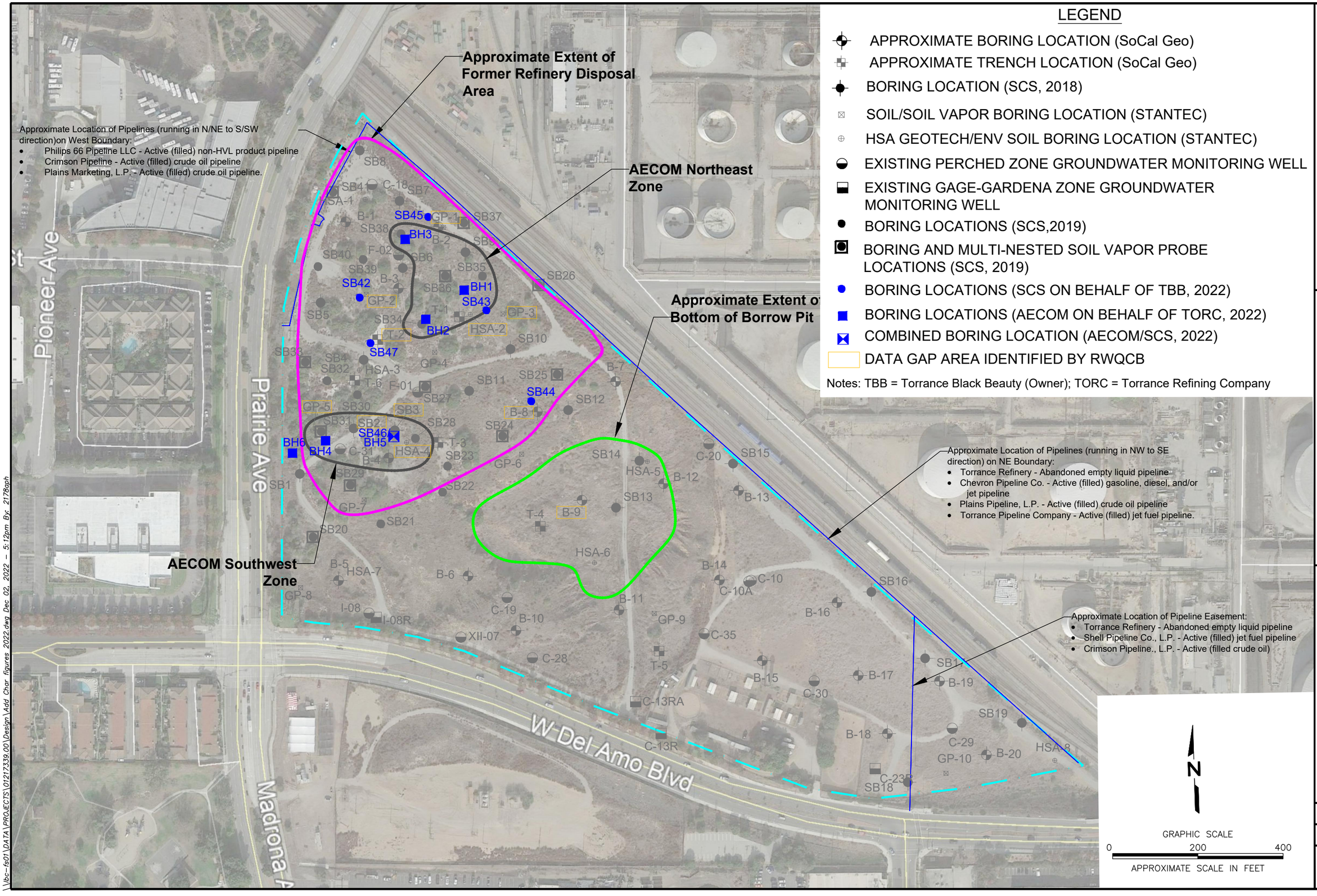
United States Environmental Protection Agency, November 2009. *Technology Performance Review: Selecting and Using Solidification/Stabilization Treatment for Site Remediation*.

United States Environmental Protection Agency, Region IX, November 2023. *Regional Screening* Levels.

Figures



SCS ENGINEERS 3900 KILROY AIRPORT WAY, STE 100 LONG BEACH, CALIFORNIA 90806-6816	SITE: North Posse Site 3041 Del Amo Blvd. Torrance, California 90503	Job No.: 01217339.00 T2 Title: SITE LOCATION MAP	FIGURE 1



LEGEND

- APPROXIMATE BORING LOCATION (SoCal Geo)
- APPROXIMATE TRENCH LOCATION (SoCal Geo)
- BORING LOCATION (SCS, 2018)
- SOIL/SOIL VAPOR BORING LOCATION (STANTEC)
- HSA GEOTECH/ENV SOIL BORING LOCATION (STANTEC)
- EXISTING PERCHED ZONE GROUNDWATER MONITORING WELL
- EXISTING GAGE-GARDENA ZONE GROUNDWATER MONITORING WELL
- BORING LOCATIONS (SCS,2019)
- BORING AND MULTI-NESTED SOIL VAPOR PROBE LOCATIONS (SCS, 2019)
- BORING LOCATIONS (SCS ON BEHALF OF TBB, 2022)
- BORING LOCATIONS (AECOM ON BEHALF OF TORC, 2022)
- COMBINED BORING LOCATION (AECOM/SCS, 2022)
- DATA GAP AREA IDENTIFIED BY RWQCB

Notes: TBB = Torrance Black Beauty (Owner); TORC = Torrance Refining Company

GRAPHIC SCALE
0 200 400
APPROXIMATE SCALE IN FEET

SHEET TITLE:
SITE MAP SHOWING CURRENT AND HISTORICAL BORING LOCATIONS

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

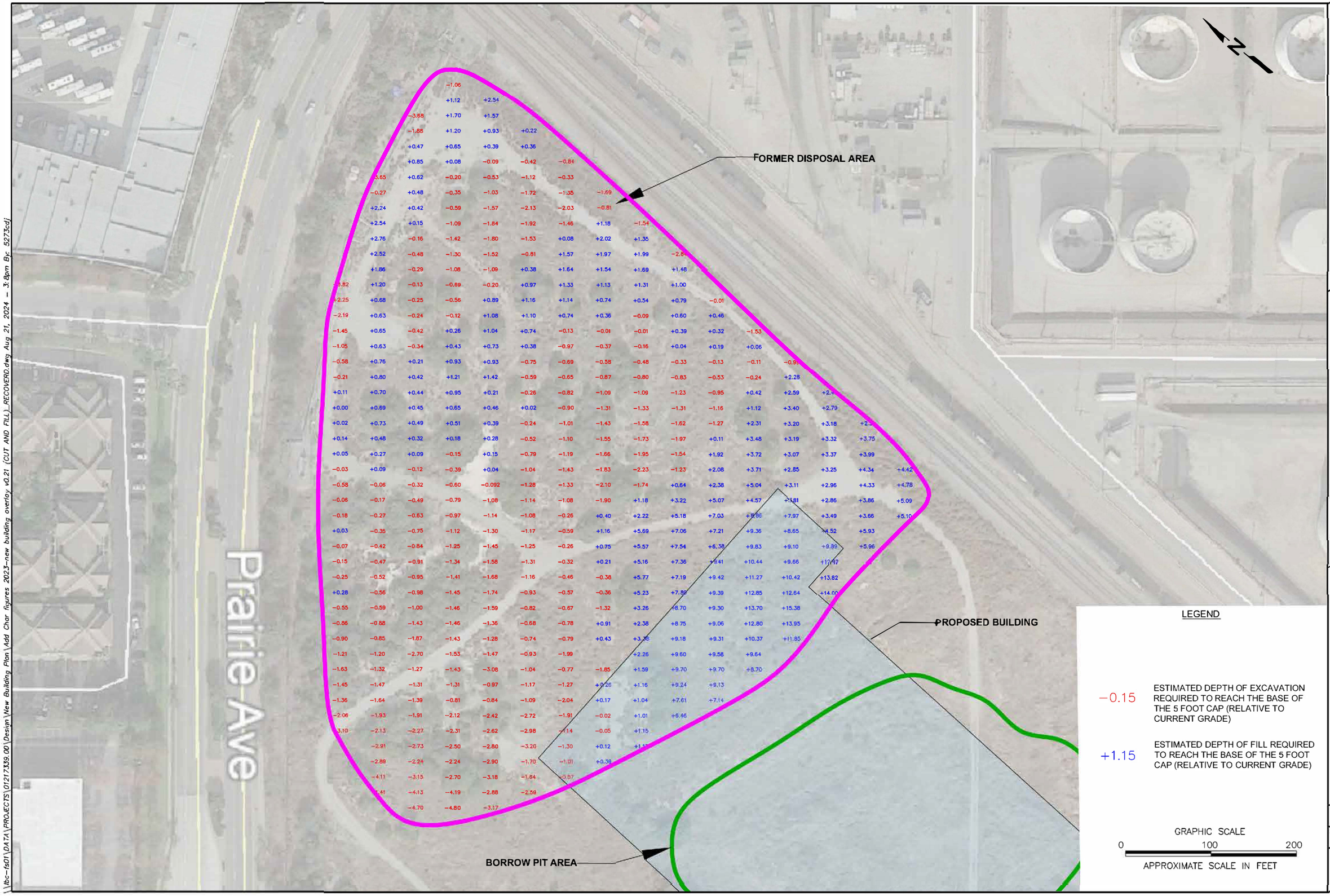
CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
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PROJ NO: 01217339.00
DSN. BY: DESIGN
DWN. BY: APH
CHK. BY: KWG
ACAD FILE: LOCATION
APP. BY: KWG

DATE: DECEMBER 2022
SCALE: 1" = 200'
FIGURE NO. 2

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LEGEND

−0.15 ESTIMATED DEPTH OF EXCAVATION REQUIRED TO REACH THE BASE OF THE 5 FOOT CAP (RELATIVE TO CURRENT GRADE)

+1.15 ESTIMATED DEPTH OF FILL REQUIRED TO REACH THE BASE OF THE 5 FOOT CAP (RELATIVE TO CURRENT GRADE)

GRAPHIC SCALE
0 100 200
APPROXIMATE SCALE IN FEET

SHEET TITLE:
SITE MAP SHOWING REQUIRED EXCAVATION AND FILL DEPTHS (5 FEET BELOW FINAL PROJECT GRADE)

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
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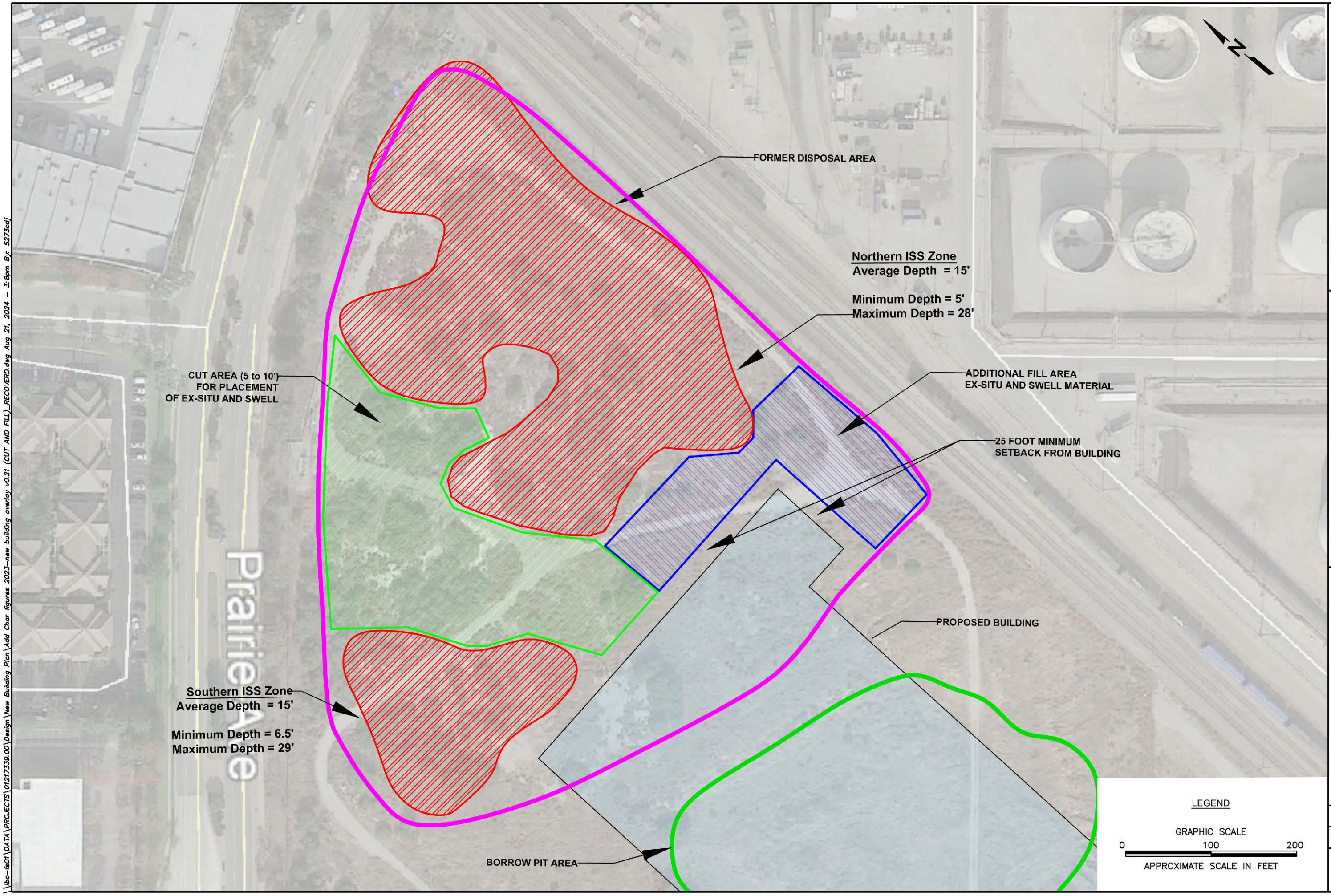
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01217339.00	RR	KWG	KWG	LOCATION

DATE: AUGUST 2024

SCALE: 1" = 150'

FIGURE NO. 3

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\New Building Plan\Add Char figures 2023-new building overlay v0.21 (CUT AND FILL)_RECOVERD.dwg Aug 21, 2024 - 3:8pm By: 5273cdj



SHEET TITLE: ISS AND ESS PLACEMENT AREAS

PROJECT TITLE: NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT: TORRANCE BLACK BEAUTY LLC
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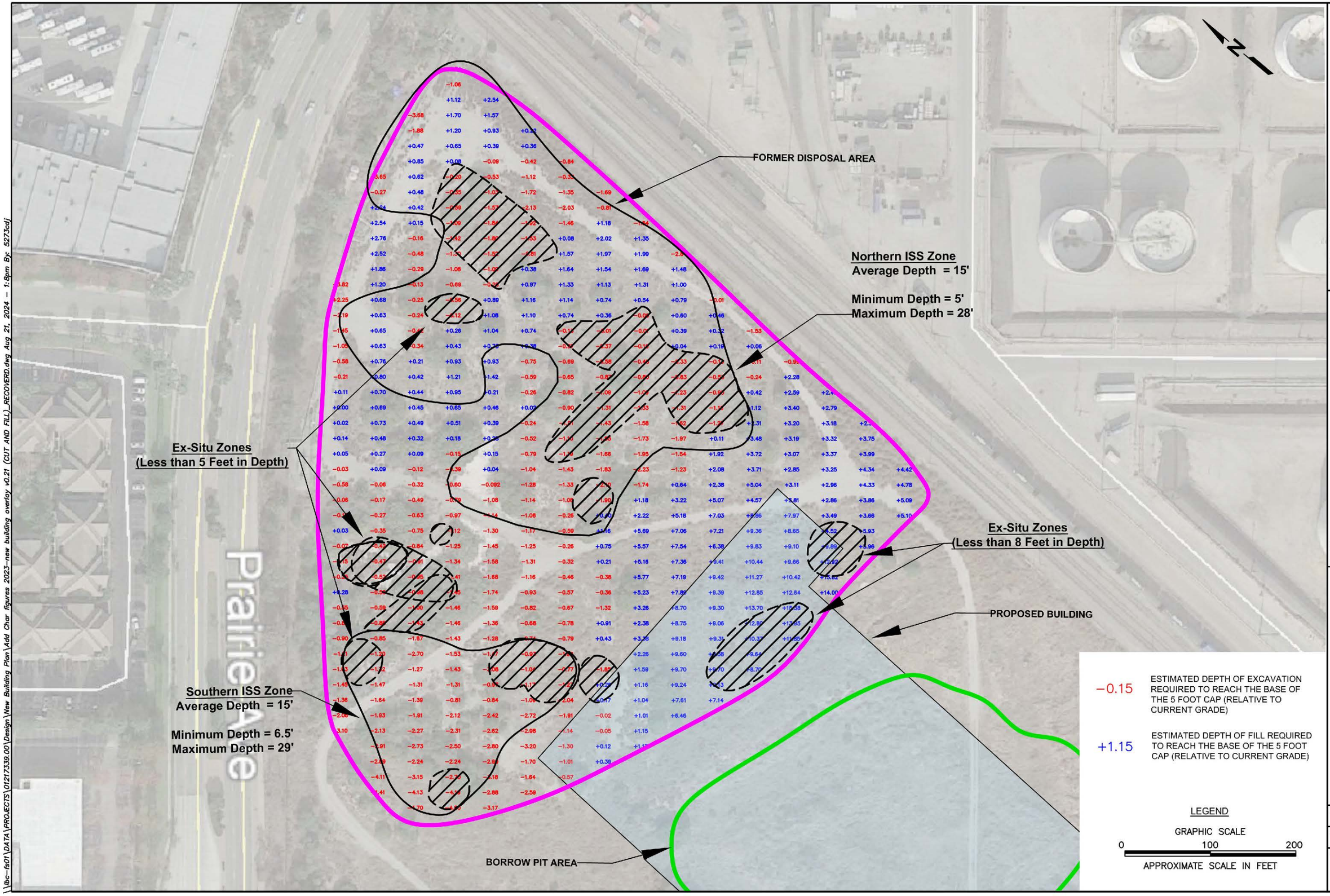
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01217339.00	RR	KWG	LOCATION	KWG
CAD ID#	RR			

DATE: JULY 2024

SCALE: 1" = 100'

FIGURE NO. 4

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SHEET TITLE: ISS AND ESS REMEDIATION ZONES

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
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PROJ. NO.	DWN. BY	CHK. BY	ACAD FILE	APP. BY
01217339.00	RR	KWG	LOCATION	KWG

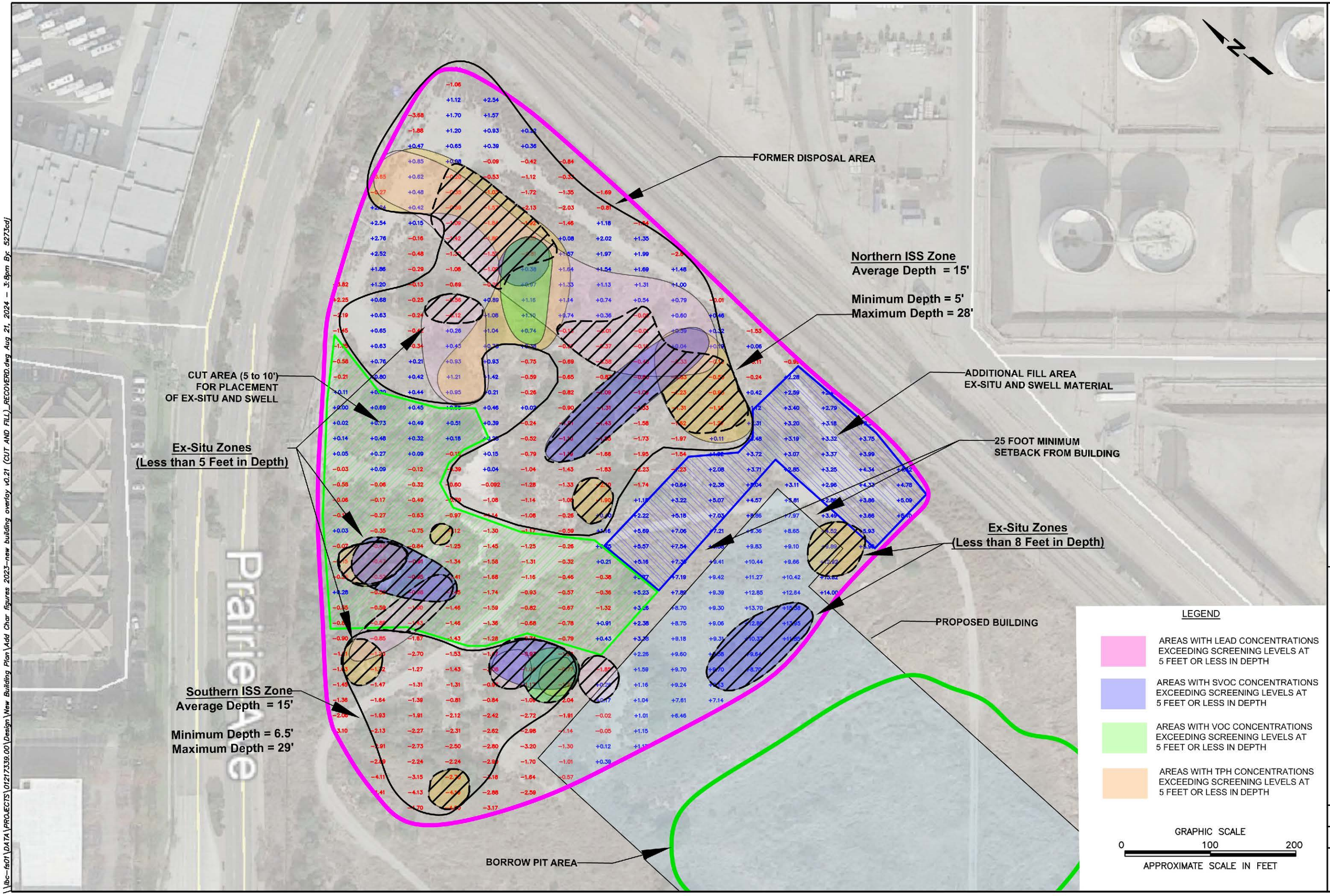
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DATE: JULY 2024

SCALE: 1" = 100'

FIGURE NO. 5

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SHEET TITLE:
COCs EXCEEDING SCREENING LEVELS IN SHALLOW SOIL WITH REMEDIATION AND FILL ZONES

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
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PROJ. NO.	DWN. BY	CHK. BY	APP. BY
01217339.00	RR	KWG	KWG
CAD. ID			ACAD FILE
RR			LOCATION

DATE: JULY 2024
SCALE: 1" = 100'
FIGURE NO. 6

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Tables

TABLE 1
REMEDIATION TECHNOLOGY FEASIBILITY SCREENING EVALUATION
NORTH POSSE / TORRANCE BLACK BEAUTY

Remedial Technology	Remedy Selection Criteria for Cleanup Actions Under Regulatory Oversight												Evaluation Results	
	Effectiveness						Implementability		Other		Cost			
	Protective of Human Health and the Environment	Compliance with ARARs	Long-Term Effectiveness and Permanence	Reduction of Toxicity, Mobility, and/or Volume	Short-Term Effectiveness	Regulatory Agency Acceptance	Technical Feasibility	Administrative Feasibility	Community Acceptance	Sustainability	Capital Costs	O&M Costs	Average Weighted Score	Consider for Further Evaluation?
SHALLOW SOIL (0-5 ft-bgs)														
Excavation with Off-Site Disposal	Fair	Good	Excellent	Poor	Fair	Excellent	Good	Fair	Fair	Good	Poor	Excellent	3.6	YES
Excavation with Stabilization/Solidification and On-Site Reuse	Good	Good	Good	Good	Fair	Good	Good	Fair	Good	Fair	Fair	Good	3.7	YES
Containment In Place (Cap)	Fair	Very Poor	Fair	Poor	Good	Poor	Excellent	Excellent	Poor	Excellent	Excellent	Fair	3.1	YES
No Action	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Excellent	Excellent	Very Poor	Excellent	Excellent	Fair	2.0	NO
INTERMEDIATE SOIL (5-30 ft-bgs)														
Excavation with Off-Site Disposal	Fair	Good	Excellent	Poor	Very Poor	Excellent	Good	Poor	Poor	Very Poor	Poor	Excellent	3.1	YES
In-Situ Stabilization/Solidification	Good	Good	Good	Good	Good	Good	Good	Fair	Good	Fair	Fair	Good	3.8	YES
Thermal Treatment	Fair	Poor	Fair	Fair	Fair	Fair	Fair	Good	Fair	Poor	Fair	Fair	2.9	NO
Soil Vapor Extraction	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Good	Poor	Fair	Good	Good	2.6	NO
In-Situ Chemical Oxidation/Fixation	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fair	2.3	NO
Containment In Place (Cap)	Poor	Very Poor	Poor	Poor	Poor	Very Poor	Excellent	Excellent	Poor	Excellent	Excellent	Good	2.6	NO
No Action	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Excellent	Excellent	Very Poor	Excellent	Excellent	Good	2.1	NO

SCALE: VERY POOR = 1, POOR = 2, FAIR = 3, GOOD =4, EXCELLENT = 5

= Score of 3.0 or greater
= Score of 2.5 or less

Notes: Effectiveness scores given double weight (2.0) relative to implementability/cost/other scores (1.0) for the initial screening of suitable remedial technologies

The technologies with an average weighted score of FAIR (3.0) or higher indicate that these are the technologies most capable of meeting the remedial action criteria and are worthy of being further evaluated.

ARARs = Applicable or Relevant and Appropriate Requirements; O&M = Operations and Maintenance,

TABLE 2
EVALUATION OF REMEDIAL ALTERNATIVES
NORTH POSSE / TORRANCE BLACK BEAUTY

	Remedial Alternatives for Consideration		
	Alternative 1	**Alternative 2**	**Alternative 3**
Technologies used in Each Alternative	**Shallow Soil:** Excavation, Off-Site Disposal; replacement with clean imported fill **Intermediate Soil:** Excavation, Off-Site Disposal; replacement with clean imported fill	**Shallow Soil:** Excavation, Off-Site Disposal; construct a 5 Foot Cap with imported fill **Intermediate Soil:** In-Situ Stabilization	**Shallow Soil:** Excavation, On-site reuse and Stabilization/Solidification; construct a 5 Foot Cap with reused soil and imported fill **Intermediate Soil:** In-Situ Stabilization
Alternative Description	Excavate all Former Disposal Area Soil to Development Depth (approximately 30 Feet Below Final Project Grade) and transport and dispose excavated soil off Site. Import and placement of clean fill within excavated areas. Equip future on site building with vapor intrusion mitigation System (VIMS).	Excavate all Former Disposal Area Soil to a depth of five feet below final Project Grade and transport and dispose excavated soil off site. Additional excavation to 10 to 15 feet below Final Project Grade outside in-situ stabilization areas for placement of in-situ swell/expansion material. In-situ stabilization of all remaining disposal area soil with impacts above Screening Levels (SLs) to development depth (approximately 30 feet below final project grade); Import and placement of 5 feet of clean imported fill below Final Project Grade (above disposal area); equip future on-site building with VIMS.	Excavate all Former Disposal Area soil to a depth of five feet below Final Project Grade; reuse and/or ex-situ stabilization based on a Soil Management Plan (SMP). Additional excavation to 10 to 15 feet below Final Project Grade outside in-situ stabilization areas for placement of in-situ swell/expansion material. Conduct ex-situ stabilization of excavated soil exceeding SLs and reuse on-site at depths below five feet below Final Project Grade. Reuse of excavated soil testing below SLs (with clean imported fill) as geotechnical fill and/or containment of disposal area with a 5 feet of soil and pavement; in-situ stabilization of all remaining disposal area soil with concentrations Above SLs to Development Depth (approximately 30 feet below final project grade); equip future on-site building with VIMS.
Advantages	- Elimination of all future risks associated with impacted soil by removal of disposal area fill. - Elimination of downward migration of COCs by source removal. - Mitigate migration of VOCs to indoor air by soil source removal and VIMS.	- Prevention of future risk from direct contact with impacted soil, such as construction workers, by removal of all fill to 5 feet below final grade and capping with 5 feet of clean imported fill.. - Greatly reduce or eliminate downward migration of COCs by stabilization. - Mitigate migration of VOCs to indoor air by stabilization of VOC impacted soil and VIMS. - Moderate cost and relatively short time of implementation.	- Prevention of future risk from direct contact with soil exceeding SLs, such as construction workers, by stabilization/solidification of impacted soil and capping with 5 feet of clean imported fill and/or excavated soil testing below SLs. - Greatly reduce or eliminate downward migration of COCs by stabilization. - Allows reuse of treated soil and soil tested below SLs as on-site fill, reducing off-site disposal volume and associated impacts to community. - Reduce risks associated with additional handling of soil by reusing soil and on-site treatment technologies - Mitigate migration of VOCs to indoor air by stabilization of VOC impacted soil and VIMS - Relatively low cost and relatively short time of implementation.
Disadvantages	- Will require significant shoring or laying back soil to reach depth of 30 feet with conventional equipment due to potentially unstable waste fill with variable soil classifications. - Will likely leave areas of contamination along the northwestern and northeastern extents of the disposal area bordering property boundaries due to setback requirements. - Greatest risk of short-term exposure to airborne contaminants to construction workers and nearby receptors during implementation due to increased soil handling. - Relatively large carbon footprint due to additional resources required to excavate and transport all Disposal Area soil off-site and import replacement fill. - Potentially unacceptable to community due to large amount of traffic to and from site. - Relatively high cost and long time for implementation.	- In-situ treatment below 5 feet does not address all disposal area fill with COC concentrations above background. - Greater relative risk of short-term exposure to airborne contaminants for construction workers and nearby receptors during implementation due to increased soil handling. -Potentially unacceptable to community due to increased traffic to and from site to export soil and import replacement fill relative to on-site treatment technologies	- Treatment below 5 feet does not address all disposal area fill with COC concentrations above background. - Variable waste fill and potential for debris may make areas of soil unsuitable for excavation and on-site treatment and reuse.

Criteria		**Score Comparison and Alternative Selection**		
		Alternative 1	**Alternative 2**	**Alternative 3**
Effectiveness	**Protective of Human Health & Environment**	**3.0**	**3.5**	**4.0**
	Compliance with ARARs	**4.0**	**4.0**	**4.0**
	Long-Term Effectiveness and Permanence	**5.0**	**4.5**	**4.0**
	Reduction of Toxicity, Mobility, and/or Volume	**2.0**	**3.0**	**4.0**
	Short-Term Effectiveness	**2.0**	**3.5**	**3.5**
	Regulatory Agency Acceptance	**5.0**	**4.5**	**4.0**
Implementability	**Technical Feasibility**	**4.0**	**4.0**	**4.0**
	Administrative Feasibility	**2.5**	**3.0**	**3.0**
Other	**Community Acceptance**	**2.5**	**3.5**	**4.0**
	Sustainability	**2.5**	**3.5**	**3.0**
COMPOSITE EFFECTIVNESS AND IMPLEMENTABILITY SCORE:		**33**	**37**	**38**
ESTIMATED COST (MM):		**$124**	**$32**	**$22**
COST EFFECTIVNESS		**0.26**	**1.16**	**1.70**

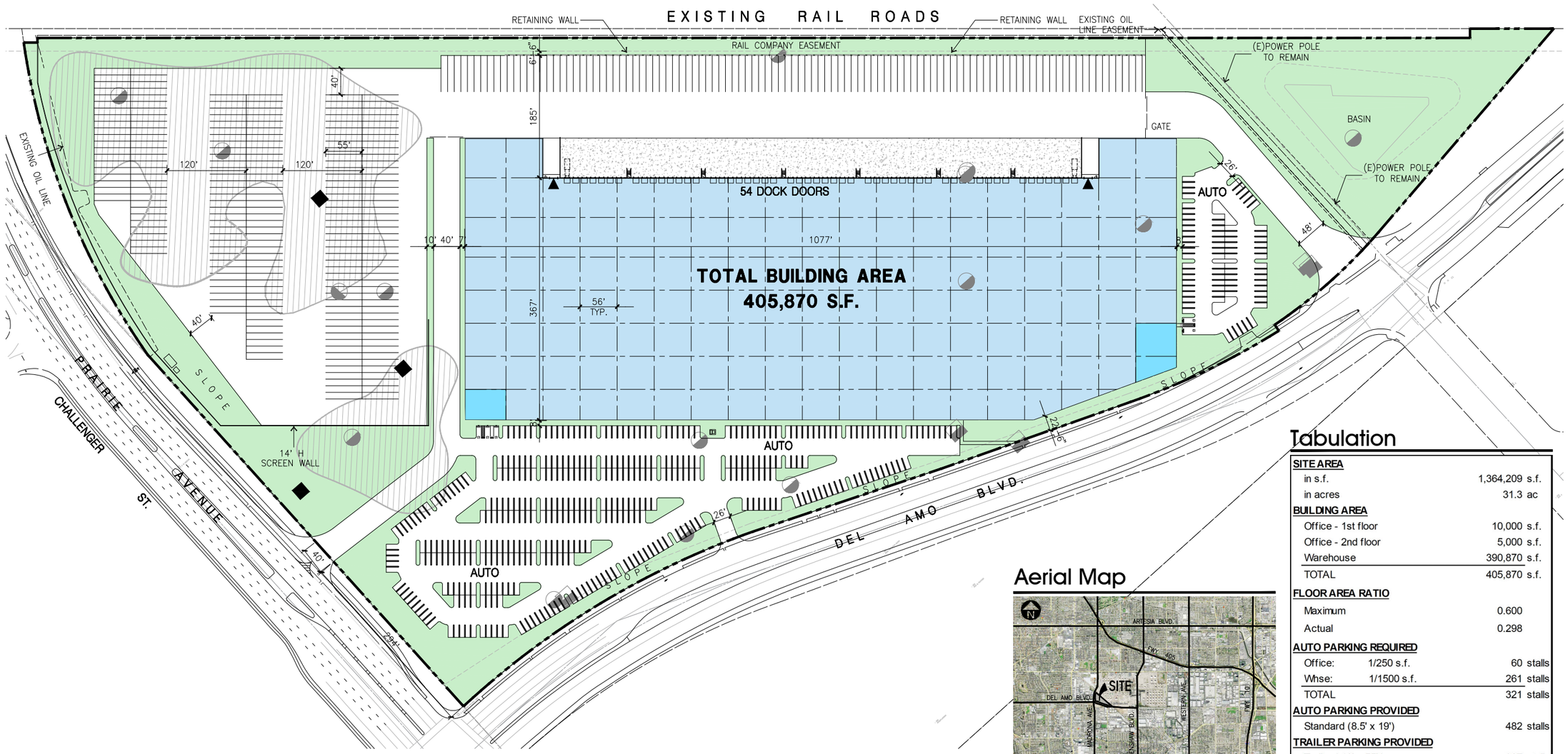
SCALE: 1 = VERY POOR 5 = EXCELLENT; AVERAGE OF SHALLOW AND DEEP SCORES FROM FEASIBILITY SCREENING TABLE
= Score of 4.0 to 5.0
= Score of 3.0 or 3.5
= Score of less than 3.0
COST EFFECTIVENESS = COMPOSITE SCORE / COST

Notes It is assumed that all criteria are equally weighted, for the purposes of the feasibility exercise

Appendix A

Proposed Development

CAUTION: IF THIS SHEET IS NOT 30"X42", IT IS A REDUCED PRINT



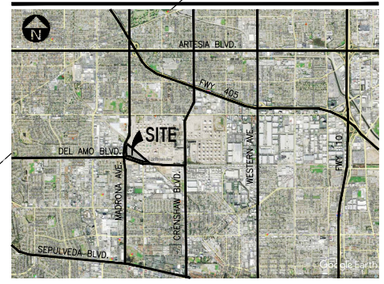
Note: This is a conceptual plan. It is based on preliminary information which is not fully verified and may be incomplete. It is meant as a comparative aid in examining alternate development strategies and any quantities indicated are subject to revision as more reliable information becomes available.

north

1" = 60'

0 60 120 180

Aerial Map



Legend

- POTENTIAL OFFICE WITH 2ND FLOOR
- WAREHOUSE
- ▼ DRIVE THRU DOOR

Tabulation

SITE AREA		
in s.f.		1,364,209 s.f.
in acres		31.3 ac
BUILDING AREA		
Office - 1st floor		10,000 s.f.
Office - 2nd floor		5,000 s.f.
Warehouse		390,870 s.f.
TOTAL		405,870 s.f.
FLOOR AREA RATIO		
Maximum		0.600
Actual		0.298
AUTO PARKING REQUIRED		
Office:	1/250 s.f.	60 stalls
Whse:	1/1500 s.f.	261 stalls
TOTAL		321 stalls
AUTO PARKING PROVIDED		
Standard (8.5' x 19')		482 stalls
TRAILER PARKING PROVIDED		
Trailer (10' x 55')		327 stalls
ZONING ORDINANCE FOR CITY		
Zoning Designation - Heavy Manufacturing District (M2)		
MAXIMUM FLOOR AREA RATIO		
F.A.R. - .60		
LANDSCAPE REQUIRED		
Percentage - 5%		
SETBACKS		
none		

Conceptual Site Plan

Del Amo & Prairie Ave

Torrance, CA

HPA architecture

18831 Bardeen Ave. - Ste. #100
Irvine, CA 92612
(949) 863-1770
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PROLOGIS® Ahead of what's next

NOVEMBER 1, 2023 / Job #18340

Scheme 27

Appendix B

Applicable or Relevant and Appropriate Requirements Tables

TABLE B-1
FEDERAL APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)
NORTH POSSE / TORRANCE BLACK BEAUTY

Citation	Standard or Requirement	Description	Potentially Applicable or Relevant and Appropriate	Comment
Safe Drinking Water Act (40 USC Section 300)				
40 CFR Part 141 Subpart B	National Primary Drinking Water Standards	Establishes maximum contaminant levels (MCLs) which are health based standards for public water systems. EPA has promulgated MCLs for inorganic chemicals (41 CFR 141.11), organic chemicals (41 CFR 141.12), turbidity (41CFR 141.13) and radioactivity (41 CFR 141.15). The SDWA also establishes secondary standards for sources of public drinking water. These Maximum Contaminant Level Goals (MCLGs) are non-promulgated and generally non-enforceable standards. They are, however, intended to provide guidance as to levels of contamination that are protective of human health; and pursuant to CERCLA § 121(d)(2)(A) remedial actions selected at CERCLA sites must require a level or standard of control which at least attains MCLGs established under the SDWA and water quality criteria established under sections 303 or 304 of the Clean Water Act, where such goals or criteria are relevant and appropriate under the circumstances of the release or threatened release. In determining the relevance and appropriateness of MCLGs, the most important factors to consider are the designated uses of the water and the purpose for which the potential requirements are intended. Regulations promulgated by EPA require that MCLGs that are set at non-zero levels "shall be attained by remedial actions for groundwater or surface water that are current or potential sources of drinking water, where the MCLGs are relevant and appropriate to the circumstances of the release based on the factors in [40 CFR] § 300.400(g)(2). If an MCLG is determined not to be relevant and appropriate, the corresponding MCL shall be attained where relevant and appropriate to the circumstances of the release." 40 CFR § 300.430(e)(2)(B). Thus, MCLGs are potential ARARs even though not generally enforceable.	YES	Per CLRRA, TORC responsible for groundwater impacts below the Development Depth, groundwater impacts emanating from the adjacent Refinery, and for groundwater impacts at any depth where caused by TORC on or after August 7, 2018.
40 CFR Part 143	National Secondary Drinking Water Standards	The SDWA established National Secondary Drinking Water Regulations consisting of Secondary Maximum Contaminant Levels (SMCLs). These standards are set to regulate aesthetic qualities of drinking water (e.g., odor, color). SMCLs are non-enforceable guidance and are therefore “to be considered” (TBCs) advisories for the Site.	YES	Per CLRRA, TORC responsible for groundwater impacts below the Development Depth, groundwater impacts emanating from the adjacent Refinery, and for groundwater impacts at any depth where caused by TORC on or after August 7, 2018.
40 CFR Part 144	Underground Injection Control (UIC) Program	UIC provides substantial requirements and permit requirements for construction and operation of underground injection wells. The technical and procedural requirements vary according to the class of well installed. These include construction, operating, monitoring, and closure requirements.	YES	If injection wells are required on Site, the substantive provisions of the program would be applicable.
40 CFR Parts 403 and 414	National Pretreatment Standards	Standards control the introduction of pollutants which pass through or interfere with treatment processes in publicly owned treatment works (POTWs). This prevents interference with the operation of a POTW, prevents pass through of pollutants through the treatment works, and improves opportunities to recycle and reclaim municipal and industrial wastewater and sludge.	YES	If discharge to publicly owned treatment works is required for remediation these standards would be applicable.
CWA § 402 (a)(1)	Water Quality Standards	Effluent limitations are required to achieve all appropriate state water quality standards. EPA "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants" (49 FR 9016, March 9, 1984) states that toxic pollutants contained in direct discharges will be controlled beyond Best Available Technology (BCT/BAT) equivalents in order to meet applicable state water quality standards. Section 303 of the CWA requires states to promulgate water quality standards. Discharges to the storm drain pertain here, such as site rainwater runoff. TBC for reinjection of groundwater in absence of direct discharge.	YES	To be considered for reinjection of groundwater in absence of other ARARs.
Clean Air Act (CCA)				
40 CFR Part 50	National Ambient Air Quality Standards (NAAQS)	National primary and secondary ambient air quality standards are defined under Section 109 of the CAA and are listed in 40 CFR 50. CERCLA sites are not considered major sources under the CAA unless emissions equal or exceed 100 tons per year of the pollutants for which the area is designated non- attainment. State implementation plans contain the specific regulations which govern the emission rates for such areas.	YES	These specific requirements are discussed in the table below relating to State and Local ARARs/
Other Applicable Acts				
19 CFR 1910	Occupational Safety and Health Act (OSHA)	The application of OSHA is controlled by the National Contingency Plan (NCP) 40 CFR § 300.150. OSHA requirements under 19 CFR 1910.120 are applicable to worker exposures during response actions at CERCLA sites, except in states that enforce equivalent or more stringent requirements. Response actions under the NCP must comply with the provisions for response action worker safety and health in 29 CFR 1910.120. Federal OSHA requirements include: Construction Standards (29 CFR Part 1926), General Industry Standards (29 CFR Part 1926), General Industry Standards (29 CFR Part 1910), and the general duty requirements of OSHA § 5(a)(1) (29 USC § 654(2)(1). OSHA exposure limits are developed for 8-hour worker exposures; these standards however could be considered in the protection of people in their homes. Exceeding OSHA standards in a home is likely to be more hazardous than on-site worker exposures.	YES	Is relevant and appropriate in order to maintain worker safety and health while working on the Site.
40 CFR 204, 205, 211	Noise Control Act of 1972 as amended by the Quiet Communities Act of 1978	Construction and Transportation equipment noise levels (e.g., portable air compressors, and medium and heavy trucks), process equipment noise levels and noise levels at the property boundaries of the project are regulated under this act State or local agencies typically enforce these levels.	YES	Applicable to process equipment noise levels and noise levels at the property boundaries.

TABLE B-2
STATE AND LOCAL APPLICABLE OR RELEVANT AND APPRORIATE REQUIREMENTS (ARARs)
NORTH POSSE / TORRANCE BLACK BEAUTY

Citation	Standard or Requirement	Description	Potentially Applicable or Relevant and Appropriate	Comment
Hazardous Waste Control Act under the California Code of Regulations Title 22				
22 CCR §§ 66261.21 to 66261.24	Criteria for Identifying Hazardous Wastes	If a chemical is either listed or tested and found to possess characteristics that are hazardous, then remedial actions must comply with the hazardous waste requirements under Title 22. Total Threshold Limit Concentrations (TTLCs) and Soluble Threshold Limit Concentrations (STLCs) have been established for selected toxics to be used in establishing whether waste is hazardous.	YES	If a chemical is either listed or tested and found hazardous, then remedial actions must comply with the hazardous waste requirements under Title 22.
22 CCR §§ 66262.10 to 66262.7	Standards Applicable to Generators of Hazardous Waste	An owner or operator who initiates a shipment of hazardous waste from a Transport, Storage, or Disposal (TSD) facility must comply with the generator standards established under Title 22, Chapter 12. These standards include keeping of manifests (66262.20), pre-transport requirements (66262.30), record keeping and reporting requirements (66262.00). This regulation is applicable to hazardous waste resulting from treatment of environmental media that accumulates on-site and is shipped off-site for disposal.	YES	This regulation is applicable to hazardous waste resulting from treatment activities that accumulates on-site and is shipped off-site for disposal.
		If hazardous wastes are generated through the treatment process and then must be transported off-site the substantive portions of these regulations would be applicable. The regulations require that transporters of hazardous waste; be registered, have the appropriate kinds of containers, adhere to mandated monitoring procedures, meet record keeping requirements, and take appropriate action in the event of a discharge.	YES	Only transportation of hazardous waste off-site is required to meetthese requirements.
22 CCR §§ 66264.110-66264.12	Closure and Post-Closure	Requires closure plans and general closure requirements for disposal and decontamination of equipment at closure.	YES	Relevant and appropriate for decontamination of equipment at the Site.
22 CCR §§ 66264.170-66264.199	Use and Management of Containers and Tank Systems	Containers used to transfer or store hazardous wastes must be compatible with wastes stored, managed appropriately, inspected, and designed and operated appropriately. Tank systems must meet design standards and provide for: containment and detection/monitoring of leaks, monitoring and inspection, and proper closure procedures.	YES	Applicable for those alternatives which contemplate the usage of tanks and/or containers as part of the remedial alternative.
19 CCR Ch. 3, Subch. 3	Hazardous Materials Release Response Plans and Inventory	Requires businesses that handle hazardous materials to establish a plan for emergency response to a release or threatened release of hazardous material. A handler would be required to report certain releases or threatened releases.	YES	Applicable to disposal of hazardous materials resulting from treatment processes.
Porter-Cologne Water Quality Control Act				
23 CCR 2200 to 2714	Water Code (WC)	Porter-Cologne delegates standard-setting authority to the RWQCBs. RWQCB will not dictate specific treatment alternatives but will require that the alternative meet minimum actions levels and perform at a level near the Best Available Technology (BAT) for the chosen alternative, RWQCB standards are set on a case-by-case basis and apply to treated wastewater and stormwater runoff. Regulations pertain to land disposal unit design and construction standards that minimize dangers to the waters of the State. Wastes are classified as hazardous, designated, non- hazardous, or inert and must be disposed of accordingly. Regulations regarding water quality protection standards are left to the Regional Water Quality Control Boards (2552). Standards are determined by the RWQCBs on a case-by-case basis based on federal Water Quality Standards and state action levels. Actions taken by public agencies to clean up pollution are exempt from the requirements of Title 23, provided that re-disposal and containment meet applicable standards.	YES	If met, these standards are not considered applicable but will remain relevant.
	Los Angeles RWQCB	Regional Boards may prescribe individual or general waste discharge requirements for discharges of site-specific, contaminant-specific, or inert wastes. The RWQCB often references and uses the DTSC action level (AL) standards when the RWQCB determines wastewater discharge standards for site-specific discharges. The RWQCB does not have their own list of ALs. The DTSC ALs is guidance and therefore to be considered (TBC).	YES	Although the RWQCB applies and enforces the DTSC ALs, the discharge standards are still guidance and are not promulgated so are considered to be TBC.
Resolution 68-16	State Water Resources Control Board (SWRCB) Antidegradation Policy	The Antidegradation Policy states in part that: Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it had been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated use of such water and will not result in water quality less than that prescribed in the policies. Resolution No. 68-16 has not been formally promulgated as a rule or regulation pursuant to the established policy making procedures of the California Water Code § 13147, so the resolution is not fully "applicable" as a rule or regulation. However, the Antidegradation Policy has been adopted by the SWRCB and the LARWQCB as a narrative standard of a water quality objective. The Antidegradation Policy states as a narrative standard the goal that "disposal of wastes into the water of the State shall be so regulated as to achieve the highest water quality consistent with maximum benefit to the people of the State ..." Because the Antidegradation Policy states a goal for the non-degradation of groundwaters of the state, and because the soil remediation at the Site may impact the groundwater quality of aquifers underling the Site, the Antidegradation Policy is relevant to the Site remedial activities. The Antidegradation Policy is also appropriate for the various remedial alternatives since the purpose of the policy is to preserve the quality of groundwater, and since the remedial alternatives will have an impact on the groundwater aquifers underlying the Site.	YES	The policy states a goal for the nondegradation of groundwaters of the state and because the soil remediation at the Site may impact the groundwater quality of aquifers underling the Site, the Antidegradation Policy is relevant to the Site's remedial activities. Waiver of the Antidegradation Policy at the Site may be appropriate if the attainment is impracticable for several reasons, including the difficulty, excessive time frame and cost for the removal of source materials.

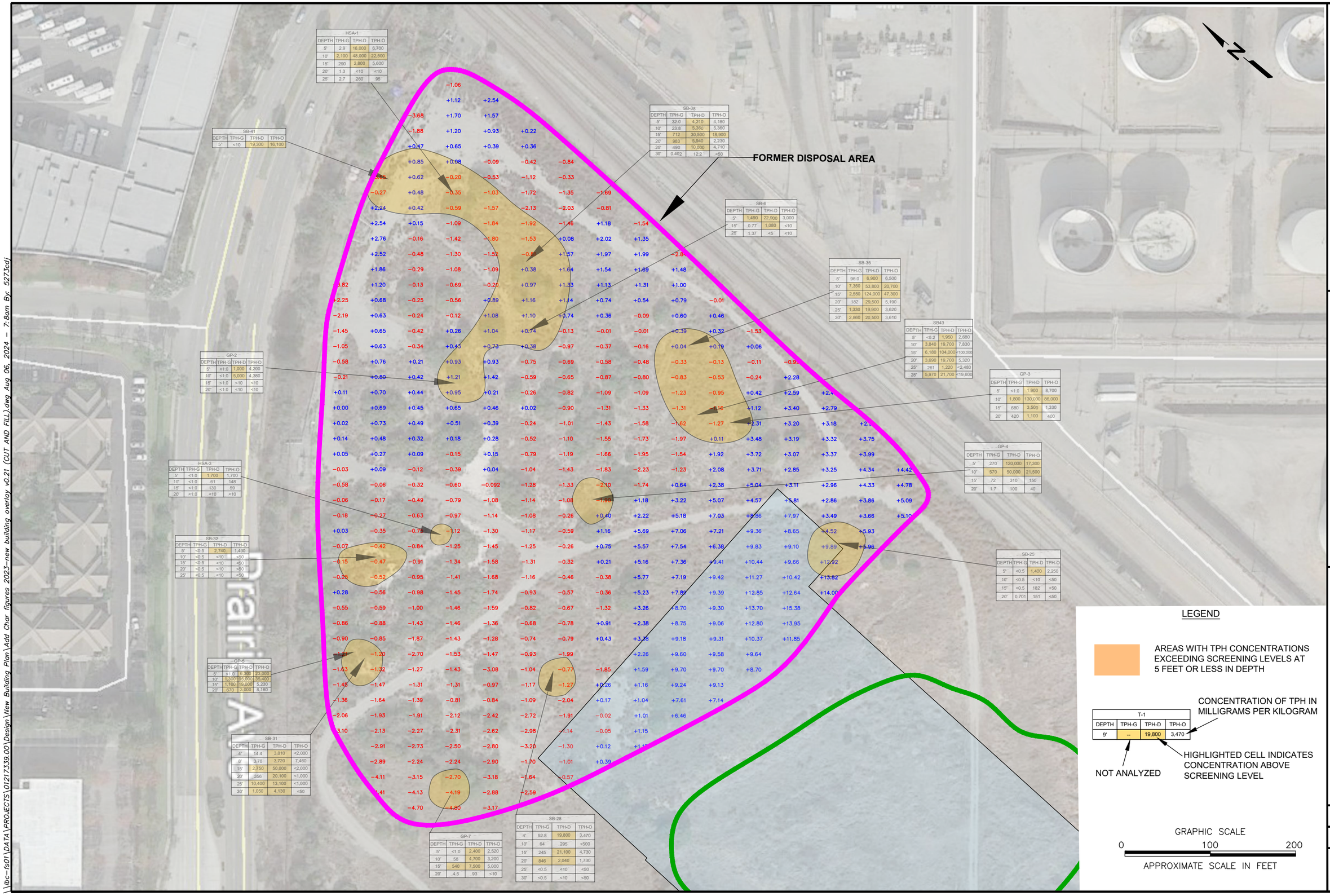
TABLE B-2
STATE AND LOCAL APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)
NORTH POSSE / TORRANCE BLACK BEAUTY

Citation	Standard or Requirement	Description	Potentially Applicable or Relevant and Appropriate	Comment
		CERCLA § 121(d) provides that, under certain circumstances, ARARs may be waived. The NCP provides for a waiver of ARARs for remedial actions if achievement of the ARAR is technically impracticable. The waiver can be used if either of two criteria are met: (I) engineering feasibility, in which current engineering methods necessary to construct and maintain an alternative that will meet the ARAR cannot reasonably be implemented; and (2) reliability, in which the potential for the alternative to continue to be protective into the future is low, either because the continued reliability of technical and institutional controls is doubtful, or because of inordinate maintenance costs. A remedial alternative that is feasible might be deemed technically impracticable if it could only be accomplished at inordinate cost. See CERCLA Compliance With Other Laws Manual: Interim Final (Part I), EPA/540/G 89/006 (August 1989), and Overview of ARARs, Focus on ARAR Waivers, EPA Publication 9234.2-03/FS (December 1989).		
California Safe Drinking Water Act (Cal-SDWA)				
22 CCR 64435, 64444.5	Advisory Drinking Water Action Levels (ALs)	ALs are health base concentration limits established by the California Department of Health Services (DHS) to aid in limiting public exposure to substances not yet formally regulated. These standards are non-promulgated advisory standards, and are therefore not ARARs.	NO	ALs are TBCs because they are intended to be protective of human health and the environment.
H&SC § 25249.5 under 22 CCR § 12000	Toxic Enforcement Act (Proposition 65)	Proposition 65 regulates discharges and exposures of chemicals known to the State of California to be carcinogenic or reproductive toxins. DTSC has adopted regulations regarding no observable effect levels (NOELs) for reproductive toxins and no significant risk levels (NSRLs) for carcinogens. However, Proposition 65 exempts from its warning requirements: "an exposure for which the person responsible can show that the exposure poses no significant risk assuming lifetime exposure at the level in question for substances known to the state to cause cancer, and that the exposure will have no observable effect assuming the exposure at one thousand (1,000) times the level in question for substances known to the state to cause reproductive toxicity..." H&S Code § 25249.10(c). An analysis would need to be performed to determine whether the risk levels expected to emanate from the treatment alternatives would release any of the above listed chemicals in concentration that would trigger Proposition 65, or whether the level of exposure would pose no significant risk for carcinogens or if the exposure is 1,000 times the NOEL for reproductive toxins.	YES	COPCs identified in soil vapor at the Site are found on the Proposition 65 list of carcinogens or reproductive toxins.
Mulford-Carrell Air Resources Act				
H&SC §§ 3900-44563 under 17 CCR 70200	Implemented by the local Air Quality Management Districts and overseen by the Air Resources Board	Ambient Air Quality Standards listed under Title 17, Sections 70200/70200.5. Title 17, Section 93000 also identifies benzene and hexavalent chromium as toxic air contaminants at specific industrial locations not applicable to remedial alternatives considered here. **https://www.epa.gov/criteria-air-pollutants/naaqs-table**	YES	Although it sets no standards, this code requirement is applicable because it gives authority to local agencies. These standards are intended to be protective of human health and consist of specific compounds. These will be TBCs in the absence of other ARARs.
H&SC §§ 3900-44563 under 17 CCR 70200	South Coast Air Quality Management District (SCAQMD) Rules and Regulations	Regulation IV -- Prohibitions. This Act assigns responsibility for the identification of air pollutants to the CDHS and ARB. The ARB and local air pollution control districts must then develop control measures reducing emissions of the identified pollutants. Rule 401 - Visible Emissions. Limits visible emissions from any point source to Ringelmann No. 1, or 20 percent opacity for 3 minutes in any hour. Rule 402 - Nuisance. Prohibits the discharge of any material (including odorous compounds) that causes injury, or annoyance to the public, property, or businesses or endangers human health, comfort, repose, or safety. Rule 403 - Fugitive Dust. Limits on-site activities so that the concentrations of fugitive dust at the property line shall not be visible at the downwind particulate concentration shall not be more than 100 micrograms per cubic meter, averaged over 5 hours, above the upwind particulate concentration. These requirements do not apply if the wind speed, averaged over 15 minutes, is above 15 miles per hour. The rule also requires every reasonable precaution to minimize fugitive dust and the prevention and cleanup of any material accidentally deposited on paved streets. Regulation X -- National Emission Standards for Hazardous Air Pollutants. Implements the provisions of Part 61, Chapter I, Title 40, of the CFR under the supervision of SCAQMD executive Officer, if contaminants identified at the Site are listed. Rule 1166 - Volatile Organic Compound Emissions from the Decontamination of Soils. This rule sets requirements to control the emission of Volatile Organic Compounds (VOC) from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, spillage, or other deposition. Regulation XIII -- New Source Review. This regulation sets forth preconstruction review requirements for new or modified stationary sources, to ensure that the operation of such stationary sources docs not interfere with progress in attainment of the national and state ambient air quality standards, without unnecessarily restricting the future economic growth within the district. NAAQS guideline sand emissions limits are on a case-by-case basis. The regulations include requirements for offsets and usage of BACT for certain types of discharges. Regulation XIV -- Toxics and Other Non-Criteria Pollutants Rule 1401 - New Source Review of Carcinogenic Air Contaminants. The rule specifies limits for cancer risk and excess cancer cases from new stationary sources and modifications to existing stationary sources that emit carcinogenic air contaminants. The rule establishes allowable emission impacts for all such stationary sources requiring new permits pursuant to SCAQMD Rules 201 or 203.	YES	Depending on the remedial alternative selected, these rules (particularly Rules 1166 and 403 for potential VOC emissions and Fugitive Dust generated during development activities) may be relevant and appropriate.
California Coastal Act of 1976				
Labor Code, Sections 6300 et seq.	California Occupational Health and Safety Act	Establishes the requirements for worker safety and responsibility of employers. Cal-OSHA also establishes exposure limits that are more stringent if not equal to OSHA exposure limits.	YES	Is relevant and appropriate in order to maintain worker safety and health while working on the Site.

Appendix C

COCs Exceeding SLs in Shallow Soil

\\bc-fs01\DATA\PROJECTS\01217339.00\Design\New Building Plan\Add Char figures 2023-new building overlay v0.21 (CUT AND FILL).dwg Aug 06, 2024 - 7:8am By: 5273cdj



HSA-1

DEPTH	TPH-G	TPH-D	TPH-O
5'	2.9	16,000	6,700
10'	2,100	48,000	22,500
15'	290	2,800	5,600
20'	1.3	<10	<10
25'	2.7	260	95

SB-41

DEPTH	TPH-G	TPH-D	TPH-O
5'	<10	19,300	16,100

SB-36

DEPTH	TPH-G	TPH-D	TPH-O
5'	32.0	4,210	4,180
10'	23.8	5,360	5,360
15'	712	30,500	18,900
20'	983	5,940	2,230
25'	490	10,000	4,710
30'	0.402	12.2	<50

SB-6

DEPTH	TPH-G	TPH-D	TPH-O
5'	1,490	22,900	3,000
15'	0.77	1,080	<10
25'	1.37	<5	<10

SB-35

DEPTH	TPH-G	TPH-D	TPH-O
5'	96.0	6,900	6,500
10'	7,350	53,800	20,700
15'	2,550	124,000	47,300
20'	182	29,500	5,190
25'	1,330	19,900	3,620
30'	2,860	20,500	3,610

SB43

DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.2	1,950	2,880
10'	3,840	19,700	7,830
15'	6,180	104,000	<100,000
20'	3,690	19,700	5,320
25'	261	1,220	<2,480
28'	5,970	21,700	<19,600

GP-2

DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	1,000	4,200
10'	<1.0	5,000	4,380
15'	<1.0	<10	<10
20'	<1.0	<10	<10

GP-3

DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	1,900	8,700
10'	1,800	130,000	86,000
15'	680	3,500	1,330
20'	420	1,100	400

HSA-3

DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	1,700	1,700
10'	<1.0	61	148
15'	<1.0	130	59
20'	<1.0	<10	<10

GP-4

DEPTH	TPH-G	TPH-D	TPH-O
5'	270	120,000	17,300
10'	570	50,000	21,500
15'	72	310	150
20'	1.7	100	40

SB-32

DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	2,740	1,430
10'	<0.5	<10	<50
15'	<0.5	<10	<50
20'	<0.5	<10	<50
25'	<0.5	<10	<50

SB-25

DEPTH	TPH-G	TPH-D	TPH-O
5'	<0.5	1,400	2,250
10'	<0.5	<10	<50
15'	<0.5	182	<50
20'	0.701	151	<50

GP-6

DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	6,300	23,000
10'	1,300	85,000	35,400
15'	1,160	19,000	5,230
20'	670	3,000	8,180

SB-31

DEPTH	TPH-G	TPH-D	TPH-O
4'	14.4	3,810	<2,000
8'	3,78	3,720	7,460
15'	2,750	50,000	<2,000
20'	356	20,100	<1,000
25'	10,400	13,100	<1,000
30'	1,050	4,130	<50

GP-7

DEPTH	TPH-G	TPH-D	TPH-O
5'	<1.0	2,400	2,520
10'	58	4,700	3,200
15'	540	7,500	5,000
20'	4.5	93	<10

SB-28

DEPTH	TPH-G	TPH-D	TPH-O
4'	92.8	19,800	3,470
10'	64	295	<500
15'	245	21,100	4,730
20'	846	2,040	1,730
25'	<0.5	<10	<50
30'	<0.5	<10	<50

T-1

DEPTH	TPH-G	TPH-D	TPH-O
9'	--	19,800	3,470

LEGEND

AREAS WITH TPH CONCENTRATIONS EXCEEDING SCREENING LEVELS AT 5 FEET OR LESS IN DEPTH

CONCENTRATION OF TPH IN MILLIGRAMS PER KILOGRAM

HIGHLIGHTED CELL INDICATES CONCENTRATION ABOVE SCREENING LEVEL

NOT ANALYZED

GRAPHIC SCALE

0 100 200

APPROXIMATE SCALE IN FEET

SHEET TITLE:
TPH EXCEEDING SCREENING LEVELS AT OR ABOVE 5 FEET IN DPETH

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

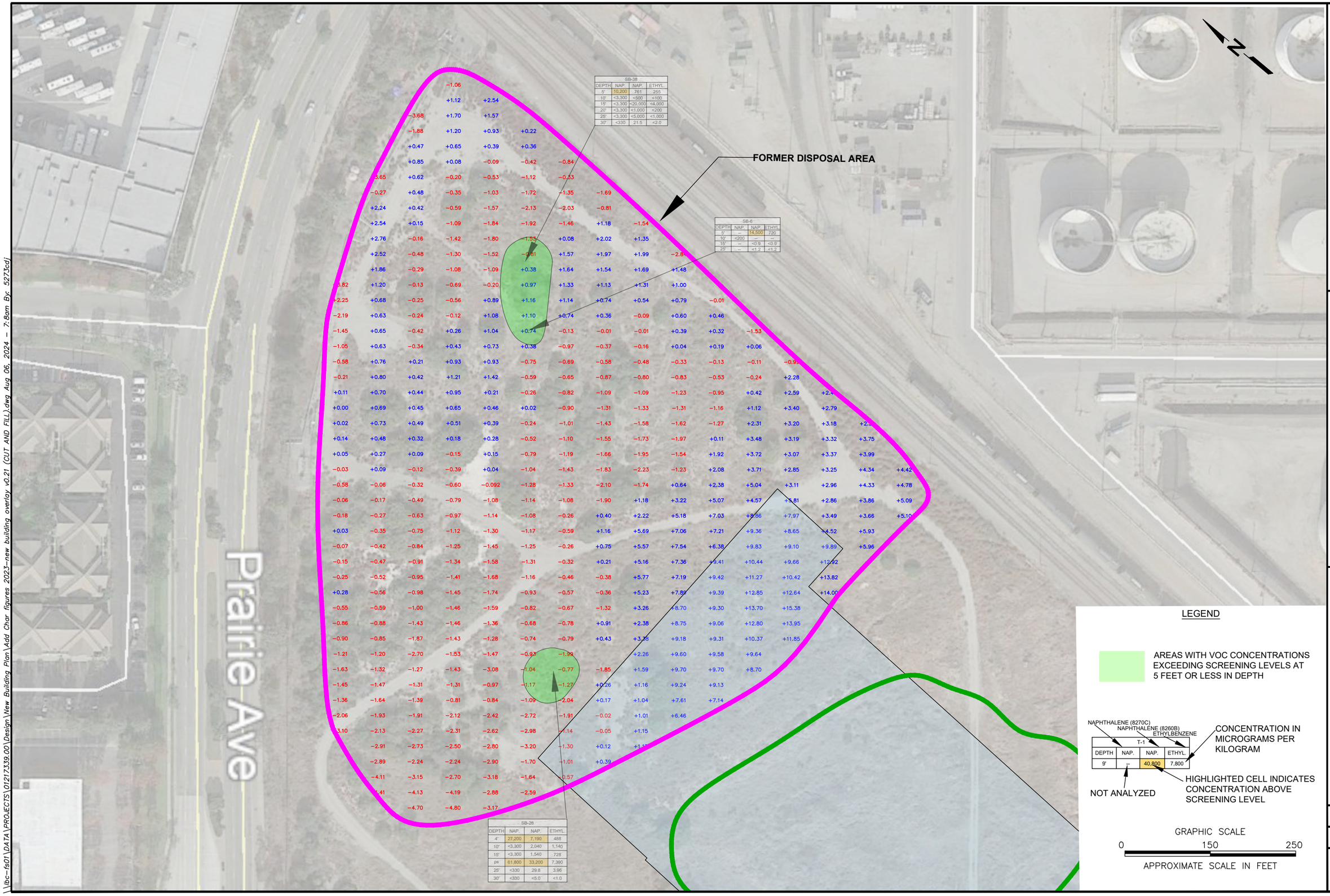
SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	01217339.00
DSN. BY	RR
DWN. BY	RR
CHK. BY	KWG
APP. BY	KWG
ACAD FILE	LOCATION

DATE: JULY 2024

SCALE: 1" = 100'

FIGURE NO.
C1



SHEET TITLE:
VOCs EXCEEDING SCREENING LEVELS AT OR ABOVE 5 FEET IN DPETH

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

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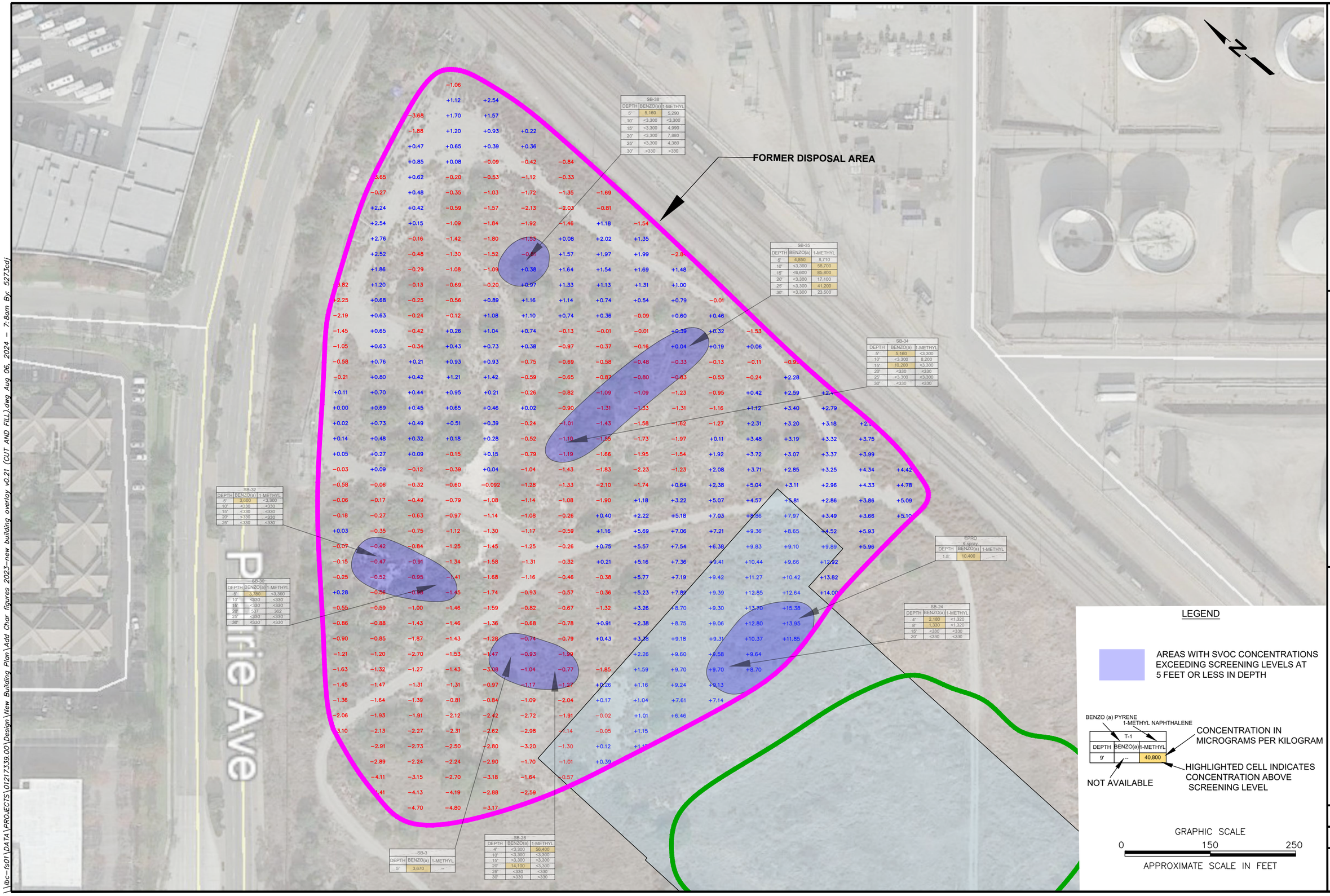
PROJ. NO.	DSN. BY:	DWN. BY:	CHK. BY:	APP. BY:	ACAD FILE:
01217339.00	RR	RR	KWG	KWG	LOCATION

DATE: JULY 2024

SCALE: 1" = 100'

FIGURE NO.
C2

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\New Building Plan\Add Char figures 2023-new building overlay v0.21 (CUT AND FILL).dwg Aug 06, 2024 - 7:8am By: 5273cdj



SB-38		
DEPTH	BENZO(a)	1-METHYL
5'	5,160	5,290
10'	<3,300	<3,300
15'	<3,300	4,990
20'	<3,300	7,880
25'	<3,300	4,380
30'	<330	<330

SB-35		
DEPTH	BENZO(a)	1-METHYL
5'	4,850	8,710
10'	<3,300	58,700
15'	<6,600	85,800
20'	<3,300	17,100
25'	<3,300	41,200
30'	<3,300	23,500

SB-34		
DEPTH	BENZO(a)	1-METHYL
5'	5,160	<3,300
10'	<3,300	8,200
15'	10,200	<3,300
20'	<330	<330
25'	<3,300	<3,300
30'	<330	<330

SB-32		
DEPTH	BENZO(a)	1-METHYL
5'	3,600	<3,300
10'	<330	<330
15'	<330	<330
20'	<330	<330
25'	<330	<330

SB-30		
DEPTH	BENZO(a)	1-METHYL
5'	3,780	<3,300
10'	<330	<330
15'	<330	<330
20'	537	362
25'	<330	<330
30'	<330	<330

EPRO 6' spray		
DEPTH	BENZO(a)	1-METHYL
1.5'	10,400	--

SB-24		
DEPTH	BENZO(a)	1-METHYL
4'	2,180	<1,320
8'	1,330	<1,320
15'	<330	<330
20'	<330	<330

SB-3		
DEPTH	BENZO(a)	1-METHYL
5'	3,670	--

SB-28		
DEPTH	BENZO(a)	1-METHYL
4'	<3,300	56,400
10'	<3,300	<3,300
15'	<3,300	<3,300
20'	14,100	<3,300
25'	<330	<330
30'	<330	<330

LEGEND

AREAS WITH SVOC CONCENTRATIONS EXCEEDING SCREENING LEVELS AT 5 FEET OR LESS IN DEPTH

BENZO (a) PYRENE
1-METHYL NAPHTHALENE

T-1		
DEPTH	BENZO(a)	1-METHYL
9'	--	40,800

CONCENTRATION IN MICROGRAMS PER KILOGRAM

HIGHLIGHTED CELL INDICATES CONCENTRATION ABOVE SCREENING LEVEL

NOT AVAILABLE

GRAPHIC SCALE
0 150 250
APPROXIMATE SCALE IN FEET

SHEET TITLE:
SVOCs EXCEEDING SCREENING LEVELS AT OR ABOVE 5 FEET IN DPETH

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

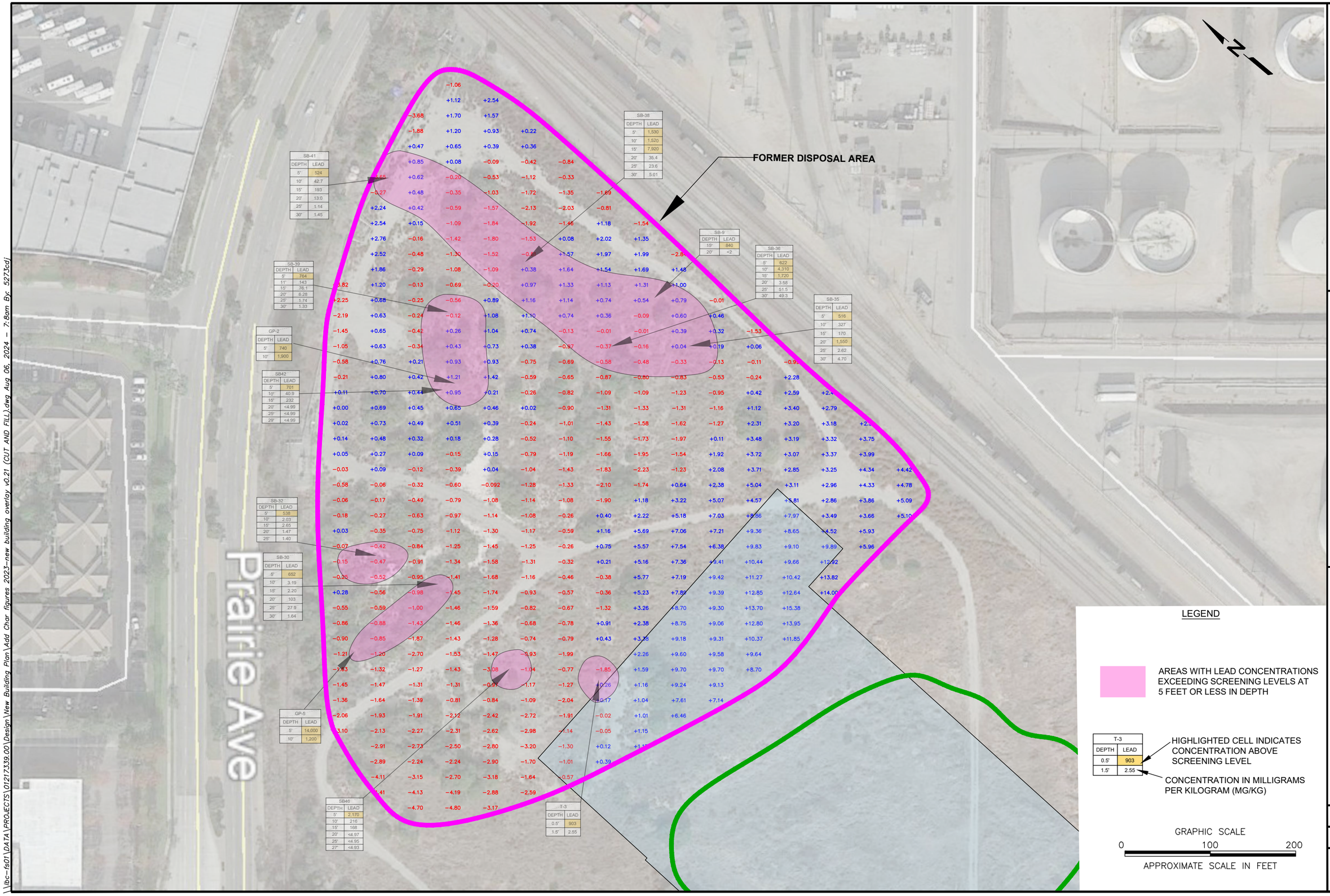
CLIENT:
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PROJ.NO: 01217339.00
DSN. BY: RR
DWN. BY: RR
CHK. BY: KWG
APP. BY: KWG
ACAD FILE: LOCATION

DATE: JULY 2024
SCALE: 1" = 100'
FIGURE NO. C3

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SHEET TITLE:
LEAD EXCEEDING SCREENING LEVELS AT OR ABOVE 5 FEET IN DPETH

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
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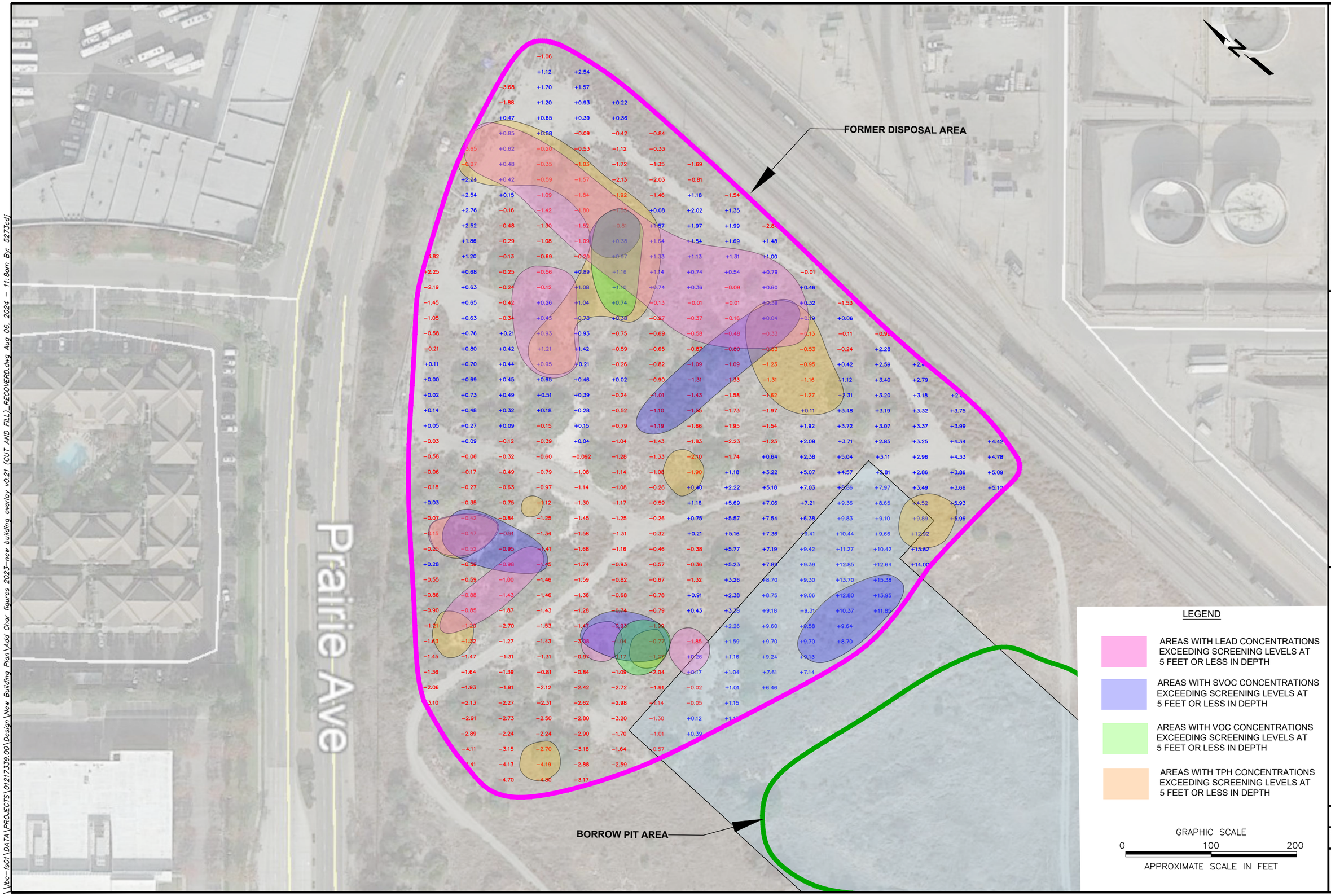
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DATE: JULY 2024

SCALE: 1" = 100'

FIGURE NO. C4

\\lbc-fs01\DATA\PROJECTS\01217339.00\Design\New Building Plan\Add Char figures 2023-new building overlay v0.21 (CUT AND FILL).dwg Aug 06, 2024 - 7:8am By: 5273cdj



SHEET TITLE:
COCS EXCEEDING SCREENING LEVELS AT OR ABOVE 5 FEET IN DEPTH

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
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PROJ. NO.	01217339.00	DWN. BY	RR
TASK NO.	RR	CHK. BY	KWG
ACAD FILE	LOCATION	APP. BY	KWG

DATE: JULY 2024

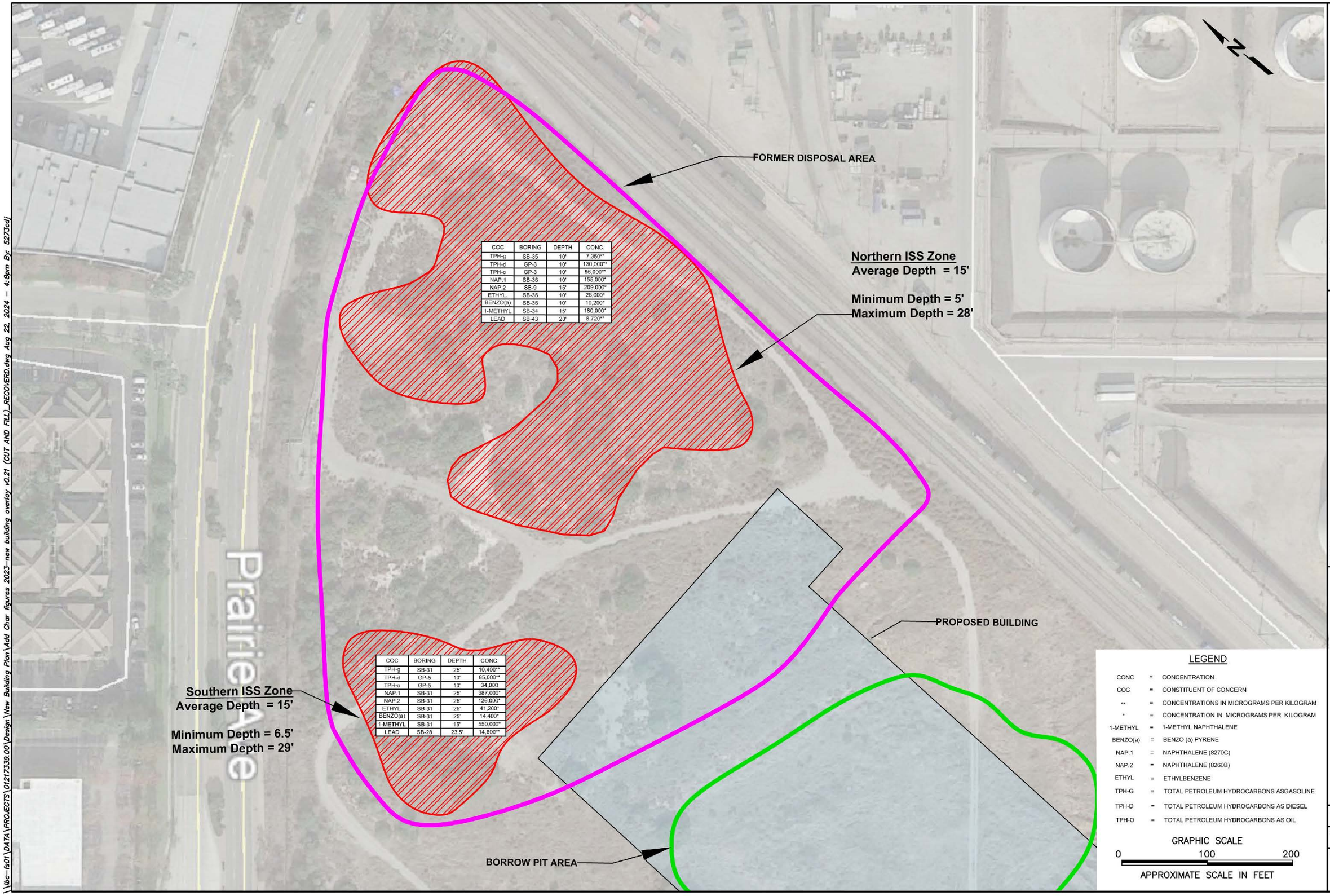
SCALE: 1" = 100'

FIGURE NO.
C5

\\lbc--fs01\DATA\PROJECTS\01217339.00\Design\New Building Plan\Add Char figures 2023--new building overlay v0.21 (CUT AND FILL)_RECOVERD.dwg Aug 06, 2024 - 11:8am By: 5273cdj

Appendix D

Maximum Concentrations of COCs in ISS Zones



COC	BORING	DEPTH	CONC.
TPH-g	SB-35	10'	7,350**
TPH-d	GP-3	10'	130,000**
TPH-o	GP-3	10'	86,000**
NAP.1	SB-36	10'	155,000*
NAP.2	SB-9	15'	209,000*
ETHYL.	SB-36	10'	26,000*
BENZO(a)	SB-36	10'	10,200*
1-METHYL	SB-34	15'	180,000*
LEAD	SB-43	20'	8,720**

COC	BORING	DEPTH	CONC.
TPH-g	SB-31	25'	10,400**
TPH-d	GP-5	10'	95,000**
TPH-o	GP-5	10'	34,000
NAP.1	SB-31	25'	387,000*
NAP.2	SB-31	25'	126,000*
ETHYL.	SB-31	25'	41,200*
BENZO(a)	SB-31	25'	14,400*
1-METHYL	SB-31	15'	550,000*
LEAD	SB-28	23.5'	14,600**

LEGEND

CONC	=	CONCENTRATION
COC	=	CONSTITUENT OF CONCERN
**	=	CONCENTRATIONS IN MICROGRAMS PER KILOGRAM
*	=	CONCENTRATION IN MICROGRAMS PER KILOGRAM
1-METHYL	=	1-METHYL NAPHTHALENE
BENZO(a)	=	BENZO (a) PYRENE
NAP.1	=	NAPHTHALENE (8270C)
NAP.2	=	NAPHTHALENE (8260B)
ETHYL	=	ETHYLBENZENE
TPH-G	=	TOTAL PETROLEUM HYDROCARBONS ASGASOLINE
TPH-D	=	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPH-O	=	TOTAL PETROLEUM HYDROCARBONS AS OIL

GRAPHIC SCALE

0 100 200

APPROXIMATE SCALE IN FEET

SHEET TITLE:
MAXIMUM CONCENTRATIONS OF COC IN ISS ZONES

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
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PROJ. NO: 01217339.00 | DSN. BY: RR | DWN. BY: RR | CHK. BY: KWG | ACAD FILE: LOCATION | APP. BY: KWG

DATE: JULY 2024

SCALE: 1" = 100'

FIGURE NO. D

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SOIL MANAGEMENT PLAN

North Posse Site
3041 Del Amo Boulevard
Torrance, California 90503

Torrance Black Beauty, LLC
Pier 1, Bay 1
San Francisco, California 94111

SCS ENGINEERS

Project No. 01217339.00 | March 27, 2025

3900 Kilroy Airport Way, Suite 100
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This Soil Management Plan for the property located at 3041 Del Amo Boulevard, Torrance, California, dated March 27, 2025, was prepared and reviewed by the following:

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C SCAQMD Rules
D DTSC Advisory Clean Imported Fill Material

DISCLAIMER

This Soil Management Plan has been prepared with specific application to the property located at 3041 Del Amo Boulevard, Torrance, California, in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, express or implied, is made as to the professional opinions presented herein. No other party, known or unknown to SCS, is intended as a beneficiary of this work product, its content, or information embedded therein. Third parties use this report at their own risk.

1 INTRODUCTION

1.1 INTRODUCTION

SCS Engineers (SCS) was retained by Torrance Black Beauty, LLC (TBB), to prepare this Soil Management Plan (SMP) for planned soil remediation, future development, and related activities at the North Posse property located at 3041 Del Amo Boulevard in Torrance, California (the "Property"). The Property is approximately 31 acres of undeveloped land with planned post-remediation commercial development. Historically, the Property was an out-parcel ancillary to the Torrance Oil Refinery (3700 West 190th Street) ("Refinery"). The general location of the Property and surrounding area is provided as **Figure 1. Figure 2** provides an aerial image of the Property with an overlay of the proposed development.

TBB acquired the Property from the prior owner, Torrance Refining Company, LLC (TORC; the former owner of the Property and the current owner and operator of the Refinery) on August 7, 2018 under the condition that TBB would be responsible for the remediation of impacts to a negotiated depth of 60 feet above mean sea level ("Development Depth"). Although topography varies across the Property, the Development Depth is generally equivalent to approximately 30 feet below ground surface (bgs) at the northwest portion of the property. TORC retained responsibility for impacts below the Development Depth, including groundwater beneath the Property. TORC is under a Cleanup and Abatement Order (CAO; CAO Nos. 88-43 and 89-136) issued by the Los Angeles Regional Water Quality Control Board (RWQCB) associated with the impacts.

This SMP supplements a Response Plan (RP) prepared by SCS, dated January 10, 2025, and submitted to the RWQCB for review. The RP and SMP will be implemented under the lead oversight of the RWQCB in general accordance with the provisions of the California Land Reuse and Revitalization Act (CLRRA) of 2004.

Note that environmental details with respect to building construction, such as design of the proposed vapor intrusion mitigation system (VIMS) will be furnished once the building design drawings are finalized. An operation and monitoring plan related to the planned VIMS will be prepared upon installation of the approved VIMS design and prior to occupancy of the future structure.

1.2 OBJECTIVES

The objective of this SMP is to provide guidance to manage soil disturbance activities at the Property. Specifically, the SMP will be implemented as a companion document to the RP and thus provide guidance to manage impacted and potentially impacted soil and/or subsurface debris or structures (such as underground storage tanks [USTs], sumps, clarifiers, and septic tanks) that might be encountered during planned remediation activities as well as future Property development (i.e., grading, trenching, and excavation) in areas outside of planned remediation zones.

This SMP addresses soil management, movement, and temporary storage during implementation of the planned response remedy and Property improvement activities. The plan is intended to comply with applicable regulations, including:

- RWQCB requirements for stormwater management under their Construction General Permit process

- South Coast Air Quality Management District (SCAQMD) Rules 1166 and 1466 for monitoring chemical and particulate emissions during earthwork

The response remedy is to treat a former Refinery disposal area located in the northwest portion of the Property where subsurface impacts are present. Following numerous environmental site assessments and a remedial technology feasibility screening and evaluation, a remedial alternative was selected based on remedial effectiveness, implementability, cost and other considerations such as community acceptance and sustainability. The selected alternative consists of a combination of *ex-situ* and *in-situ* soil solidification (ESS/ISS) along with the placement of a 5-foot-thick, clean soil cover that will be covered with pavement upon redevelopment. Implementation of this remedial action will consist of the following activities:

- Pre-characterization of subsurface soil in areas with little to no known impacts to assess suitability for potential reuse as cover material. Conditions for soil reuse are provided in Section 4.3.2.

- Removal and replacement, where appropriate, of TORC's groundwater monitoring wells where site remediation and construction are to occur. This activity will be planned and coordinated with TORC and the RWQCB.

- Grade and excavate soil within the disposal area to depths between 5 to 15 feet. Existing sample data and soil pre-characterization results will determine handling and management:

  - Clean soil (i.e., soil that meets the most conservative regulatory screening levels) will be stockpiled for reuse as cover material.

  - Impacted soil (soil above screening levels) from grade to a predetermined depth will be treated using ESS techniques, specifically mixing with Portland cement as a binding agent.

- Implement ISS to the target depth in two areas: ISS North and ISS South. The ISS target depth(s) will not exceed the designated Development Depth of 60 feet above mean sea level (amsl).

- Place ESS treated and ISS swell (expansion) material in pre-excavated areas where clean soil was removed for future on-site reuse. This material will be placed a minimum of 5 feet below the final grade.

- Use clean soil (either reuse and/or imported) to construct a 5-foot-thick cover surfaced with pavement that covers the treated ESS/ISS material and swell material.

Copies of the current redevelopment design and conceptual grading plans are provided in **Appendix A**.

2 BACKGROUND

The following sections briefly summarize historical use, previous environmental investigations, SMP applicability, and the regulatory status associated with the Property.

2.1 SITE LOCATION AND GENERAL DESCRIPTION

The Property is roughly triangular and is located at 3041 Del Amo Boulevard on the northeast corner of West Del Amo Boulevard and Prairie Avenue (**Figure 2**). The Property consists of approximately 31

acres of predominantly undeveloped vacant land and features a former soil borrow pit in the central area.

Railroad tracks are present adjacent to the eastern/northeastern Property boundary. Beyond the railroad tracks to the east and north is the Refinery. Numerous groundwater monitoring wells associated with Refinery environmental investigations are present on the Property. The area to the south of the Property, beyond Del Amo Boulevard, includes an undeveloped lot and commercial buildings near the intersection of Maple Avenue and Del Amo Boulevard. Located to the southwest, across the intersection of Del Amo Boulevard and Prairie Avenue, are condominiums, and to the west, across Prairie Avenue, are commercial buildings, a hotel called Staybridge Suites, and a self-storage facility.

2.2 SITE HISTORY

Historically, the Property was an out-parcel ancillary to the Refinery that was used for the disposal of refinery waste and to supply soil for construction projects on the Refinery. Historical information obtained during a previous Phase I Environmental Site Assessment (SCS, 2018A) indicated that the northwest portion of the Property was used by the Refinery for the placement or disposal of refinery wastes from at least 1947 until sometime between 1963 and 1970. This area is referred to as the "disposal area" and is designated on **Figure 2**. By 1970, it appeared that excavation/grading activities had been conducted in the central area of the Property known as the "borrow pit" (where soil was historically sourced for constructing berms at the Refinery). The eastern portion of the Property appeared to be used for agricultural purposes between at least 1952 and 1970. The Torrance Mounted Posse used approximately 1.5 acres of the southeastern portion of the Property for horse stables from at least 1989 until recently when their operation was relocated to the South Posse site across Del Amo Boulevard. The structures associated with the facility have been demolished. Other than oil pipelines observed on and adjacent to the Property, no oil production or petroleum processing activities were conducted on the Property. The Property is currently fenced and vacant.

2.3 FUTURE SITE USE AND DEVELOPMENT

The current redevelopment plan for the Property includes the construction of a 403,033 square foot (sf) single-story concrete building that consists of a 398,033 sf pad, tilt-up walls, and a 5,000 sf mezzanine. The building will be used as a logistics center and warehouse and located in the central portion of the Property. Paved parking areas will surround the building, coupled with entrances from Del Amo Boulevard and Prairie Avenue. The Property will be nearly fully covered with pavement or the structure (thus nearly eliminating water infiltration), with only a few small, landscaped areas located near the building and in parking areas. The building will be constructed with a VIMS (passive system with ability to be active) due to known methane and soil vapor impacts in the subsurface of the Property.

The conceptual plan for site redevelopment is presented as an overlay on **Figure 3**. Proposed development and conceptual grading plans are provided in **Appendix A.**

2.4 LAND USE/TOPOGRAPHY

The Property is located on the eastern edge of the El Segundo Sand Hills, in the southern Torrance Plain region of the Los Angeles County Coastal Plain. Elevation varies significantly across the Property, ranging from approximately 106 feet amsl along Del Amo Boulevard at the Property's south side to about 61 feet amsl in the central area's low-lying depression (the former borrow pit).

The overall topography slopes northeast toward TORC, with the borrow pit being the only exception to this pattern. No surface water bodies exist within a one-mile radius of the Property.

2.5 GEOLOGY AND SOILS

The surficial geologic unit in the area has been mapped as the unconsolidated Upper Pleistocene Older Dune Sand (California Department of Water Resources, 1961), which is underlain by the Upper Pleistocene Lakewood Formation consisting of unconsolidated sand, silty sand, silt, and clay. Refinery reports (AECOM, 2016, 2019) do not delineate a contact between the Older Dune Sand and the Lakewood Formation on cross-sections, likely because similarities in lithology makes distinguishing the two units difficult.

A report for the Refinery (AECOM, 2019) stated that poorly graded fine sand constitutes the predominant lithology to depths ranging from 50 to 70 feet bgs (or approximately 35 feet msl) below which a lower permeability silt or clay unit is present across much of the area. The AECOM 2019 report indicated that, depending upon the location, this low permeability unit appears to function as the layer upon which perched groundwater may be found. Regionally, the low permeable layer thins southward and becomes discontinuous towards the southern boundary of the Property. AECOM identified this layer as a part of the Bellflower Aquitard and states that it is largely absent south of Del Amo Boulevard.

2.6 HYDROGEOLOGY

The Property is located in the southwestern portion of the West Coast Groundwater Basin and the two shallowest hydrogeological units include the perched aquifer and the first regional water bearing unit, the Gage-Gardena aquifer. Groundwater in the West Coast Basin is designated for municipal and domestic supply, industrial process and service supply, and agricultural supply.

The Refinery Subsurface Cleanup Progress Report and Del Amo Area Soil Vapor and Groundwater Monitoring Report, June 2024 (AECOM, 2024), indicates that the potentiometric surface of the perched aquifer ranges from 21.90 feet msl (well F-02) in the northwestern area of the Property to 37.29 feet msl (well C-29) in the southeastern area. The groundwater in the perched aquifer flows generally southwesterly and has been impacted with up to 2 feet of light non-aqueous phase liquid (LNAPL). The potentiometric surface of the Gage-Gardena aquifer ranges from 2.11 feet msl (well C-23R) located in the southeastern portion of the Property to 3.63 feet msl (well C-13RA) located in the southcentral area. The Gage-Gardena Aquifer flows generally southeasterly, has also been impacted by fuel releases, and contains measurable LNAPL.

Based on depth to water measurements provided on the State Water Resources Control Board GeoTracker database, the measured depth to groundwater in the disposal area is approximately 75 feet bgs, as recorded at wells SWP-MW-P08 (78.9 feet bgs, 9/2024), SWP-MW-P10 (76.8 feet bgs, 9/2024), and C-18 (76.9, 9/2024).

2.7 CLIMATE

The Property is located within the South Coast Air Basin, with a climate generally characterized by sparse winter rainfall and dry hot summers tempered by cool ocean breezes. The mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The annual average temperature is 67°F. On average, August is the warmest month while December is the coolest month. Most of the annual rainfall occurs between November and April and annual average rainfall is approximately 12 inches in the area of the Property.

2.8 PREVIOUS INVESTIGATIONS

A summary of previous investigations is provided in the following section. Detailed summaries of previous assessment and investigation are provided in the RP.

2.8.1 Subsurface Investigation

Based on identified Recognized Environmental Conditions (RECs) identified in the Phase I, SCS conducted several subsurface investigations from 2018 through 2022 to evaluate the nature and extent of impacts at the Property. For the purposes of this SMP, the summary below pertains principally to soil assessment results above the Development Depth (60 ft amsl). Additional details on historical investigation results are provided in the RP, specifically Section 3.0, Nature and Extent of Site Impacts (SCS, 2025).

DTSC guidance was followed to evaluate soil data collected during previous investigations. Specifically, the Human and Ecological Risk Office (HERO) issued an updated Human Health Risk Assessment (HHRA) Note No. 3 in June 2020 – Revised May 2022. HERO Note No. 3 provides DTSC-modified Screening Levels (SLs) for soil, tap water, and ambient air for use in evaluating human health risks at hazardous waste sites and permitted facilities. For a majority of regulated chemicals, HERO Note No. 3 recommends the use of the U.S. Environmental Protection Agency (EPA) Region IX Screening Levels (RSLs; most recently updated in November 2024) for an industrial land use setting, except in cases where DTSC has calculated a more stringent screening level. Human health risks associated with contact with contaminated soil (dermal, ingestion, etc.) in California were evaluated by comparing detected chemical concentrations at the Property to the most stringent (or conservative) of these values for each chemical in an industrial land use setting. These values are referred to herein as the DTSC recommended SLs.

For total petroleum hydrocarbons (TPH) quantified as gasoline (TPH-g), diesel (TPH-d) and motor oil (TPH-o), concentrations were compared to RWQCB soil screening levels (SSLs) to assess potential groundwater impacts where the depth of impacted soil is between 20 to 150 feet above groundwater (RWQCB, 1996). Based on depth to water measurements in on-site monitoring wells, the measured depth to groundwater in the disposal area is approximately 75 feet bgs or approximately 45 feet below the Development Depth.

The following constituents exceeded the SSLs or the DTSC recommended SLs in subsurface soil samples within the disposal area:

- TPH-g exceeded the SSL of 500 milligrams per kilogram (mg/kg) at concentrations up to 10,400 mg/kg.
- TPH-d exceeded the SSL of 1,000 mg/kg at concentrations up to 130,000 mg/kg.
- TPH-o exceeded the SSL of 10,000 mg/kg at concentrations up to 47,300 mg/kg.
- Ethylbenzene exceeded the DTSC recommended SL of 25,000 micrograms per kilogram (µg/kg) at concentrations up to 41,200 µg/kg. No other VOCs exceeded the screening levels.
- Naphthalene exceeded the DTSC recommended SL of 6,500 µg/kg at concentrations up to 387,000 µg/kg.
- Benzo(a)pyrene exceeded the DTSC recommended SL of 1,300 µg/kg at concentrations up to 14,400 µg/kg.
- Benzo(a)anthracene exceeded the DTSC recommended SL of 12,000 µg/kg in one sample at 189,000 µg/kg.

- Benzo(b)fluoranthene exceeded the DTSC recommended SL of 13,000 µg/kg in two samples at concentrations up to 13,200 µg/kg.
- Dibenzo(a, h)anthracene exceed the DTSC recommended SL of 310 µg/kg in two samples at concentrations up to 5,880 µg/kg.
- 1-Methyl naphthalene exceeded the DTSC recommended SL of 30,000 µg/kg at concentrations up to 550,000 µg/kg.
- Lead exceed the DTSC recommended SL of 500 mg/kg at concentrations up to 14,600 mg/kg.
- Hexavalent chromium exceeded the DTSC recommended SL of 6.2 mg/kg in one sample at 7.20 mg/kg.
- Arsenic exceeded the DTSC recommended SL of 12 mg/kg in four samples up to 23.9 mg/kg.

In summary, historical investigations identified six primary constituents of potential concern (COPCs) that exceed screening levels in multiple samples or at significant concentrations:

1. TPH (TPH-g, TPH-d, and TPH-o)
2. Ethylbenzene
3. Naphthalene
4. Benzo(a)pyrene
5. 1-Methyl naphthalene
6. Lead

While a few other constituents (benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, hexavalent chromium, and arsenic exceeded screening levels in a limited number of samples, they were not identified as primary COPCs for the Property.

2.8.2 Asbestos Assessment and Abatement

On May 8, 2020, SCS conducted a survey of the surface to assess the Property for asbestos containing materials (ACMs). The survey included visual observation of the surface for potential ACMs and based on the visual survey, 41 bulk samples were collected in or near the disposal area and analyzed for asbestos by polarized light microscopy (PLM) and dispersion staining. The laboratory results identified the following materials as containing asbestos greater than 1% by weight:

- Silver/black roofing mastic debris
- Woven fabric insulation debris
- Pipe gasket debris
- Gray thin underlayment material debris
- Green thin underlayment material debris
- Black insulation debris

The above materials were found to be significantly degraded. In September 2024, Terracon conducted an additional asbestos survey of debris at the surface in the refinery disposal area (Terracon, 2024a). Insulation material, roofing felt, textured and other paper, woven material, cementitious piping materials were sampled and found to contain various levels and types of

asbestos. Based on the SCS and Terracon surveys, Terracon prepared a Procedure 5 workplan for ACM abatement that was approved by the SCAQMD (Terracon, 2024b).

Approximately 400 total square feet of ACM debris identified in the SCS and Terracon surveys was removed from the Property. On February 28, 2025, Terracon conducted a visual inspection of the regulated work area and confirmed that all visible ACM debris had been removed from the surface of the Property. A copy of Terracon's clearance report is provided in **Appendix B.**

2.9 REMEDIATION OVERVIEW

The disposal area occupies approximately 9.2 acres (400,250 square feet). As shown on **Figure 4**, ESS/ISS is proposed in two areas (outlined in red) within the footprint of the disposal area, ISS North and ISS South. From each of the two areas, shallow soil will be graded and excavated to depths between 5 to 6.5 feet across each area to prepare load-bearing pads for ISS equipment. The shallow soil (less than 3-foot treatment thickness) will be excavated from the two areas and undergo ESS treatment (i.e., bucket mixing with Portland Cement) at the point of generation and subsequently will be placed into the two designated cut and fill areas shaded green and blue on **Figure 4**. The cut and fill areas will have been excavated to depths up to 15 feet prior to placement of ESS treated material. These cut and fill areas will also be utilized for the placement of ESS treated material generated within the cut and fill areas and/or swell (expansion) material resulting from ISS. The entire Disposal Area will subsequently be covered with a 5-foot-thick layer of clean soil covered with pavement. Clean soil will be sourced from the designated cut and fill areas and/or imported from an approved/pre-screened offsite borrow source.

Remediation activities will take place within the footprint of the former disposal area and will not extend beyond the Development Depth defined at 60 feet amsl or approximately 30 feet bgs. The designated target depths (color shaded) of impacted soil to be remediated for ISS North and ISS South are shown on **Figure 5.**

The cut and fill areas shaded green and blue on **Figure 4** will be utilized as a potential borrow source. It is estimated that a portion of the onsite soil will be suitable for reuse, however the total volume will be further refined by the results of pre-characterization soil sampling, discussed further in Section 3.2. Criteria for soil reuse are defined in Section 4.3.2.

3 PRE-CONSTRUCTION ACTIVITIES

3.1 SITE IMPROVEMENT/DEVELOPMENT PLANS

The intended future use of the Property is for commercial/industrial purposes as a logistics center and warehouse. Property improvement entails remediation of the disposal area in the northwest area via ESS/ISS, placement of a clean soil layer paved with pavement, followed by construction of a single-story, slab-on-grade concrete tilt-up building situated in the central portion of the Property with surrounding parking areas. The Property Redevelopment Plan is provided in **Appendix A.** The proposed building will be designed to include a VIMS (with a passive sub-slab ventilation system) due to known methane and soil vapor impacts in the subsurface of the Property. The VIMS design will be developed once building design drawings are finalized. An operation and monitoring plan for the planned VIMS will be prepared upon installation of the approved VIMS design and prior to occupancy. Additional details on the planned VIMS system design and associated Operation and Monitoring Program are provided in the RP in Sections 6.7.1 and 6.9.2, respectively.

3.2 PRE-CHARACTERIZATION SOIL SAMPLING FOR REUSE

Soil pre-characterization will be conducted prior to mobilization of remediation equipment. The objective of the sampling will be to confirm that soil planned for reuse will meet the criteria proposed herein and will be acceptable for use as soil cover, as well as reduce and/or eliminate the need of stockpile characterization of these soils located in proposed cut and fill areas identified as low impact areas outlined in green and blue on **Figure 4**. It is estimated that up to 42,000 cubic yards of onsite soil will be suitable for reuse, which constitutes approximately 60 percent (%) of the estimated volume required to construct the 5-foot soil cover.

To pre-characterize the soil in place, soil borings are proposed to be advanced on approximately 75-foot centers with the collection of three depth-discrete soil samples from each boring. The samples will be analyzed for the COPCs. It is estimated that 20 soil borings will be drilled in the proposed cut and fill areas, as proposed on **Figure 5**. At three soil samples per boring, this would result in the collection and analysis of 60 soil samples, overly sufficient to meet the DTSC's Information Advisory Clean Imported Fill Material Fact Sheet (DTSC, 2001), which is the proposed criteria for sampling for import soils, further discussed in Section 5.8.

Prior to commencing drilling operations, a soil boring permit will be secured from the Los Angeles County Department of Environmental Health (DEH). Proposed boring locations will be pre-marked with staked/flagged and Underground Service Alert (USA)/Dig Alert will be notified a minimum of 72 hours before scheduled drilling activities. In addition, a geophysical survey will be conducted by a certified private utility contractor to confirm the absence of underground utilities or structures within a 5-foot radius of each boring location.

A direct-push drill rig will be used to advance each boring for sample collection. The maximum depth of each boring will not exceed 20 feet bgs. Borings will be continuously sampled to observe soil conditions and lithology with up to three depth-discrete soil samples collected at predetermined depths. The sample collection depth will vary between borings based on the final grade and planned excavation depth for the placement of ESS and swell materials.

Soil samples will be collected using a 2-inch macro core sampler attached to the direct-push drill rods. The sampling tool will be lined with an acetate sleeve and advanced ahead of the borehole to retrieve an undisturbed soil sample. Retrieved cores will be observed for visual observation and logging. Samples will be transferred into pre-cleaned laboratory supplied glass jars samples, labeled, and placed on ice in a pre-chilled cooler. Standard chain-of-custody protocol will be followed for all samples prepared for laboratory analysis. Reusable sampling equipment will be decontaminated prior to arrival and in between each sampling interval using a three-stage decontamination process consisting of a soapy wash with a non-phosphate detergent, tap-water rinse followed by a final rinse with distilled water. Following sample collection, the resulting borehole will be backfilled with hydrated bentonite or equivalent in accordance with permit conditions.

Soil samples will be analyzed by a California certified laboratory for the following analyses:

- TPH with carbon chain range quantification (TPH-cc) using EPA Method 8015M (Modified).
- TPH-g & VOCs using EPA Method 8260B/5035.
- SVOCs using EPA Method 8270C.
- Metals using EPA Methods 6010B/7471

For the purpose of determining soil reuse at the Property, concentrations of COPCs will be compared to most conservative regulatory screening levels for the protection of human health and groundwater as further described in Section 4.4 below. Additionally, soil considered for reuse will not be

considered “VOC” contaminated pursuant to SCAQMD Rule 1166 where PID readings exceed 50 parts per million by volume (ppmv).

Following sampling and laboratory analysis, a technical memorandum will be prepared that summarizes the pre-characterization field activities, sample results, and provides recommendations for potential soil reuse for review and concurrence by the RWQCB.

Assuming samplings determines that the soil is acceptable for reuse, the soil will be excavated at the start of remediation activities and stockpiled at a designated location on the eastern portion of the Property (away from the remediation zone) for later use as soil cover. Handling and stockpiling of this soil is further discussed in Section 4.3.2.

3.3 WELL PROTECTION AND DECOMISSIONING

Twenty-three active groundwater monitoring wells are present on the Property (**Figure 3**), some of which will be impacted by remediation and development activities. Since TORC is the responsible party for groundwater monitoring and reporting to the RWQCB, the wells that require protection and/or decommissioning will need to be coordinated between TORC and the RWQCB. TBB/SCS and TORC/AECOM will work together to determine the locations that will need to be abandoned for work to take place as well as the wells that can be protected in place during construction for later rehabilitation. Similarly, the schedule and well protection and decommissioning protocols and need for replacement wells will need to be developed with TORC's and RWQCB's concurrence. A general description of the well protection and decommissioning approach is provided in the following sections.

3.3.1 Well Protection and Rehabilitation

Any groundwater monitoring wells to remain in place will require protection during grading and Property development. The wells that require protection will be identified and communicated to key project stakeholders: Prologis, TORC, and the RWQCB.

Upon stakeholder approval, SCS will work with the contractors to protect the infrastructure to the extent practical and feasible for future use. Prior to any grading activities on the Property, the well boxes/monuments will be removed, and the well casing will be cut at an appropriate depth of 2-feet below the lowest proposed depth of excavation for grading and re-compaction purposes. The blank well casing will be cut, capped, and covered with a metal plate for protection and to assist in re-locating the well using a magnetometer. The area of the plated well will be surveyed using a handheld GPS device and covered with 1- to 2-feet of soil for added protection.

Following Property development to final grade, SCS will work with contractors and/or TORC to locate, excavate, and restore the protected wells. New blank casing will be affixed to each well and trimmed to extend to just below the final development grade. Well heads will be brought to surface grade prior to final paving activities and secured with a locked, gasket-fitted well cap and protected with a flush-mounted traffic-rated well box set in concrete. A mounded concrete apron will surround the well box and be positively sloped to prevent surface water infiltration into the well box. In addition, the new wellheads will be resurveyed for elevation and location.

3.3.2 Well Decommissioning and Replacement

Based on the remediation and Property development design drawings, there are several groundwater monitoring wells that will need to be decommissioned. Specifically, there are six wells that are located within the disposal area: C-18, C-34, F-01, F-02, SWP-MW-P08 and SWP-MW-P09.

These wells will be decommissioned before commencing with remediation activities. Additional wells to be decommissioned, such as those within the planned building footprint, will be determined once the Property improvement design drawings are finalized.

A groundwater monitoring well decommissioning permit will be obtained from Los Angeles County Department of Environmental Health (LAC-DEH). Well decommissioning will be conducted in accordance per DWR standards (DWR Bulletins 74-81 and 74-90) by over drilling to remove the entire well and annular materials. The borehole will then be filled using a tremie pipe from total depth up to grade. Portland cement hydrated with 5% or less bentonite gel or approved sealant will be placed in the borehole using the tremie as the auger is slowly removed to prevent void space, freefall, bridging, and dilution of sealing materials.

Replacement of any abandoned groundwater wells is to be determined in the future by TORC/AECOM with concurrence by the RWQCB. SCS and TBB with work the TORC/AECOM to propose future locations in areas that will be accessible for sampling and will provide appropriate access for installation and sampling. It is anticipated that any installation would be conducted following completion of development activities.

Note that there are several soil vapor probes on the Property. The probes will be either protected in place or decommissioned in accordance with DTSC Advisory Active Soil Gas Investigations guidance (DTSC, 2015). Soil vapor probe protection/decommissioning will be conducted through coordination with Prologis, TORC, and RWQCB.

3.4 REGULATORY FRAMEWORK

The following regulatory requirements apply to activities at the Property where impacted or potentially impacted soil may be encountered:

- At least three working days prior to conducting any subsurface work, Dig Alert (Underground Service Alert) must be contacted.
- Due to the potential of encountering VOCs during remediation activities planned for the disposal area, activities will be completed in accordance with an SCAQMD Rule 1166 Site-specific Soil Management Plan (the "1166 Plan") for monitoring potentially impacted VOC soils. Notification of excavation activities will be completed prior to commencing excavation or grading soil in the disposal area at the Property in accordance with the 1166 Plan. Compliance with the plan will be the responsibility of SCS and designated excavation/remediation contractor.

  The prescribed VOC monitoring will be conducted in accordance with the 1166 Plan using a photo ionization detector (PID). Monitoring will be conducted at 15-minute intervals and recorded as required per the 1166 Plan. Mitigation measures outlined in the plan will be triggered if VOC-contaminated soil is detected over 50 ppmv. Note: All soil with PID readings over 50 ppmv must be either treated by ESS to mitigate emissions or stockpiled in a segregated pile, sampled, characterized and transported off site for disposal within 30 days of excavation. All VOC measurements, calibration logs, and agency notifications will be recorded in the field log for SCAQMD reporting purposes.

  Upon completion of the activities in the disposal area, the 1166 Plan will no longer be required, as the remainder of the Property, inclusive of the borrow pit and areas to the east, do not have known impacts and will be treated as a typical construction site, with

further monitoring to occur should additional (previously unidentified) VOC-impacted soil be identified.

- The project consists primarily of subsurface activities using heavy equipment (drilling rig, excavator, backhoe, etc.) in operation on unpaved surfaces; consequently, dust control measures are to be in compliance with SCAQMD Rule 403. If impacted soil is encountered, monitoring for nuisance odors will be conducted in accordance with SCAQMD Rule 402. The General or grading contractor will be directed to take additional measures, as necessary, such as application of water or a change in operations or equipment to properly manage dust or nuisance odors.

- Due to the constituents previously detected within the disposal area at the Property, earth-moving activities in this area will be completed in accordance with SCAQMD Rule 1466 (control of particulate emissions from soils with toxic air contaminants) for monitoring air quality. Specifically, real-time PM10 air monitors (e.g., DustTrak Aerosol Monitor) capable of measuring 0-10,000 micrograms per cubic meter ($\mu g/m^3$) will be deployed upwind and downwind of the impacted area.

  Work conducted outside of the disposal area is not anticipated to require Rule 1466, however, if suspected contamination is encountered during the earth moving activities associated with site improvements, soil samples will be collected for laboratory analysis. If laboratory results confirm that "applicable toxic air contaminants" are present further notification and permitting with the SCAQMD will be required and necessary mitigation controls and monitoring pursuant to Rule 1466 will be implemented.

- For sites over one acre, a Storm Water Pollution Prevention Plan (SWPPP) for construction activities is required and will be in in place before the start of remediation and site improvement activities.
- USTs and/or clarifiers are not anticipated to be encountered during site improvement activities. However, if discovered, their removal will be conducted under the oversight of the Torrance Fire Department and in accordance with SCAQMD Rule 1166 monitoring as applicable.
- Workers engaged in managing hazardous waste will be trained in accordance with 29 CFR 1910.120(e) (24-hour or 40-hour HAZWOPER, as appropriate).
- Contractors whose work scopes involve directly working with impacted (i.e., hazardous) soil will be required to possess an active California state contractor's license with a Hazardous Substances Removal certification.

Copies of the above-referenced SCAQMD Rules are provided for reference in **Appendix C**. The notification and requirements of the rules will be implemented as described/required by the rules. Other agency involvement will include items such as filing of a grading plan with the City of Torrance or Los Angeles County.

3.5 HEALTH AND SAFETY PLAN

An updated site-specific Health and Safety Plan (HASP) will be prepared prior to implementation of field activities to address health and safety hazards, personnel protective and monitoring procedures and equipment, and descriptions of specific tasks that will be performed at the Property. Contractors working on the Property are expected to be operating under their own health and safety plans. As noted above, any employee working at a site with hazardous waste, as defined in 29 CFR 1910.120

(or applicable state OSHA standard) shall be trained in accordance with 29 CFR 1910.120(e) (24-hour or 40-hour HAZWOPER, as appropriate).

3.6 ENVIRONMENTAL MONITORING

In accordance with SCAQMD Rules, air monitoring and control measures for fugitive dust will be required. An air monitoring/health and safety professional will be present during relevant remediation activities and responsibilities will include recording monitoring data on field sheets, which will be kept as part of project documentation. Monitoring may include one or more of the following:

- Monitoring meteorological conditions that could lead to excessive dust levels may require use of on-site meteorological instrumentation and/or coordination with off-site meteorological professionals to identify conditions that require cessation of work, for instance winds in excess of 25 miles per hour (mph) for a duration of 15 minutes.
- Deployment of real-time aerosol monitors and industrial hygiene air sampling equipment and media to measure dust levels and/or concentration of COPCs in dust.
- Monitoring of vapor concentrations will be conducted during excavation of the affected area using an organic vapor analyzer fitted with a PID. As discussed above, work in the disposal are will be in accordance with a site-specific 1166 Plan. Outside of the disposal area, if readings using the PID reach or exceed 50 parts per million, the provisions of SCAQMD Rule 1166 will then be implemented.

Air monitoring data will be recorded on the appropriate field form, which will be maintained for project documentation.

3.7 ROLES & RESPONSIBILITIES

3.7.1 Environmental Consultant

SCS will act as the environmental consultant and provide field oversight and management services for the SMP. SCS personnel may include an Environmental Program Manager (EPM) and Environmental Field Coordinator (EFC). The SCS EFC will have current health and safety certifications (40-hr HAZWOPER). The following personnel will be the main points of contact for SCS. The EFC is to be determined.

- Dave Dirkin – EPM, primary point of contact – ddirkin@scsengineers.com; (562) 751-8016
- Ashley Hutchens – secondary point of contact – ahutchens@scsengineers.com; (562) 572-4097

3.7.2 Contractor

The designated general contractor (GC) for the project, ENTACT LLC, will provide oversight and management services for all aspects of the planned work. The GC will be responsible for notifying the Owner and SCS if unanticipated soil impacts are identified. Under that scenario, SCS and the GC will work together as the SMP is implemented. The following will be the main points of contact for ENTACT.

- Tony Moran – Practice Lead (tmoran@entact.com); (517) 490-2376
- Jordan Wipf – Project Director (jwipf@entact.com); (630) 669-3802

- TBD – Construction General Contractor

3.7.3 Owner's Participants

The following will be the main point of contact for the Owner:

- Brett Richer – Project Director (bricher@prologis.com); (451) 733-9574
- Manasi Chavan – Environmental Manager (mchavansharma@prologis.com; (562) 376-9232
- Andrew Resurreccion – Environmental Manager (aresurreccion@prologis.com); (909) 262-1336

3.7.4 Individual Responsibilities

Environmental Consultant's Program Manager

The EPM will perform the following tasks:

- Monitor the work of the EFC.
- Communicate field activities to the Owner's Construction Manager.
- Communicate with the EFC to investigate previously unknown features and other environmental conditions, if encountered.
- After consultation with the EFC and the Owner's Construction Manager, characterize, delineate, and supervise the proper management of unknown features, and other unanticipated environmental conditions.
- Evaluate soil sampling results.
- Review reports of daily field activities.
- Initiate and approve non-emergency contacts with the appropriate agencies.

Environmental Field Coordinator (EFC)

The EFC will perform the following tasks:

- Monitor grading operations visually and with the appropriate monitoring equipment to assess potential unknowns and respond to requests based on questions and findings from the contractor's representative.
- Provide oversight of the implementation of the SMP and Health & Safety Plan including air monitoring.
- Collect soil samples and arrange for laboratory analyses, if determined to be necessary.
- Maintain records of soil sample locations, if necessary.
- Report suspected unknown features and other unanticipated environmental conditions to the EPM.
- Supervise activities related to investigating and remediating unknown features and other unanticipated environmental conditions.

- Review reports of field activities.

Contractor's Field Coordinator

The Contractor's Field Coordinator shall be responsible for the following tasks:

- Coordinate field activities with the EFC.
- Coordinate with the EPM regarding identification and removal of impacted soil or other unknown structures or materials found during grading.
- Excavate and stockpile impacted soil, as directed by the EPC or EPM that may be encountered during grading.
- Cover and assist in labeling and managing stockpiles, as directed by SCS.

4 GENERAL CONSTRUCTION ACTIVITIES

4.1 SOIL HANDLING

Remedial and development activities consisting of grading, trenching, excavation, and ESS/ISS will commence after the completion of the following:

- Pre-characterization soil assessment to profile soil for potential reuse within the two proposed cut and fill areas shown on **Figure 4**. Additional details are provided in Section 3.2.

- Protection and Decommissioning of groundwater monitoring wells that may be affected by planned construction (Section 3.3).

This SMP is a supplemental document to the RP and as such provides a reference to the applicable soil handling guidance with respect to the response remedy (ESS/ISS) for the disposal area, as described in the following sections of the RP:

- Section 6.3.3 – Excavation Staging and Sequencing
- Section 6.3.4 – Material Segregation
- Section 6.3.5 – Debris and Waste Disposal
- Section 6.3.6 – Loading and Transportation
- Section 6.3.7 – Unknown Wastes or Impacts
- Section 6.4 – Solidification/Stabilization – This section pertains to specific ESS/ISS construction and implementation activities, e.g., pad construction, batch plant operations, bucket mixing for ESS, auger mixing for ISS, and swell management.

Before mobilizing construction equipment, the disposal area and other areas where soil impact is known or suspected will be delineated with cones, caution tape, stakes, chalk, or flagging. If new potential impacted areas are encountered during development, those will also be delineated and the area(s) shall not be disturbed until an environmental professional determines whether testing and/or soil disturbance activities can begin. Stockpile staging areas will be delineated prior to the start of excavation. All excavations will conform to the applicable regulations including Cal/OSHA Construction Safety Orders.

The specific equipment, means, and methods to be utilized for soil removal, handling, and disposition will be selected based on the nature of the work to be conducted and its location on the

Property. Following is a summary of potential soil removal and handling tasks; however, certain activities may not involve all of the listed tasks:

- Mobilization of equipment, supplies, and manpower. Anticipated equipment to be used include excavators, drill rigs, backhoes, dump trucks, loaders, and water trucks/tanks. Support facilities such as toilets, trailers fencing, and signage will also be located on-site. Additional details related to work specific to the disposal area are provided in the RP, Section 6.3.3 – Excavation Staging and Sequencing.
- Areas from which contaminated, or potentially contaminated soil is being excavated, disturbed, treated, or handled will be cordoned off using caution tape and/or delineators, as appropriate. Exclusion and support zones, if any, staging areas, and decontamination pads will also be delineated.

  Additional details for the disposal area remediation are provided in the RP, Section 6.1.6 – Decontamination Procedures and Section 6.3.4 – Material Segregation.
- Provide traffic control signage and flagging as necessary.
- Provide appropriate dust and vapor control and monitoring in accordance with applicable SCAQMD rules.
- The EFC will be present full-time during soil removal and handling activities in areas in which contaminated soil has been encountered or has the potential to be encountered. This individual will be responsible for observations of soil conditions, air monitoring, maintaining communications, ensuring compliance with this SMP and applicable guidance in the RP, and any oversight of sampling.

Additional details related to implementation of the remedial actions for the disposal area are outlined in the Section 6.1 (General Implementation Procedures) in the RP.

As previously described, SCAQMD Rule 1466 will be implemented for remedial work in the disposal area. It should be noted that if testing un previously unidentified suspect materials confirms that "applicable toxic air contaminants" are present, notification and permitting with the AQMD will be required and implementation of necessary mitigation controls and monitoring pursuant to Rule 1466 will modify the minimum soil handling procedures describe above.

If excavation is conducted during the rainy season (November through April), provisions will be made to prevent off-site migration of sediment in runoff. Best management practices will be implemented for runoff control in accordance with the construction permit, regulatory requirements, and the SWPPP. Measures may include placement of sandbags, straw rolls, and/or hay bales to control runoff and to act as filters. If precipitation accumulates within any excavation, it will be pumped out and disposed in accordance with federal, state, and local regulations.

4.1.1 ESS/ISS Contingency Plan

In the event that field scale pilot testing and/or confirmation batch sampling indicates ESS/ISS performance criteria are not achieved, contingency measures will be followed to meet the performance criteria for treatment. Specifically, performance criteria for the ISS/ESS material during full-scale implementation include a monolithic mass containing:

- An average unconfined compressive strength greater than 25 pounds per square inch.
- An average hydraulic conductivity of less than 1×10^{-6} centimeters per second (cm/sec) with no single sample higher than 5×10^{-6} cm/sec.

- No visible presence of free product observed during field implementation after mixing is complete.

The goal is to verify the successful remediation of contaminated soil through cement stabilization. If performance criteria are not met, the Contractor may extend the testing duration from 28-days of cure to 56-days of cure. If longer duration testing fails to meet the performance criteria, the Contractor and Owner will discuss mitigation measures to ensure remedy success. Mitigation measures may include reprocessing the treated material with modified mixing parameters and/or reagent changes including dosage increase. An alternative mitigation measure would include excavation and off-site disposal of reprocessed ESS/ISS material and backfilled with clean soil.

The implementation of these contingency measures will follow a progressive approach, with selection based on the specific performance deficiency. Contingency measures will be thoroughly documented and verified through testing to ensure that final treatment meets the performance criteria.

4.2 FUGITIVE DUST AND VAPOR CONTROL

Appropriate procedures will be implemented to control the generation of airborne dust by soil removal activities, including, but not limited to, some or all of the following:

- As previously mentioned, implementation of general dust control measures described in the SCAQMD Rule Book, Rule 403, Fugitive Dust (dated May 7, 1976, amended June 3, 2005) should be followed. Generation of dust and emission of VOCs (if any) during Property improvement activities will be minimized, as necessary, by the use of water as a dust suppressant. The water will be available from on-site water service, via a water truck, or through a metered discharge from a fire hydrant located on or proximate to the Property. When necessary, the responsible contractor will control dust generation by spraying water prior to daily work activities, during excavation/loading activities (as necessary to maintain concentrations below action levels), and at truck staging locations. During the Property construction activities, watering equipment will be continuously available to provide proper control measures. It is the responsibility of the Contractor to ensure that the presence of dust is minimized during construction activities, and that all applicable local and state dust-control and worker protection requirements are met. Should construction activities result in observable dust at the boundary of the Property, enhanced control measures will be performed by the Contractor.
- Activities that have the potential to generate fugitive dust will cease in the event wind conditions change creating an uncontrollable condition. If required, the EFC will monitor on-site meteorological instrumentation and/or coordinate with off-site meteorological professionals to identify conditions that require cessation of work.

4.3 SOIL EXCAVATION AND STOCKPILING

4.3.1 Impacted Material

Impacted soil that is excavated and not immediately removed from the Property will be stockpiled on and covered with 10 mil plastic sheeting to control dust and minimize exposure to precipitation. The edges of the plastic sheeting will have an overlap of at least 24 inches. Plastic sheeting will be secured at the base of the stockpile and along seams of overlapping plastic sheeting, if any, with sandbags or by equivalent means. If a stockpile remains on site during the rainy season, a perimeter sediment barrier, constructed of material such as straw bales or fiber roll, will also be installed. The stockpiles will remain covered until the soil is ready for either ESS treatment or offsite T&D.

All impacted soil unsuitable for ESS will be segregated and stockpiled in volumes not to exceed 400 cubic yards in accordance with Rule 1166 and/or Rule 1466 for chemical analysis, characterization, and/or offsite disposal. Waste profiling will consist of collecting soil samples for laboratory analysis at the frequency required by the disposal/recycling facility to which the soil is to be transported. At a minimum, sample collection shall be at a frequency of one composite sample per 400 cubic yard stockpile. Impacted stockpiles for removal will be contained or covered in order to prevent release to the environment until they can be transported off-site to an approved disposal/treatment facility. Specific analyses for materials going offsite will be based on the requirements of the receiving facility. Some or all of the following analytical methods are anticipated to be used as required for waste soil and/or material characterization:

- TPH-G/TPH-D/TPH-O, carbon chain identification using EPA Method 8015M;
- VOCs using EPA Method 8260B.
- SVOCs including polynuclear aromatic hydrocarbons using EPA Method 8270C.
- Organochlorine pesticides and PCBs using EPA Method 8081/8082.
- CAM 17 metals using EPA Method 6000/7000.
- Soluble threshold limit concentration (STLC).
- Total Threshold Limit Concentration (TCLP).

If no specific analytical program is required by the disposal/recycling facility, analysis will include TPH, VOCs, and metals using the methods listed above.

Daily inspection of any stockpiles related to Rule 1166 or 1466 material will be conducted to verify cover integrity. Any gaps, tears, or other deficiencies in plastic covering will be documented by the EFC and corrected immediately. Records will be kept of stockpile inspections and any repairs made. During stockpile removal, only the working face of the stockpile will be uncovered.

4.3.2 Soil for Reuse

Based on the amount of imported soil required for this project, it is unlikely that any soil acceptable for reuse would be removed from the Property. Soil deemed acceptable for reuse will be stockpiled on site in an area where there are no known environmental impacts. Stockpiled soil for reuse will be covered with plastic sheeting for dust and erosion control and inspected biweekly.

Pre-characterization sampling is planned prior to commencing work at the Property. This sampling will be conducted to confirm that soil in two designated areas (green and blue on **Figure 4**) meets reuse criteria as described below. If the sampling confirms reuse of this soil, it will be excavated, stockpiled, and covered on the Property outside of the work zone for later use as soil cover. This soil is not anticipated to require further sampling, however if during excavation, observations indicate potential impacts, soil will be segregated (based on visual and field monitoring observations) and sampling conducted.

Note that if SCAQMD Rules apply to any material, stockpiling will be conducted as described above in Section 4.3.1. All other stockpiles will be place on and covered with plastic sheeting. Sampling will be conducted with a minimum of four samples to be collected from a stockpile of up to 1,000 cubic yards. For each approximately 500 cubic yards of stockpile material, an additional sample will be collected and analyzed, which meets the sampling frequency described below to evaulate for reuse. Sampling/analysis to evaluate soil for reuse will be conducted in accordance

If the soil is not deemed acceptable for reuse, the data will be used for waste profiling and/or to evaluate the material for treatment by ESS.

4.4 SOIL REUSE CRITERIA

For the purpose of determining soil reuse at the Property, concentrations of COPCs in soil at the Property will be compared to regulatory screening levels for the protection of human health and groundwater quality. Regulatory screening levels under a commercial/industrial land use scenario will be used for the protection of human health, including the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note No. 3 (revised May 2022), U.S. EPA Regional Screening Levels (RSLs; November 2024), and the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs; January 2019). For the protection of groundwater quality, the SFRWQCB Leaching to Groundwater ESLs (January 2019) and LARWQCB soil screening levels (SSLs; Interim Site Assessment & Cleanup Guidebook, May 1996) will be used for comparison. The regulatory screening levels for health risk and groundwater protection for all COPCs detected in soil at the Property are summarized on Tables 1 and 2.

Soil from the Property that is sampled for reuse will be analyzed for the following parameters:

- TPH with carbon chain range quantification (TPH-cc) using EPA Method 8015M (Modified)
- TPH-g & VOCs using EPA Method 8260B/5035
- SVOCs using EPA Method 8270C
- Metals using EPA Methods 6010B/7471

The lowest regulatory screening level based on both the protection of human health and/or groundwater quality for each COPC was selected as the threshold criteria for soil reuse at the Property as highlighted on Tables 1 and 2.

5 SOIL MONITORING DURING CONSTRUCTION

5.1 SOIL MONITORING

The following provides guidelines for characterizing, documenting, and handling soil impacted by potential COPCs that are encountered during site development. The monitoring and sampling activities to be performed include:

- Visual observation performed to detect areas of soil that may be impacted by TPH or other non-VOC hazardous materials, if encountered.
- VOC screening performed to document new or previously undetected sources of VOCs.
- Soil sampling and chemical testing performed to evaluate concentrations of COPCs.

Freshly exposed soil will be evaluated by visual observation by the EFC and with handheld direct read instruments. Depending upon visual, olfactory, and direct reading instrument indicators, soil samples may be collected for chemical testing that will be performed by a state-certified laboratory, as discussed below.

5.2 VISUAL OBSERVATION

During construction activities, visual observation of the condition of exposed soil and potential subsurface features, if encountered, will be conducted. A daily field sheet will be used to record pertinent information such as the removal of impacted soil, soil type and color, potential debris (if any), and other subsurface features. Discolored/stained soil, odor, PID readings, or other evidence of potential hazardous materials will be documented and serve as the basis for further evaluation. Photographic documentation will be used to supplement field sheets, as appropriate.

5.3 SAMPLE COLLECTION AND TESTING

Based on field indications, soil samples may be collected to evaluate the presence of suspected chemicals or compounds in exposed soil. Selected soil samples will be analyzed by an appropriately certified, off-site laboratory, with the analytical methods selected based on the following criteria:

- Visual and Olfactory Observation: Soil that is odorous or appears dark or oil stained will be analyzed for TPH-carbon chain by EPA Method 8015M modified and for VOCs by EPA Method 8260B. Soil that appears discolored in a manner typical of metals impacts (e.g., red, yellow, green, gray, silvery) will be analyzed for California Code of Regulations Title 22 metals using EPA Method 6010B/7000.
- Elevated VOC Levels: A soil sample (or samples) will be collected for laboratory testing if the headspace VOC measurement exceeds 100 ppm, as measured with a PID calibrated to hexane during the on-site screening. Samples may be analyzed for VOCs using EPA Method 8260 (VOCs) and/or TPH by EPA Method 8015M modified.

Soil samples for laboratory analysis will be collected using hand tools (for instance hand auger or hand trowel) and placed in glass jars, brass tubes, or other appropriate containers. Samples to be analyzed for VOCs (if deemed necessary) will be field preserved using EPA Method 5035. After collection, samples will be sealed, uniquely labeled, and placed in a chilled cooler pending delivery to the analytical laboratory. All soil samples will be tracked from point of collection through the laboratory using chain-of-custody documentation.

Re-useable soil sampling equipment (hand auger, trowel, shovel, etc.) will be decontaminated using the following steps to reduce the potential for cross-contamination.

- Wash and scrub in non-phosphate detergent and potable water.
- Rinse in potable water.
- Rinse in deionized water and air dry.

Investigation derived residuals, including decontamination water, will be managed in accordance with regulatory requirements.

5.4 EVALUATION OF ANALYTICAL DATA

Laboratory analytical data will be compared to appropriate regulatory screening levels including the DTSC HERO Note 3, EPA RSLs for VOCs, SVOCs, and metals and the LARWQCB SSLs for TPH with respect to risk to groundwater as described in Section 4.4. Based on the depth to groundwater of approximately 75 feet bgs at the Property, the SSLs for petroleum hydrocarbons between 20 and 150 feet above groundwater are:

- TPH-g or gasoline-range hydrocarbons (C_4-C_{12}) – 500 mg/kg
- TPH-d or diesel-range hydrocarbons (C_{13}-C_{22}) – 1,000 mg/kg
- TPH-o or oil/heavy-range hydrocarbons (C_{23}-C_{40}) – 10,000 mg/kg.

If confirmation soil samples are required, concentrations exceeding their respective screening levels may be subject to further excavation and additional confirmatory soil sampling and chemical testing.

As previously described, laboratory analytical data will be used to characterize excavated soil for reuse potential, suitability for ESS, and/or to determine if off-site transportation and disposal is

warranted. Only soil that contains constituents in exceedance of the respective SLs will be considered for export and disposal off-site. Soil with no visual or olfactory evidence of impacts and not containing COPCs above SLs will be considered for onsite reuse in accordance with the criteria provided in the Section 4.4.

If soil is exported from the Property, waste manifests and weight tickets for the transportation and disposal of soil will be maintained for record keeping and subsequent reporting.

5.5 RESPONDING TO UNKNOWN CONDITIONS

If unanticipated impacted soil is encountered (based on visual staining, odors, PID readings, or other indications), the area of suspected impact will be delineated, and soil disturbance activities will halt in this area. The contractor will notify the EFC and EPM and/or Owner representative (identified in Section 3.7) of the condition within 24 hours. The EFC or EPM will visit the Property and sampling will be conducted, as appropriate. Analyses are expected to be conducted for TPH (includes: TPH-g, TPH-d, and TPH-o), VOCs, SVOCs, and/or metals. Analytical results will be compared to applicable regulatory SLs. Based on this comparison, a determination will be made regarding soil disposition (reuse on site, off-site transport and disposal/recycling, etc.). The number of, and the methods used to collect the soil samples and the analyses to be performed will be selected by the supervising professional (e.g., EPM), and may include the following test methods:

- TPH-d and TPH-o with carbon chain range quantification (TPH-cc) using EPA Method 8015M (Modified).
- TPH-g & VOCs using EPA Method 8260B/5035.
- SVOCs using EPA Method 8270C.
- Metals using EPA Methods 6010B/7471.

Similarly, if a potential structure such as a buried UST or other subsurface features (sumps, clarifiers, vaults, septic tanks, etc.) are encountered, a similar approach will be taken, where the construction contractor halts related work activities, delineates the area, and provides the appropriate notification within 24 hours to the EFC, EPM, and/or Owner representatives. The EFC/EPM will visit the Property to observe conditions in the area(s) of concern and conduct sampling, as necessary. The procedures that will be followed in the event that an unanticipated subsurface structure is discovered are summarized below:

- Visually assess the feature from a safe distance.
- Evaluate atmospheric conditions in the work area/vicinity, using a PID and/or four gas meter.
- If the above conditions are determined to be safe, evaluate the container contents with a PID and four gas meter.
- If all conditions are determined to be safe, a licensed Contractor or an Environmental Professional (SCS) will remove and containerize observed residual liquid, sludge, or sediment in the subsurface structure, and will characterize the residual material(s) as required by the waste-receiving facility(ies);
- Appropriate permitting, as necessary, will be obtained for the removal of any feature(s) that may be identified requiring specific permits. Permitted removals will be conducted with appropriate regulatory oversight, documentation, and reporting.
- The Contractor will remove the subsurface structure in compliance with applicable laws and regulations, and under permit from the applicable regulatory agency, if required.
- Soil removal and sampling actions will be performed in accordance with the procedures outlined in this SMP; and
- The structure will be removed upon regulatory approval to proceed.

- The Contractor will ensure that work is conducted under an appropriate health and safety plan that meets the requirements detailed in Section 3.5.

If suspected asbestos containing material (ACM), such as transite pipe or disposed building material, is discovered, work in the area will stop, the material will be wetted with water, and the area will remain undisturbed until assessed by a California Certified Asbestos Consultant or California Site Surveillance Technician.

As necessary, the RWQCB will be notified of the identification of unknown conditions. Upon completion of any required action, the Contractor will be notified by the EPM that they can resume work in the area.

5.6 GROUNDWATER MANAGEMENT

This section describes the procedures for handling groundwater during groundwater monitoring or dewatering activities conducted at the Property. These procedures do not apply to uncontaminated potable or irrigation water supplies. Because the depth to perched groundwater is approximately 75 feet bgs, which is about 45 feet deeper than the planned development depth, it is unlikely that groundwater will be encountered. Groundwater beneath the Property is known to be impacted with motor-fuel related substances. As previously mentioned, TORC maintains responsibility for the monitoring of groundwater at the Property. If groundwater is encountered, it should be presumed to be contaminated and managed accordingly. Any contact, suspected contact, or proposed contact with the water table must be reported to TBB, who will subsequently report it to the EPM.

5.7 STORMWATER MANAGEMENT

Stormwater management regarding sediment runoff will be consistent with local, state, and federal rules and regulations, including those set forth by Los Angeles County, the Los Angeles County Regional Water Quality Control Board and by the Department of Toxic Substances Control, as applicable. As outlined in Section 3.4, a SWPPP is required for sites over one acre. Applicable stormwater pollution control measures will be implemented to prevent runoff of sediment in stormwater from flowing to nearby storm drains and from entering local creeks, rivers, and other water bodies. The Contractor is required to obtain the necessary stormwater permits, and to implement the appropriate best management practices during construction.

5.8 IMPORT FILL SOIL REQUIREMENTS

As appropriate, off-site soils brought to the Property for use as backfill (import fill) for the 5-foot cover of the remediation area, for backfill of the borrow pit, and/or other import required for construction activities will be tested in general conformance with the DTSC Information Advisory Clean Imported Fill Material document (DTSC, 2001), included as **Appendix D**. The Advisory recommends reviewing site history for source soils, and if the source soil passes initial screening a sampling plan will be developed in general accordance with the Advisory based on the volume of soil to be sources and whether it is in place or stockpiled.

The Advisory recommends the following sampling frequencies for imported soil stockpiles:

Up to 1,000 cubic yards	1 sample per 250 cubic yards
1,000 to 5,000 cubic yards	4 samples for first 1,000 cubic yards plus 1 sample for each additional 500 cubic yards
Greater than 5,000 cubic yards	12 samples for first 5,000 cubic yards plus 1 sample for each additional 1,000 cubic yards

If the source soil is in place (has not been stockpiled), review of the grading plans for the source site will assist in determining a sample plan. We anticipate sampling plans to consist of borings at a frequency similar to that described below (per the Advisory), with specific sampling depths based on depth of planned grading or excavation. In general, this will involve samples from a shallow depth of 1 to 2 feet bgs and then at approximately 5-foot vertical intervals to total depth. Samples would be composited by depth prior to analysis. At each depth interval the number of sample points would follow the frequency suggested by DTSC, as listed below:

Area of Individual Borrow Area	Sample Points per Area
2 acres or less	Minimum of 4 samples
2 to 4 acres	Minimum of 1 sample point per ½ acre
4 to 10 acres	Minimum of 8 samples
Greater than 10 acres	Minimum of 8 locations with 4 subsamples per location

Import fill will be tested for target compounds based on knowledge of the fill source area; however, at a minimum, the fill will be tested for the following constituents (or have been tested and documented at the source):

- TPH-cc (TPH-d and TPH-o) using EPA Method 8015.
- TPH-g using EPA Method 8260B/5035.
- VOCs using EPA Method 8260B/5035.
- Title 22 metals using EPA Methods 6010B/7471.
- Pesticides using EPA Method 8081A.

Other analyses may be required contingent on the source of the import fill or recommendations by the supervising professional. Additionally, due to the volume of soil required for the construction portion of the project (to backfill the borrow pit), a minimum of one sample for laboratory analysis is suggested per 1,000 tons of import fill per borrow site (single source). For quantities above 5,000 tons of import fill per borrow site (single source), one sample for laboratory analysis is suggested per 5,000 tons of import fill.

6 POST-CONSTRUCTION ACTIVITIES

6.1 SURVEYING

The Contractor will conduct surveys throughout the duration of the project to document the remediation work scope as defined in the RP. Field surveys will be conducted in accordance with the remedial design and specified requirements as needed to prepare final as-built drawings for future regulatory reporting. Note that it is anticipated that a minor amount of residual soil impact will remain in place, especially within the easement of adjacent underground pipeline/utility corridors. The location of residual soil impact will be surveyed or recorded by use of geographic positioning system equipment. Survey results, including maps, and survey notes will become part of project documentation for future reporting.

6.2 DOCUMENTATION

Following the completion of construction activities, i.e., grading, excavation and solidification (ESS/ISS), and soil disposition, surveying etc., a RP implementation report will be prepared. The

report will include a description of field activities, figures, tables, estimated material quantities, laboratory test results, manifests, and discussion of typical procedures. In addition, this document will provide the location and estimated quantities of residual soil impacts. Further, removal of potential USTs or other subsurface structures will be appropriately reported to the Torrance Fire Department and/or other applicable regulatory agencies. Additionally, if any previously unknown conditions are identified during development activities, a report documenting sampling, oversight, and related activities will be prepared.

7 REFERENCES

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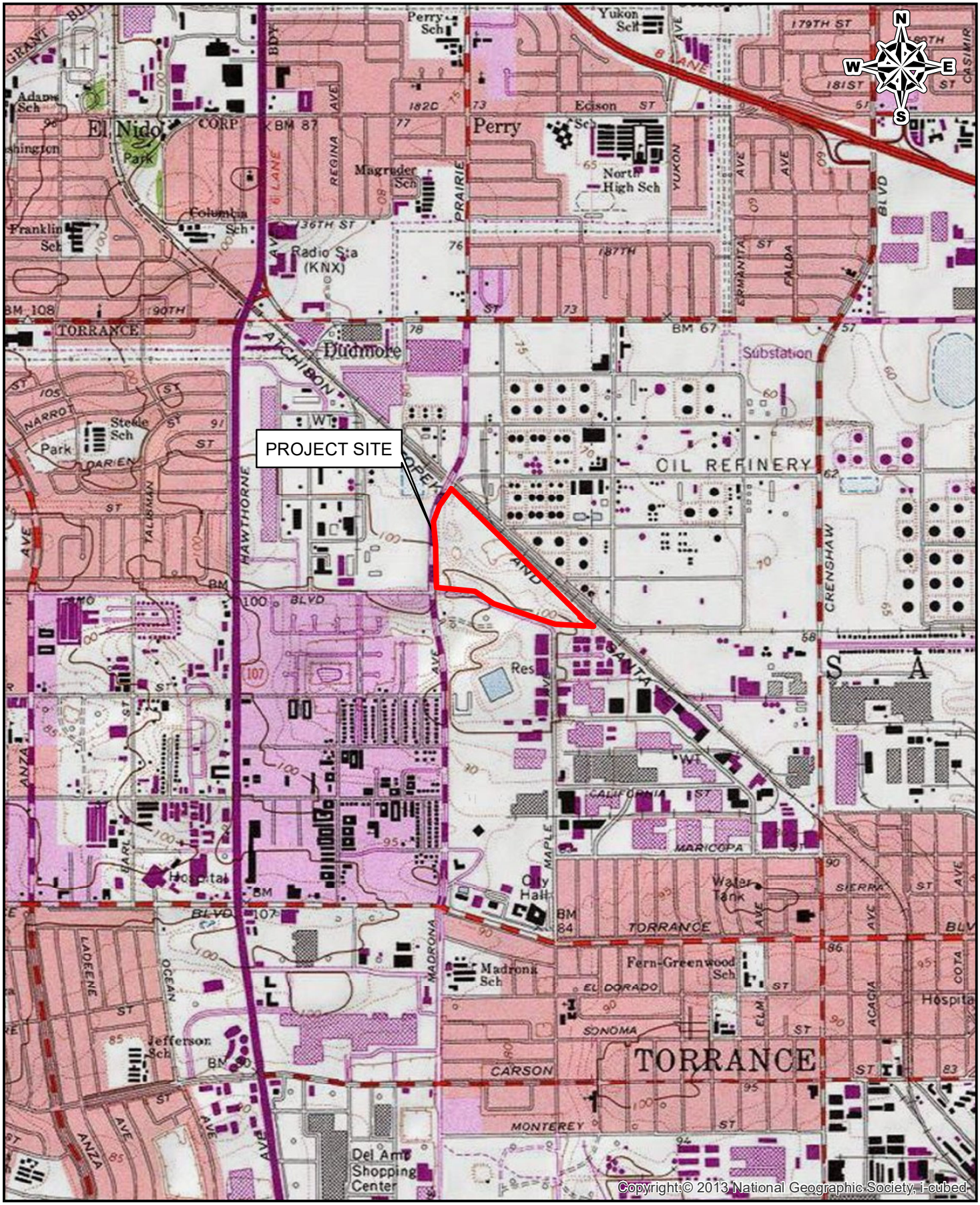
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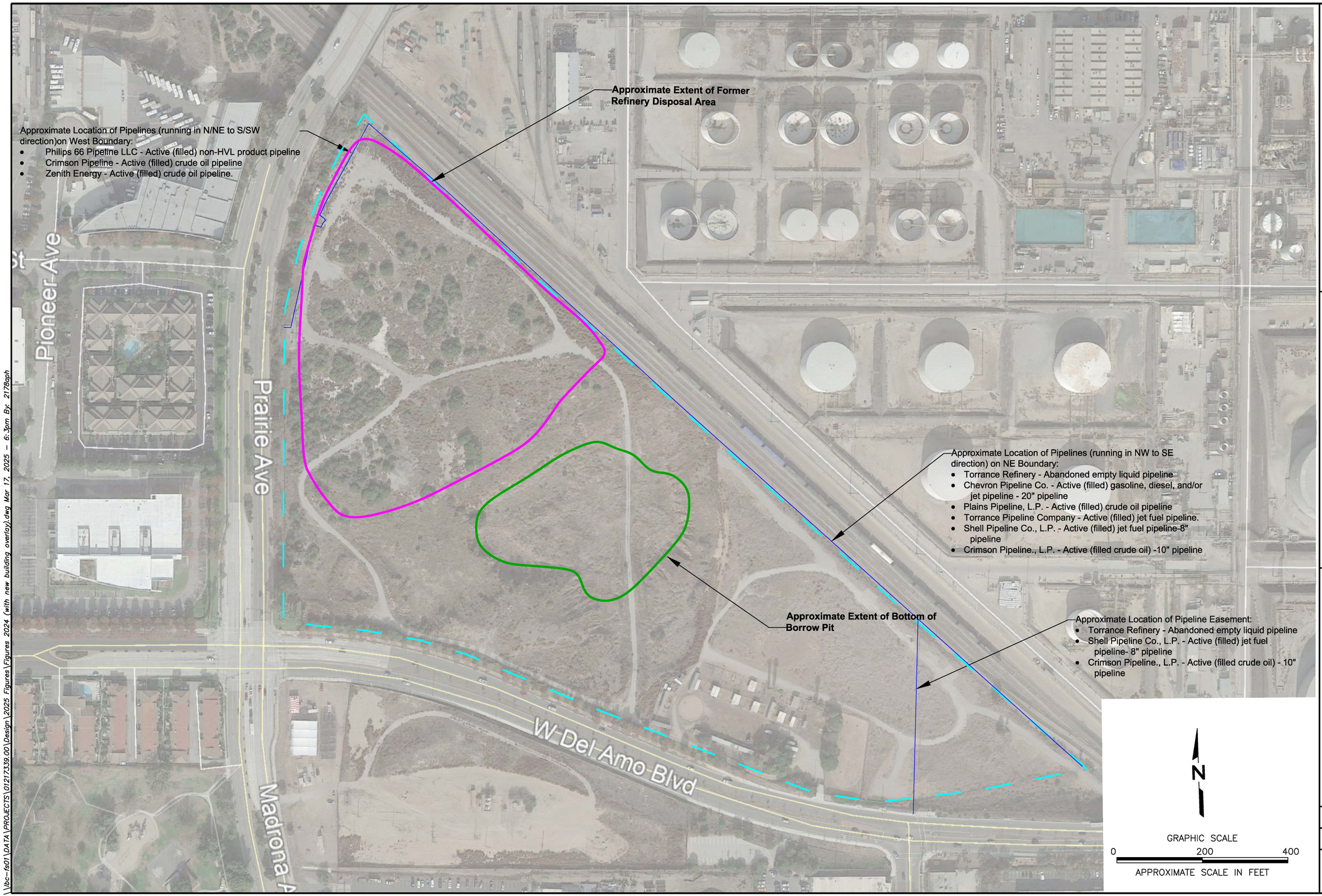
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Figures



SCS ENGINEERS 3900 KILROY AIRPORT WAY, STE 100 LONG BEACH, CALIFORNIA 90806-6816	SITE: North Posse Site 3041 Del Amo Blvd. Torrance, California 90503	Job No.: 01217339.00 T2 Title: SITE LOCATION MAP	FIGURE 1



SHEET TITLE: SITE MAP

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, SUITE 300
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO. 01217339.00
DSN. BY: DESIGN
DWN. BY: APH
CHK. BY: DD
ACAD FILE: LOCATION
APP. BY: DD

DATE: MARCH 2025

SCALE: 1" = 200'

FIGURE NO. 2

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LEGEND

- PERCHED ZONE GROUNDWATER MONITORING WELL
- GAGE-GARDENA AQUIFER GROUNDWATER MONITORING WELL
- DATA GAP GROUNDWATER MONITORING WELL
- DESTROYED GROUNDWATER MONITORING WELL
- MULTI-NESTED SOIL VAPOR PROBE (SCS, 2019)
- MULTI-NESTED SOIL VAPOR PROBE (AECOM)

Approximate Extent of Former Refinery Disposal Area

Approximate Extent of Bottom of Borrow Pit

SB41 C-18 SB37 F-02 SB36 SB26 SWP-VMP-P01 (BH1) SWP-MP-P08 (BH2) SB33 SB27 SB25 F-01 SB31 SWP-MW-P09 (BH5) SB24 SWP-VMP-P02 (BH4) C-31 SWP-MW-P10 (BH6) SB29 SB20 C-20 C-10 C-10A SWP-MW-P13 I-08 I-08R C-19 XII-07 C-28 C-35 SWP-MW-P11 C-30 C-13RA SWP-MW-P12 C-13R C-29 C-23R SWP-MW-G04

Pioneer Ave

Prairie Ave

Madrona Ave

W Del Amo Blvd

EXISTING RAILROADS

CHALLENGER ST.

PRAIRIE AVENUE

DEL AMO BLVD

CYPRESS PL

N

GRAPHIC SCALE

0 200 400

APPROXIMATE SCALE IN FEET

SHEET TITLE:
SITE MAP WITH PROPOSED DEVELOPMENT PLAN AND EXISTING GROUNDWATER WELLS AND SOIL VAPOR PROBES

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

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ENVIRONMENTAL CONSULTANTS
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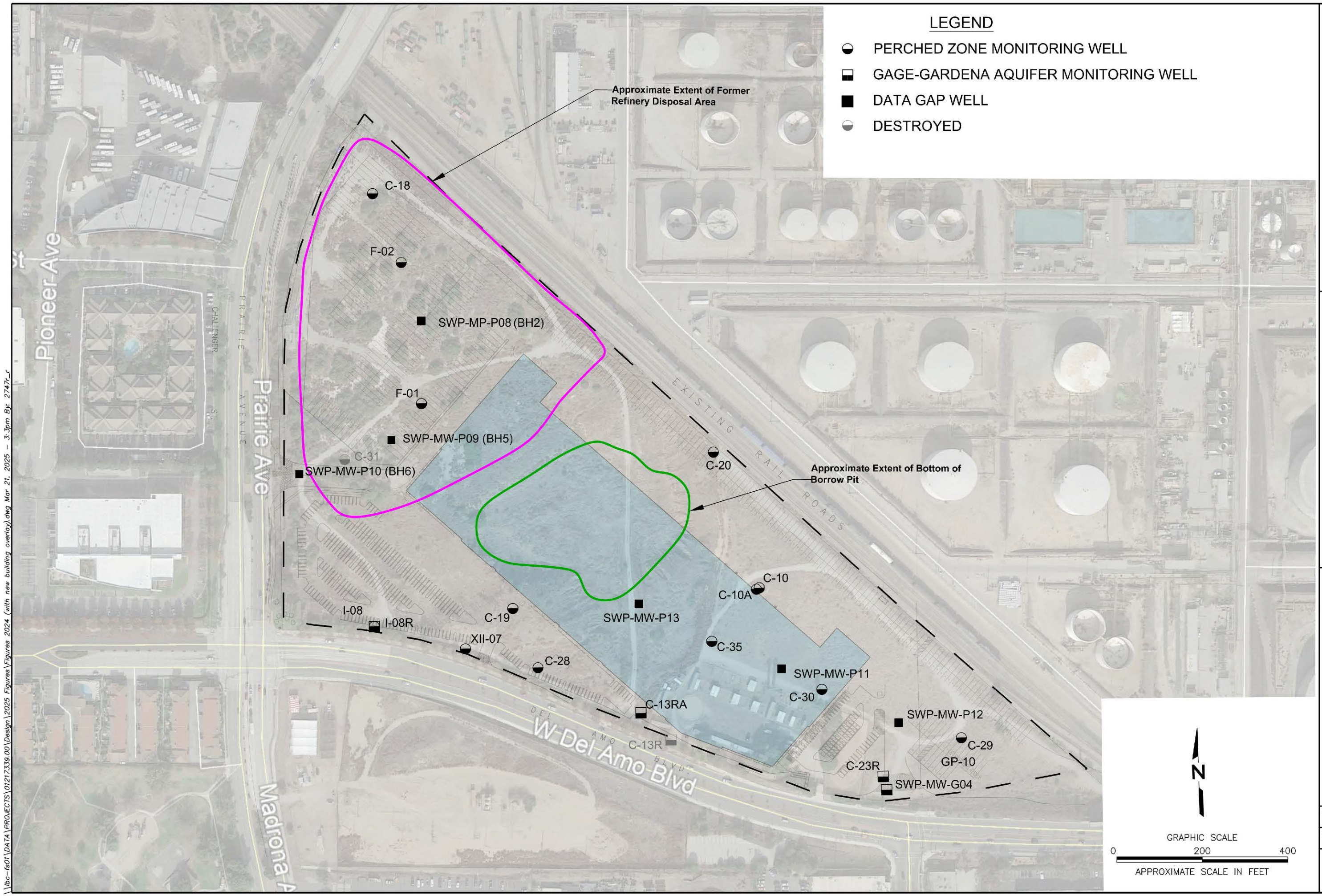
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01217339.00	APH	DD	LOCATION	DD
DSN. BY	DESIGN			

DATE: MARCH 2025

SCALE: 1" = 200'

FIGURE NO. 3

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SHEET TITLE:
SITE MAP WITH PROPOSED DEVELOPMENT PLAN AND EXISTING GROUNDWATER WELLS

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
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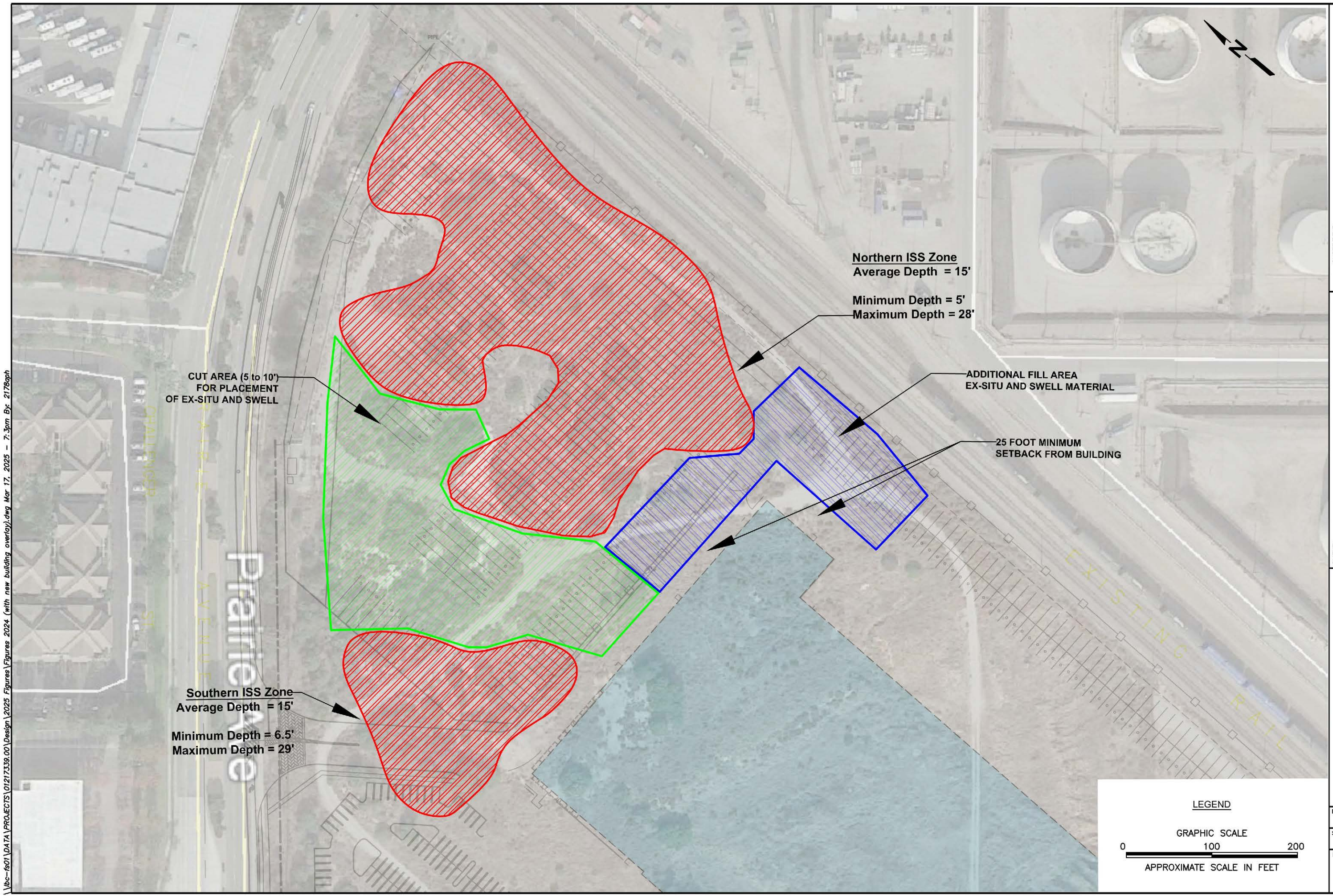
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DATE:
MARCH 2025

SCALE:
1" = 200'

FIGURE NO.
3

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LEGEND

GRAPHIC SCALE

0 100 200

APPROXIMATE SCALE IN FEET

SHEET TITLE:
ISS AND ESS ZONES AND PLACEMENT AREAS

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
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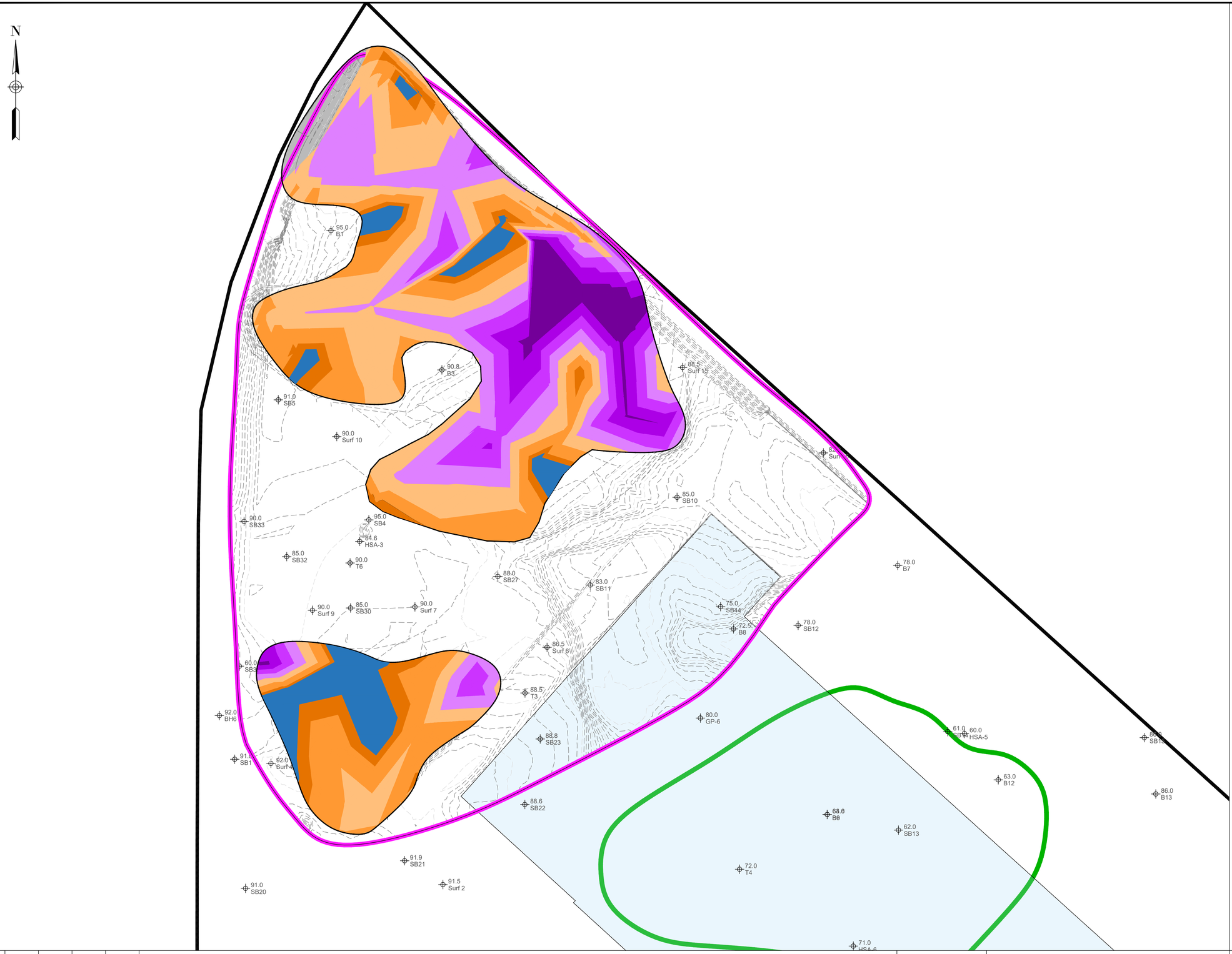
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01217339.00	RR	DD	APH	DD	LOCATION

DATE: MARCH 2025

SCALE: 1" = 100'

FIGURE NO. 4

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LEGEND

- ISS WORKPAD MAJOR CONTOURS — 50
- ISS WORKPAD MINOR CONTOURS — 48
- PROPERTY BOUNDARY
- FORMER DISPOSAL AREA
- BORROW PIT
- PROPOSED ISS AREAS
- PROPOSED BUILDING FOOTPRINT
- ESS > 3 FT
- ISS DEPTH 0-5 FT
- ISS DEPTH 5-10 FT
- ISS DEPTH 10-15 FT
- ISS DEPTH 15-20 FT
- ISS DEPTH 20-25 FT
- ISS DEPTH 25-30 FT
- ISS DEPTH 30 - 35 FT
- MISSING DATA (SEE NOTE 4)
- SOIL BORINGS — MAX. EXCEEDANCE ELEV. BORING ID

NOTES

1. BASEMAP DATA PROVIDED BY SCS BASED ON JULY 2024 FIGURES.
2. THE DATA DEPICTED HEREIN ARE BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83) FOR HORIZONTAL AND GEOMETRIC CONTROL DATUM AND NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
3. PROPOSED ISS WORKPAD SURFACE IS BASED ON 5 FEET BELOW THE PROPOSED FINAL GRADE TO ALLOW FOR 5 FEET OF CLEAN FILL ABOVE THE TOP OF ISS. ISS WORKPAD WILL BE DESIGNED FOR A MAXIMUM SLOPE OF 2% IN ISS AREAS FOR EQUIPMENT STABILITY PURPOSES. ISS QUANTITIES MAY CHANGE +/- 10% FROM THIS RAP TO REMEDIAL DESIGN.
4. FINAL GRADE SURFACE DOES NOT OVERLAP WITH PROPOSED ISS AREAS.

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SCALE:1"=50'

REVISION	DATE	BY	CHECKED	APPROVED	DESCRIPTION

Signature_____

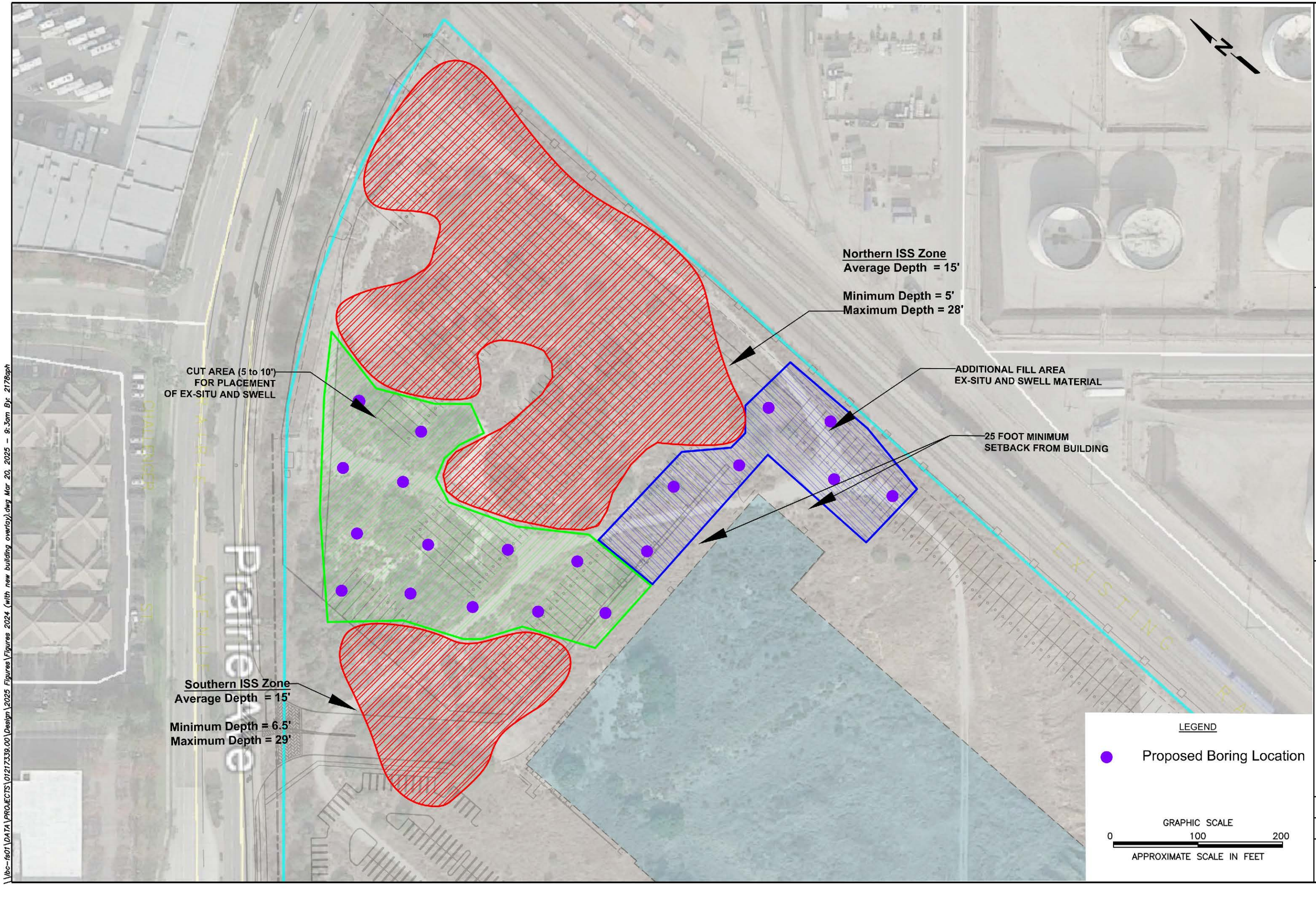
NOT FOR CONSTRUCTION

ENTACT.

DRAWING NAME: FIGURE 5 - ESS/ISS PLACEMENT DEPTHS

PROJECT NAME & LOCATION: TORRANCE POSSE, TORRANCE, CA

DRAWN BY	J.CARR	APPROVED BY	T.MORAN	DRAWING NO.	3 OF 3
DATE	12/6/2024	DATE	12/6/2024	PROJECT NO.	E9109



SHEET TITLE
PROPOSED BORINGS FOR PRE-SAMPLING

PROJECT TITLE:
NORTH POSSE
3041 DEL AMO BOULEVARD
TORRANCE, CALIFORNIA 90503

CLIENT:
TORRANCE BLACK BEAUTY LLC
PIER 1, BAY 1
SAN FRANCISCO, CALIFORNIA 94111

SCS ENGINEERS
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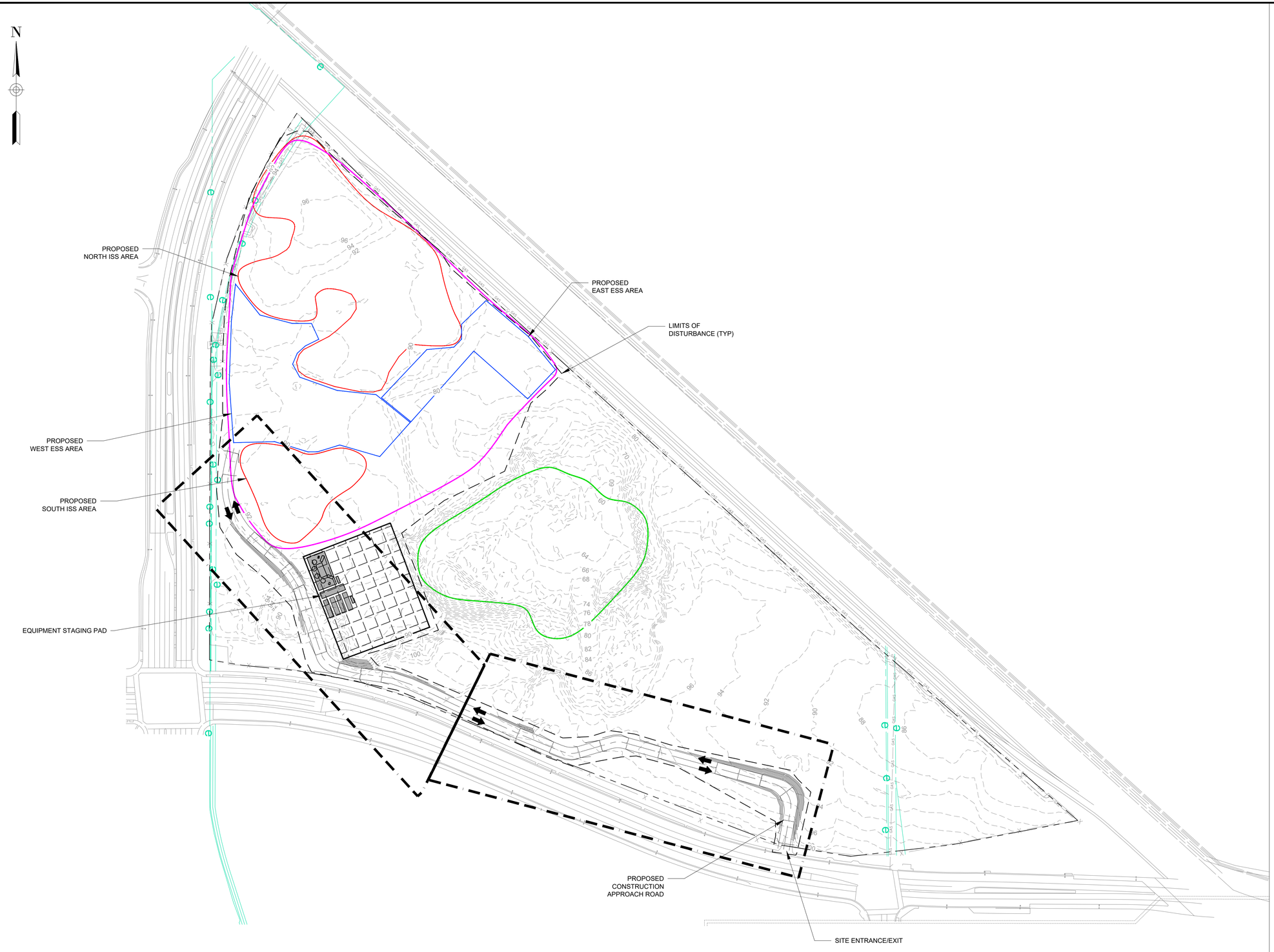
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CHK. BY: DD
ACCEPTED: LOCATION
APP. BY: DD
ISSUE BY: RR

DATE:
MARCH 2025

SCALE:
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FIGURE NO.
5

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LEGEND

- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPERTY LINE
- EXISTING GAS LINE
- EXISTING FENCE LINE
- PIPELINE EASEMENT
- TRAFFIC DIRECTION
- LAYDOWN AREA
- CONSTRUCTION ROAD MAJOR CONTOURS
- CONSTRUCTION ROAD MINOR CONTOURS
- LIMITS OF DISTURBANCE
- ISS AREAS
- ESS AREAS
- FORMER DISPOSAL AREA
- BORROW PIT AREA

NOTES

1. THE DATA DEPICTED HEREIN ARE BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83) FOR HORIZONTAL AND GEOMETRIC CONTROL DATUM AND NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
2. IMAGERY CAPTURED = 2025 © Microsoft Corporation © 2025 Maxar CNES (2025) Distribution Airbus DS © 2025 TMAP MOBILITY Earthstar Geographics SIO.

0 50 100 200
SCALE: 1"=100'

REVISION	DATE	BY	CHECKED	APPROVED	DESCRIPTION

Signature_____

PREPARED FOR:

ENTACT.

DRAWING NAME
FIGURE 7 - CONSTRUCTION OPERATIONS LAYOUT

PROJECT NAME & LOCATION
TORRANCE PROLOGIS TECH CENTER REMEDIAL DESIGN
LOS ANGELES, CALIFORNIA

DRAWN BY	J.REI	APPROVED BY	X.XXX	DRAWING NO.	C-102A
DATE	XX-XX-XX	DATE	XX-XX-XX	PROJECT NO.	E9418

File location: C:\Users\jreinhardt\Entact\E9109 - Prologis Torrance Tech Center - Bench Scale Study - Documents\2.0 Project\2.4 Construction Mgmt\2.4.1 Drawings\Design Drawings\E9418 Torrance_Planset.dwg Last saved: 3/13/2025 By: jreinhardt

Tables

TABLE 1

INDUSTRIAL SOILS REUSE THRESHOLDS - TPH, VOCs, AND SVOCs

NORTH POSSE SITE

3041 DEL AMO BOULEVARD

TORRANCE, CALIFORNIA 90503

COPC	DTSC-Recommended SL	USEPA RSL	SFRWQCB ESL	LARWQCB SSLs	SFRWQCB ESLs (Leaching)	Industrial Soils Reuse Threshold
	Milligrams per kilogram (mg/kg), equivalent to parts per million (ppm)					
TPH as Gasoline (C4 - C12)	--	--	2,000	500	1,100	**500**
TPH as Diesel (C13 - C22)	--	--	1,200	1,000	1,100	**1,000**
TPH as Oil (C23 - C40)	--	--	180,000	10,000	--	**10,000**
Ethylbenzene	--	25	26	--	0.43	**0.43**
Naphthalene	6.5	9	17	--	0.042	**0.042**
Benzo(a)pyrene	1.3	2.1	2.1	--	5.7	**1.3**
1-Methyl naphthalene	30	73	--	--	--	**30**

Notes:

-- = Not Established

COPC = Constituents of Potential Concern

DTSC-Recommended SL = Department of Toxic Substance Control Human and Ecological Rick Office (HERO) Note 3 Screening Level (June 2020; Revised May 2022)

LARWQCB SSLs = Los Angeles Regional Water Quality Control Board Soil Screening Levels for soils located 20-150 feet above groundwater (Interim Site Assessment and Cleanup Guidebook. May 1996).

VOCs = volatile organic compounds

SVOCs - Semi-volatile organic compounds

SFRWQCB ESLs = San Francisco Bay Regional Water Quality Control Board's Environmental Screening level (January 2019)

TABLE 2

INDUSTRIAL SOILS REUSE THRESHOLDS - METALS

NORTH POSSE SITE

3041 DEL AMO BOULEVARD

TORRANCE, CALIFORNIA 90503

COPC	DTSC-Recommended SL	USEPA RSL	SFRWQCB ESL	Typical Range for CA Soils*	Industrial Soils Reuse Threshold
	Milligrams per kilogram (mg/kg), equivalent to parts per million (ppm)				
Antimony	--	470	160	0.15-1.95	**160**
Arsenic^	0.36	3.0	0.31	0.6-11	**12^**
Barium	--	220,000	220,000	133-1,400	**220,000**
Beryllium	210	2,300	230	0.25-2.7	**210.0**
Cadmium	7.3	100	1,100	0.05-1.7	**7.3**
Chromium	170,000	--	--	23-1,579	**170,000**
Cobalt	--	350	350	2.7-46.9	**350**
Copper	--	47,000	47,000	9.1-96.4	**47,000**
Lead	500	800	^^	12.4-97.1	**500**
Mercury (elemental)	4.5	46	190	0.1-0.9	**4.5**
Molybdenum	--	5,800	5,800	0.1-9.6	**5,800**
Nickel	3,100	18,000	11,000	9-509	**3,100**
Selenium	--	5,800	5,800	0.015-0.430	**5,800**
Silver	1,500	5,800	5,800	0.1-8.3	**1,500**
Thallium	--	12	12	0.17-1.1	**12**
Vanadium	1,000	5,800	5,800	39-288	**1,000**
Zinc	--	350,000	350,000	88-236	**350,000**

Notes:

-- = Not Established

COPC = Constituents of Potential Concern

DTSC-Recommended SL = Department of Toxic Substance Control Human and Ecological Rick Office (HERO) Note 3 Screening Level (June 2020; Revised May 2022)

USEPA RSL = United States Environmental Protection Agency Regional Screening Level (November 2024)

SFRWQCB ESLs = San Francisco Bay Regional Water Quality Control Board's Environmental Screening level (January 2019)

^ = In HERO Note No. 11, DTSC indicated that mitigation and remediation is not usually taken to reduce the concentration of contaminants below ambient levels. Collated a data set of arsenic concentrations in soil from five Southern California counties (Los Angeles, Orange, Riverside, San Bernardino, and San Diego), which established an upper-bound estimate of the regional ambient arsenic soil concentration that can be used as a screening tool for sites throughout Southern California. DTSC Site Mitigation and Restoration Program (SMRP) made a risk management decision on the acceptability of estimated risk associated and stated that site-specific soil concentrations which exceed 12 mg/kg may be indicative of a release.

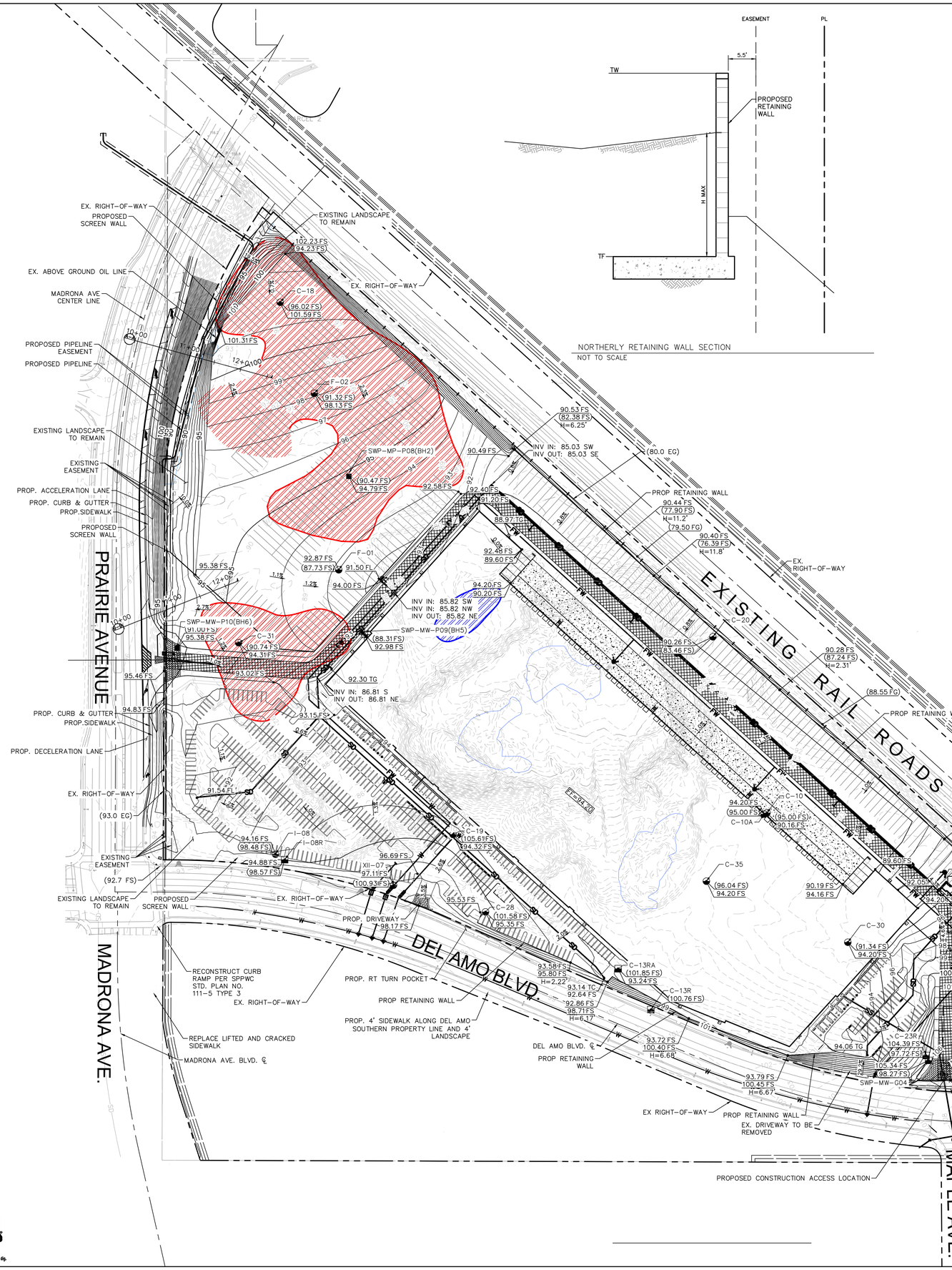
^ ^= DTSC-Recommended SL will be used for soil reuse screening criteria for lead based on DTSC HERO Note 4 (March, 2022) revisions to the LeadSpread model to include updates to the lead exposure parameters

* = Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Fampton, J.A., and Wright, H., 1996, Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation of Soil Science Special Report, Division of Agriculture and Natural Resources, University of California.

Appendix A

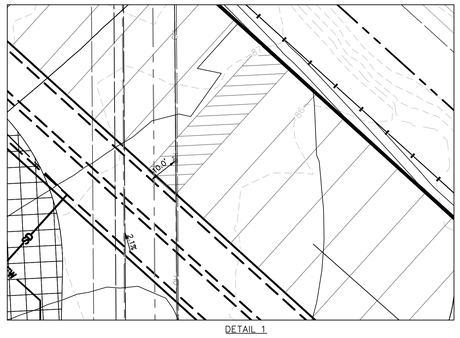
Property Redevelopment Plan and

Conceptual Grading Plans

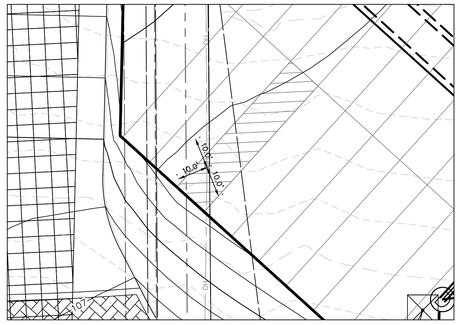


NORTHERLY RETAINING WALL SECTION
NOT TO SCALE

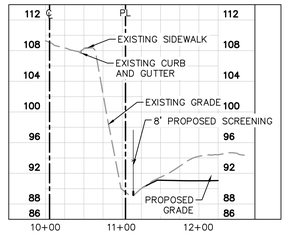
ELECTRICAL POLE DETAILS
SCALE 1:20



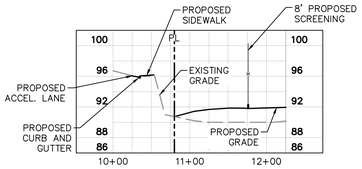
DETAIL 1



DETAIL 2



A–A SECTION
1:80 H AND 1:8 V



B–B SECTION
1:80 H AND 1:8 V

LEGEND

- PROPERTY LINE
- RIGHT–OF–WAY LINE
- CENTER LINE
- EASEMENT LINE
- LIMITS OF GRADING
- SD — PROPOSED STORM DRAIN PIPE
- FLOW LINE
- POINT OF CONNECTION (@ BLDG)
- POINT OF CONNECTION (TO EXISTING)
- PIPE END CAP
- PROPOSED CLEANOUT
- STORM DRAIN AND SANITARY SEWER MANHOLE
- MONITORING WELLS

SITE DATA

SITE AREA:	1,364,209 SF (31.318 AC)
BUILDING AREA:	403,033 SF (9.252 AC)
FLOOR AREA RATIO (FAR):	403,033 SF/1,364,209 SF = 0.30 FAR

NOTE

PER CONDITIONS OF APPROVAL FOR FUTURE EQUESTRIAN FACILITY ON THE SOUTH SIDE OF DEL AMO BLVD:

1. REPLACE LIFTED, AND CRACKED SIDEWALK ON MADRONA AVE. AND SOUTH SIDE OF DEL AMO BLVD. ALONG FUTURE EQUESTRIAN FACILITY FRONTAGE PER CITY OF TORRANCE STD. NO. T102.
2. REPLACE EXISTING WHEELCHAIR RAMP AT SOUTHEAST CORNER OF MADRONA AVE. AND DEL AMO BLVD.
3. MAINTAIN 4' SIDEWALK ALONG DEL AMO SOUTHERN PROPERTY LINE AND REPLACE REMAINING 4' WITH APPROVED DROUGHT TOLERANT LANDSCAPING.
4. MAINTAIN AND REPAIR EXISTING PERIMETER CHAIN LINK FENCE AND PRIVACY SCREEN ON THE SOUTH SIDE OF DEL AMO BLVD.

NOTE

ALL EXISTING TREES WITHIN THE LIMITS OF IMPROVEMENTS WILL BE DEMOLISHED. ALL EXISTING TREES WITHIN THE PUBLIC RIGHT–OF–WAY, NOT AFFECTED BY PROPOSED DRIVEWAY APPROACH AND DECELERATION/ACCELERATION LANES, WILL BE PROTECTED IN PLACE.

ESTIMATED EARTHWORK QUANTITIES

CUT:	49,200 CY
FILL:	340,700 CY
NET:	291,500 CY (FILL)

NOTE: THE EARTHWORK QUANTITIES ABOVE ARE FOR PERMIT PURPOSES ONLY. THE CONTRACTOR IS NOT AUTHORIZED TO USE THE ESTIMATES HEREIN FOR BIDDING AND CONSTRUCTION PURPOSES WITHOUT THE EXPLICIT WRITTEN PERMISSION OF THE ENGINEER OF RECORD. NO REPRESENTATIONS OF SUCH QUANTITIES OR A BALANCED SITE CONDITION ARE MADE BY THE ENGINEER OF RECORD.

UNLESS EXPLICITLY STATED OTHERWISE HEREIN, THE ABOVE QUANTITIES ARE APPROXIMATE, IN PLACE VOLUMES CALCULATED FROM THE EXISTING GROUND TO THE PROPOSED FINISHED GRADE. EXISTING GROUND IS DEFINED BY THE CONTOURS AND SPOT GRADES ON THE BASE SURVEY. PROPOSED FINISHED GRADE IS DEFINED AS THE FINAL GRADE AS INDICATED ON THE GRADING PLAN(S) AS FINISHED GROUND, FINISHED SURFACE, AND FINISHED FLOOR ELEVATIONS.

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NORTH

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0 40 80 160

No.	REVISIONS	DATE	BY

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NOT FOR CONSTRUCTION

KHA PROJECT	194187001
DATE	9/23/2024
SCALE	AS SHOWN
DESIGNED BY	ML
DRAWN BY	CL
CHECKED BY	JM

DATE:

PRELIMINARY GRADING PLAN

TORRANCE REFINERY

PREPARED FOR
TORRANCE BLACK BEAUTY, LLC

CITY OF TORRANCE CA

C1

Plotted By:Gutierrez, Kevin Sheet Set:Kha Layout:C1 PRELIMINARY GRADING PLAN September 23, 2024 01:54:47pm K:\ORA_LDE\V\194187001 – Prologis Torrance\CAD\PlanSheets\PRELIM GRADING\C1 GRADING AND DRAINAGE PLAN.dwg
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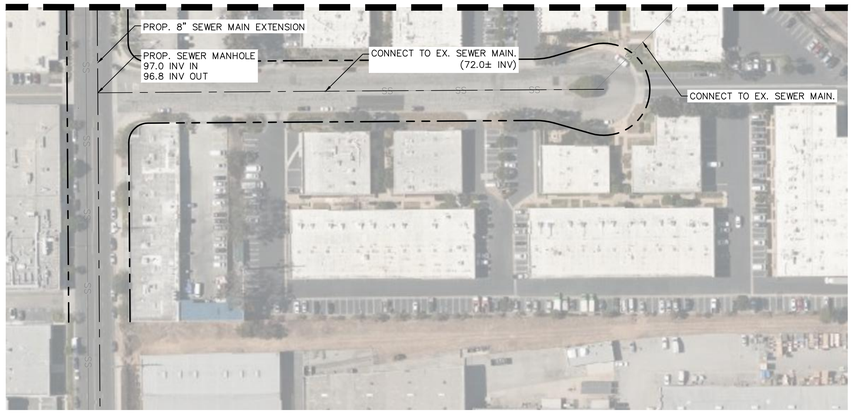
LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- CENTER LINE
- EASEMENT LINE
- SD — PROPOSED STORM DRAIN PIPE
- FLOW LINE
- POINT OF CONNECTION (@ BLDG)
- POINT OF CONNECTION (TO EXISTING)
- PIPE END CAP
- PROPOSED CLEANOUT
- D S — STORM DRAIN AND SANITARY SEWER MANHOLE
- MONITORING WELLS

UTILITY NOTES

1. ABANDON ALL EXISTING UNUSED SERVICES AT THE MAIN.
2. A METER AND DOUBLE CHECK VALVE SHALL BE INSTALLED AT EACH POINT OF CONNECTION FOR PROPOSED ONSITE FIRE HYDRANTS.

PROPOSED SEWER EXTENSION MATCH LINE



EX. DRAINAGE CHANNEL
EX. ABOVE GROUND OIL LINE
EX. RAIL 20' EASEMENT
EX. PROPERTY LINE
EXISTING RAIL ROADS
PRAIRIE AVENUE
MADRONA AVE.
DEL AMO BLVD
PROPOSED BUILDING FFE=94.20
PROP. HYDRANT (TYP.)
PROP. 10" FIRE WATER
SWP-MW-P10(BH6)
SWP-MW-P09(BH5)
SWP-MP-P08(BH2)
F-01
F-02
C-18
C-31
C-20
C-10
C-10A
C-35
C-19
C-28
C-30
C-13RA
C-13R
C-29
C-23R
WATER BUILDING POC
PROP. BACKFLOW PREVENTER (TYP.)
I-08
I-08R
XII-07
PROP. WATER METER
EX. HYDRANT (TYP.)
EX. WATER
EX. SEWER
EX. STORM DRAIN
EX. RIGHT OF WAY
RELOCATE EX. LIGHT POLE
PROP. 12" WATER MAIN POC
PROP. 2" IRRIG. SERV.
PROP. 3" WATER SERV.
PROP. 10" FIRE SERV.
PROP. 12" WATER MAIN APPROX. 1450 LF
MADRONA AVE. BLVD. ℄
DEL AMO BLVD. ℄
SEWER BUILDING POC 77.8 INV
PROP. SIDEWALK EASMENT
PROP. SEWER LIFT STATION 76.8 INV IN 100.9 INV OUT
SWP-MW-G04
GP-10
PROP. 8" SEWER.
EX. POWER POLE TO REMAIN
EX. OVERHEAD UTILITY
EX. RIGHT-OF-WAY
PROPOSED PUBLIC SEWER LINE MAIN EXTENSION TO OREGON CT SEWER MAIN APPROX. 750 LF
PROP. 12" WATER MAIN POC
PROP. 8" GRAVITY SEWER
PROP. SEWER LATERAL FOR FUTURE DEVELOPMENT
MAPLE AVE. ℄
PROP. SEWER MANHOLE 99.0 INV IN 98.9 INV OUT
PROPOSED SEWER EXTENSION MATCH LINE ABOVE

NORTH
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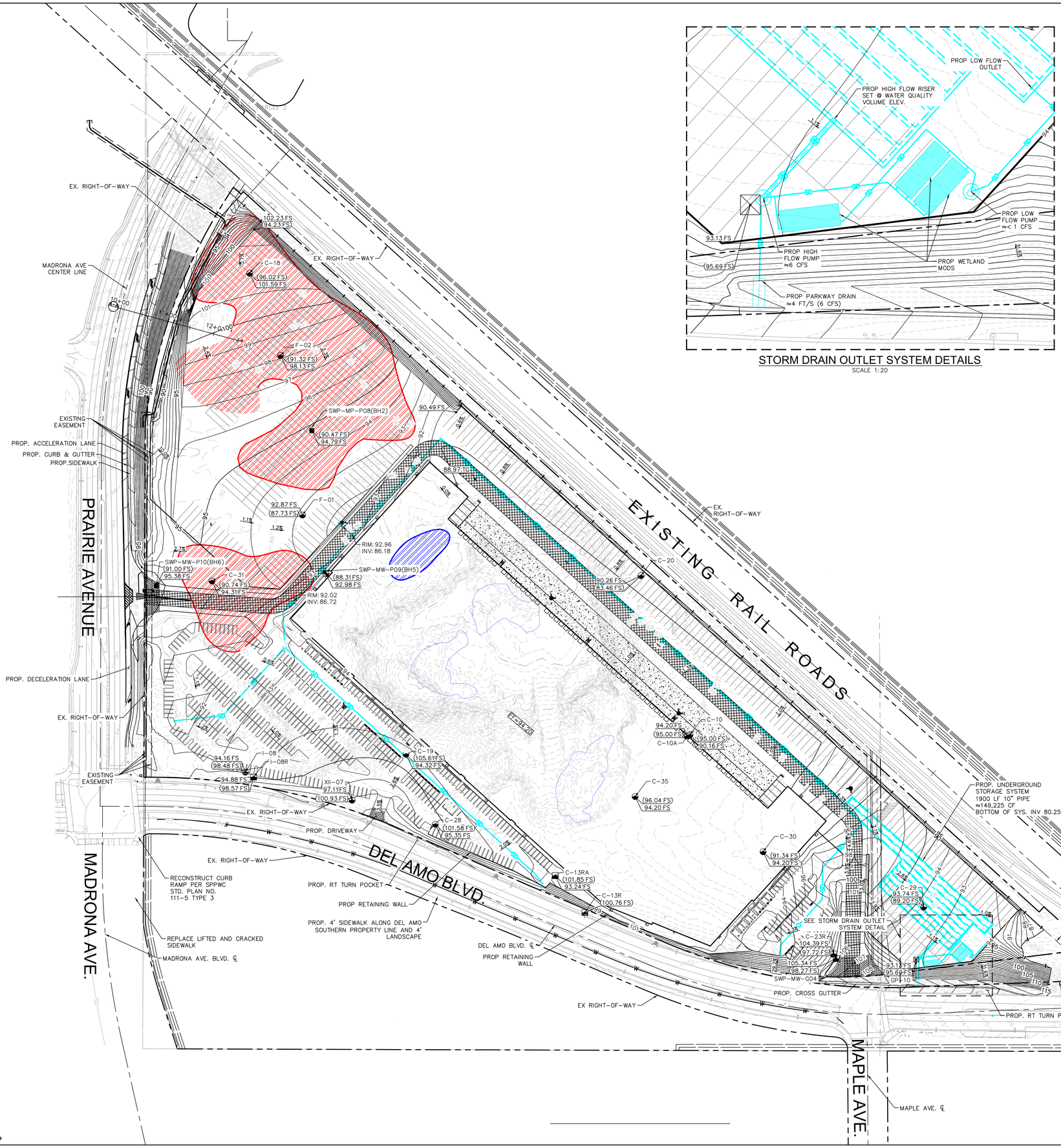
KHA PROJECT	194187001
DATE	9/23/2024
SCALE	AS SHOWN
DESIGNED BY	ML
DRAWN BY	CL
CHECKED BY	JM

PRELIMINARY UTILITY PLAN

TORRANCE REFINERY
PREPARED FOR
TORRANCE BLACK BEAUTY, LLC
CITY OF TORRANCE CA

2

Plotted By:Gutierrez, Kevin Sheet Set:Kha Layout:C2 PRELIMINARY UTILITY PLAN September 23, 2024 01:55:07pm K:\ORA_LDEV\194187001 — Prologis Torrance\CAD\PlanSheets\PRELIM GRADING\2 UTILITY PLAN.dwg
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STORM DRAIN OUTLET SYSTEM DETAILS

SCALE 1:20

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- CENTER LINE
- EASEMENT LINE
- LIMITS OF GRADING
- PROPOSED STORM DRAIN PIPE
- FLOW LINE
- POINT OF CONNECTION (@ BLDG)
- POINT OF CONNECTION (TO EXISTING)
- PIPE END CAP
- PROPOSED CLEANOUT
- STORM DRAIN AND SANITARY SEWER MANHOLE
- WETLAND MODS
- MONITORING WELLS

SITE DATA

SITE AREA:	1,364,209 SF (31.318 AC)
BUILDING AREA:	403,033 SF (9.252 AC)
FLOOR AREA RATIO (FAR):	403,033 SF/1,364,209 SF = 0.30 FAR

NOTE

PER CONDITIONS OF APPROVAL FOR FUTURE EQUESTRIAN FACILITY ON THE SOUTH SIDE OF DEL AMO BLVD:

1. REPLACE LIFTED, AND CRACKED SIDEWALK ON MADRONA AVE. AND SOUTH SIDE OF DEL AMO BLVD. ALONG FUTURE EQUESTRIAN FACILITY FRONTAGE PER CITY OF TORRANCE STD. NO. T102.
2. REPLACE EXISTING WHEELCHAIR RAMP AT SOUTHEAST CORNER OF MADRONA AVE. AND DEL AMO BLVD.
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ESTIMATED EARTHWORK QUANTITIES

CUT:	49,200 CY
FILL:	340,700 CY
NET:	291,500 CY (FILL)

NOTE: THE EARTHWORK QUANTITIES ABOVE ARE FOR PERMIT PURPOSES ONLY. THE CONTRACTOR IS NOT AUTHORIZED TO USE THE ESTIMATES HEREIN FOR BIDDING AND CONSTRUCTION PURPOSES WITHOUT THE EXPLICIT WRITTEN PERMISSION OF THE ENGINEER OF RECORD. NO REPRESENTATIONS OF SUCH QUANTITIES OR A BALANCED SITE CONDITION ARE MADE BY THE ENGINEER OF RECORD.

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NORTH

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No.	REVISIONS	DATE	BY

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DATE:

KHA PROJECT 194187001

DATE 9/23/2024

SCALE AS SHOWN

DESIGNED BY ML

DRAWN BY CL

CHECKED BY JM

TORRANCE REFINERY

PREPARED FOR

TORRANCE BLACK BEAUTY, LLC

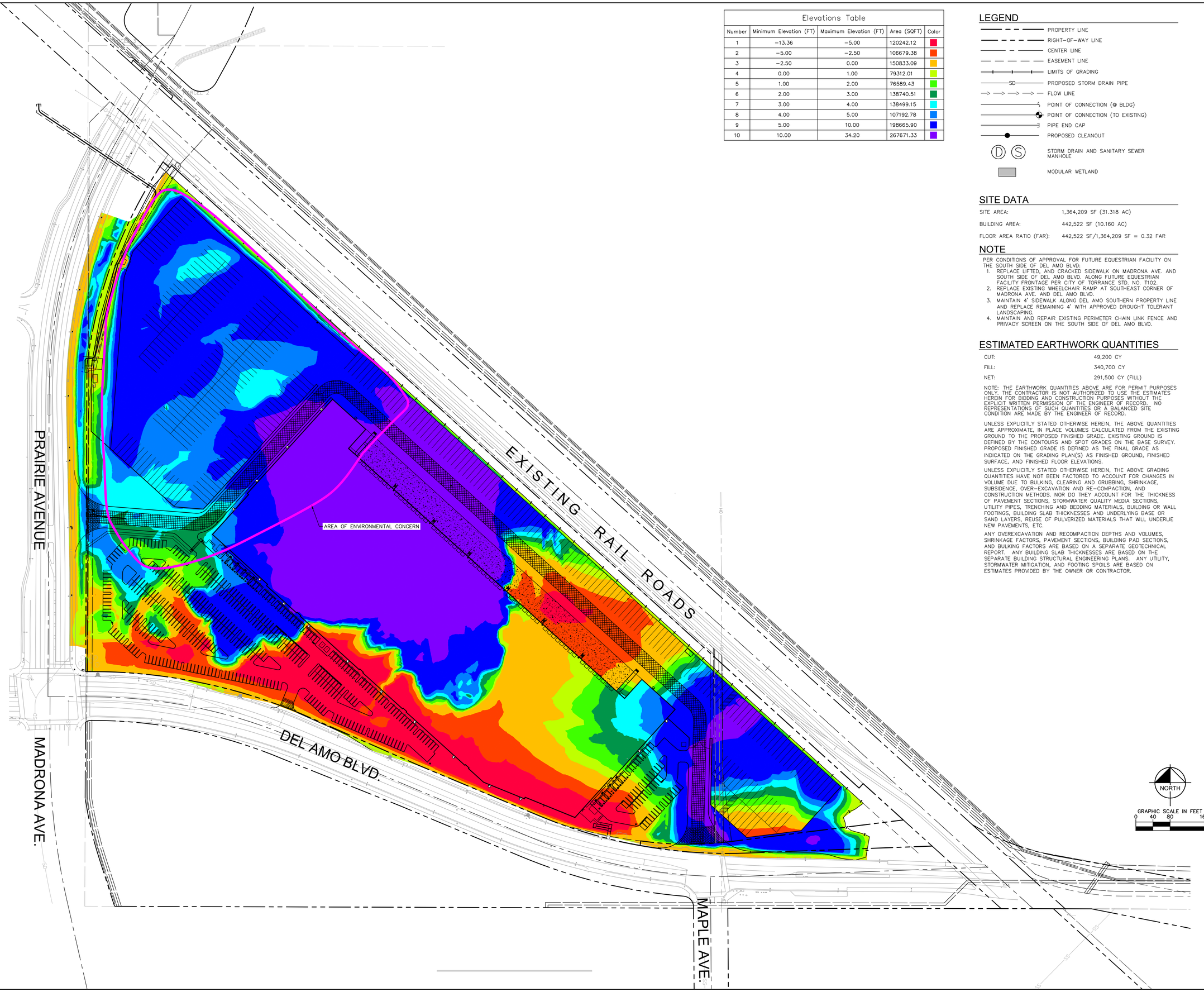
CITY OF TORRANCE CA

PRELIMINARY DRAINAGE PLAN

C3

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Elevations Table				
Number	Minimum Elevation (FT)	Maximum Elevation (FT)	Area (SQFT)	Color
1	-13.36	-5.00	120242.12	
2	-5.00	-2.50	106679.38	
3	-2.50	0.00	150833.09	
4	0.00	1.00	79312.01	
5	1.00	2.00	76589.43	
6	2.00	3.00	138740.51	
7	3.00	4.00	138499.15	
8	4.00	5.00	107192.78	
9	5.00	10.00	198665.90	
10	10.00	34.20	267671.33	

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- CENTER LINE
- EASEMENT LINE
- LIMITS OF GRADING
- SD — PROPOSED STORM DRAIN PIPE
- FLOW LINE
- POINT OF CONNECTION (@ BLDG)
- POINT OF CONNECTION (TO EXISTING)
- PIPE END CAP
- PROPOSED CLEANOUT
- D S — STORM DRAIN AND SANITARY SEWER MANHOLE
- MODULAR WETLAND

SITE DATA

SITE AREA:	1,364,209 SF (31.318 AC)
BUILDING AREA:	442,522 SF (10.160 AC)
FLOOR AREA RATIO (FAR):	442,522 SF/1,364,209 SF = 0.32 FAR

NOTE

PER CONDITIONS OF APPROVAL FOR FUTURE EQUESTRIAN FACILITY ON THE SOUTH SIDE OF DEL AMO BLVD:

1. REPLACE LIFTED, AND CRACKED SIDEWALK ON MADRONA AVE. AND SOUTH SIDE OF DEL AMO BLVD. ALONG FUTURE EQUESTRIAN FACILITY FRONTAGE PER CITY OF TORRANCE STD. NO. T102.
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ESTIMATED EARTHWORK QUANTITIES

CUT:	49,200 CY
FILL:	340,700 CY
NET:	291,500 CY (FILL)

NOTE: THE EARTHWORK QUANTITIES ABOVE ARE FOR PERMIT PURPOSES ONLY. THE CONTRACTOR IS NOT AUTHORIZED TO USE THE ESTIMATES HEREIN FOR BIDDING AND CONSTRUCTION PURPOSES WITHOUT THE EXPLICIT WRITTEN PERMISSION OF THE ENGINEER OF RECORD. NO REPRESENTATIONS OF SUCH QUANTITIES OR A BALANCED SITE CONDITION ARE MADE BY THE ENGINEER OF RECORD.

UNLESS EXPLICITLY STATED OTHERWISE HEREIN, THE ABOVE QUANTITIES ARE APPROXIMATE, IN PLACE VOLUMES CALCULATED FROM THE EXISTING GROUND TO THE PROPOSED FINISHED GRADE. EXISTING GROUND IS DEFINED BY THE CONTOURS AND SPOT GRADES ON THE BASE SURVEY. PROPOSED FINISHED GRADE IS DEFINED AS THE FINAL GRADE AS INDICATED ON THE GRADING PLAN(S) AS FINISHED GROUND, FINISHED SURFACE, AND FINISHED FLOOR ELEVATIONS.

UNLESS EXPLICITLY STATED OTHERWISE HEREIN, THE ABOVE GRADING QUANTITIES HAVE NOT BEEN FACTORED TO ACCOUNT FOR CHANGES IN VOLUME DUE TO BULKING, CLEARING AND GRUBBING, SHRINKAGE, SUBSIDENCE, OVER-EXCAVATION AND RE-COMPACTION, AND CONSTRUCTION METHODS. NOR DO THEY ACCOUNT FOR THE THICKNESS OF PAVEMENT SECTIONS, STORMWATER QUALITY MEDIA SECTIONS, UTILITY PIPES, TRENCHING AND BEDDING MATERIALS, BUILDING OR WALL FOOTINGS, BUILDING SLAB THICKNESSES AND UNDERLYING BASE OR SAND LAYERS, REUSE OF PULVERIZED MATERIALS THAT WILL UNDERLIE NEW PAVEMENTS, ETC.

ANY OVEREXCAVATION AND RECOMPACTION DEPTHS AND VOLUMES, SHRINKAGE FACTORS, PAVEMENT SECTIONS, BUILDING PAD SECTIONS, AND BULKING FACTORS ARE BASED ON A SEPARATE GEOTECHNICAL REPORT. ANY BUILDING SLAB THICKNESSES ARE BASED ON THE SEPARATE BUILDING STRUCTURAL ENGINEERING PLANS. ANY UTILITY, STORMWATER MITIGATION, AND FOOTING SPOILS ARE BASED ON ESTIMATES PROVIDED BY THE OWNER OR CONTRACTOR.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
945 E THIRD ST, LONG BEACH, CA 90802
PHONE: 714-939-1030 FAX: 714-938-9488
WWW.KIMLEY-HORN.COM

NOT FOR CONSTRUCTION

KHA PROJECT	194187001
DATE	9/23/2024
SCALE	AS SHOWN
DESIGNED BY	ML
DRAWN BY	CL
CHECKED BY	JM

PRELIMINARY GRADING HEAT MAP

TORRANCE REFINERY

PREPARED FOR
TORRANCE BLACK BEAUTY, LLC

CITY OF TORRANCE, CA

C4

Plotted By:Gutierrez, Kevin Sheet Set:Kha Layout:C1 PRELIMINARY GRADING PLAN September 23, 2024 01:56:15pm K:\ORA_LDEV\194187001 - Proloqis Torrance\CAD\PlanSheets\PRELIM GRADING\Grading Heat map.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.
811 Know what's below. Call 811 before you dig.

Appendix B

Asbestos Abatement Clearance Report

Asbestos Abatement Clearance Report

3041 Del Amo Boulevard

Torrance, California 91325

March 27, 2025 | Terracon Project Number: LA247394

Prepared for:

AMPCO Contracting, Inc.
Irvine, California



Terracon
Explore with us

Nationwide
Terracon.com

- Facilities
- Environmental
- Geotechnical
- Materials

145 W. Walnut Street
Carson, California
P (310) 627-3430
Terracon.com

March 27, 2025

AMPCO Contracting, Inc.
17991 Cowan
Irvine, California 92614

Attn: Mr. Colin Padilla
P: (909) 376-3194
E: cpadilla@ampcocontracting.com

RE: Asbestos Visual Clearance Inspection Report
3041 Del Amo Boulevard
Torrance, California 91325
Terracon Project Number: LA247394

Dear Mr. Padilla:

Terracon Consultants, Inc. (Terracon) conducted a visual clearance inspection on February 28, 2025, following abatement of surface level asbestos-containing material (ACM) identified in Terracon report, dated October 14, 2024, and reported findings of a May, 2020 survey by SCS Engineers. The visual clearance inspection was performed by Mark Korte, a California Occupational Safety and Health Administration (Cal/OSHA) Certified Asbestos Consultant (CAC).

The purpose for the asbestos abatement was to properly remove previously identified asbestos consistent with and following the approved alternative outline in Terracon's South Coast Air Quality Management District (SCAQMD) Procedure 5 Abatement Work Plan. Approximately 400 total square feet of the ACM debris was removed.

Terracon was not present during abatement activities.

Following the reported completion of abatement activities, Terracon performed a visual inspection of the regulated work area on the undeveloped land at the subject address to ensure all known visible ACMs scheduled for removal had been satisfactorily removed.

Table I
Post Abatement Work Area Clearance

Date of Clearance	Location of Demarcated Area	Pass/Fail
February 28, 2025	Exterior Demarcated Area	Visual Pass

Following the completion of the visual inspection, Terracon informed the client of the findings of visual clearance inspection of the exterior demarcated work area. Terracon advised that demarcated barriers could be removed and the areas were cleared for un-regulated work.

Copies of the inspector visual clearance inspection form and inspector certification are attached to this letter.

Terracon appreciates this opportunity to provide environmental consulting services to AMPCO Contracting, Inc. If additional information is needed, feel free to contact the undersigned at (949) 383-1977.

Sincerely,

Terracon Consultants, Inc.

Mark Korte, CAC
Project Manager

Chris Blake, CAC
Senior Project Manager

ATTACHMENTS: Visual Clearance Form, Inspector Certification

VISUAL CLEARANCE FORM

February 28, 2025

Terracon

Southern California Metro
Los Angeles – Orange County – Inland Empire – San Diego

ABATEMENT FINAL CLEARANCE

PAGE ____OF_____

PROJECT NAME:	Del Amo P5 Abatement	**TERRACON PROJECT #:**	LA247394
SITE ADDRESS:	3041 Del Amo Blvd, Torrance	**DATE:**	2/28/2025
CLIENT CONTACT:		**TIME:**	8am
CLIENT PHONE #:			
ABATEMENT CONTRACTOR:	TriSpan	**CONTRACTOR SUPERVISOR:**	
CLEARANCE AREA:	Undeveloped Land		

[x] **Clearance by Visual Inspection**

In accordance with Cal/OSHA and the local air quality management district, the Terracon representative has visually inspected the surfaces in and around the regulated work area and has observed no visible asbestos-containing debris, residue or wastes from the area where asbestos was specified for removal. Exceptions to this statement are noted below. Each exception has been corrected as of the date listed:

DEFICIENCY	DATE AND TIME CORRECTED

[ ] **Clearance by Air Sampling and Analysis**

Terracon Representative hereby certified that air samples from the regulated work area have been collected in accordance with all applicable regulations and specifications. All samples were analyzed in the field by NIOSH 582 certified personnel or an appropriately accredited laboratory. Results of the final air sampling are attached.

Comments:

The regulated abatement area may be: _____ REOCCUPIED ___x___ RENOVATED/DEMOLISHED

Terracon Representative Name:

Mark Korte

Terracon Representative Signature:

Certification Number:
19-6503

Date:

INSPECTOR CERTIFICATIONS

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Mark A Korte

Name



Certification No. **19-6503**

Expires on **05/15/2026**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq of the Business and Professions Code.

Appendix C

SCAQMD Rules

(Adopted August 5, 1988)(Amended July 14, 1995)(Amended May 11, 2001)

RULE 1166. VOLATILE ORGANIC COMPOUND EMISSIONS FROM DECONTAMINATION OF SOIL

(a) Applicability

This rule sets requirements to control the emission of Volatile Organic Compounds (VOC) from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.

(b) Definitions

(1) EXCAVATION is the process of digging out and removing materials, including any material necessary to that process such as the digging out and removal of asphalt or concrete necessary to expose, dig out and remove known VOC contaminated soil.

(2) GRADING is the process of leveling off to produce a smooth surface including the removal of any material necessary to that process such as asphalt and concrete necessary to expose known VOC contaminated soil.

(3) SOIL DECONTAMINATION MEASURE is any process approved by the Executive Officer to remediate, destroy, remove, or encapsulate VOC and VOC-contaminated soil.

(4) UNDERGROUND STORAGE TANK means any one or combination of tanks, including pipes connected thereto, which is used for the storage of organic liquid which is more than 50% beneath the surface of the ground.

(5) VOC CONTAMINATED SOIL is a soil which registers a concentration of 50 ppm or greater of Volatile Organic Compounds as measured before suppression materials have been applied and at a distance of no more than three inches from the surface of the excavated soil with an organic vapor analyzer calibrated with hexane.

(6) VOC CONTAMINATED SOIL MITIGATION PLAN is a plan to minimize VOC emissions to the atmosphere during excavation and any subsequent handling of VOC-contaminated soil.

(7) VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds. Exempt compounds are defined in Rule 102—Definition Of Terms.

(8) VOLATILE ORGANIC MATERIALS include gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvent, resin, monomer, and/or any other material containing VOC.

(c) Requirements

(1) A person excavating an underground storage tank and/or transfer piping storing or previously storing VOC materials, or excavating or grading soil containing VOC materials shall:

(A) Apply for, obtain and operate pursuant to a mitigation plan approved by the Executive Officer prior to commencement of excavation or handling. The mitigation plan general requirement and application requirements are found in Attachment A to this rule. A copy of the approved plan must be on site during the entire excavation period.

(B) Notify the Executive Officer at least 24 hours prior to excavation using a form approved by the Executive Officer which is fully completed.

If the excavation does not commence on start date, renotification is required.

An alternative notification procedure may be authorized for multiple excavations within a single facility, with prior written approval from the Executive Officer.

(C) Monitor for VOC contamination pursuant to subdivision (e), at least once every 15 minutes commencing at the beginning of excavation or grading and record all VOC concentration readings in a format approved by the Executive Officer; and

(D) When VOC-contaminated soil is detected during excavation or grading:

(i) Implement the approved mitigation plan (Attachment A).

(ii) Notify the Executive Officer within 24 hours of detection of VOC-contaminated soil.

(iii) Monitor and record VOC concentration readings as prescribed in the plan. Monitoring records must be kept available on site.

(iv) Keep calibration records for all monitoring instruments available on site.

(2) A person handling VOC-contaminated soil at or from an excavation or grading site shall:

(A) Segregate VOC-contaminated stockpiles from non-VOC contaminated stockpiles such that mixing of the stockpiles does not take place.

(B) Spray VOC-contaminated soil stockpiles with water and/or approved vapor suppressant and cover them with plastic sheeting for all periods of inactivity lasting more than one hour.

(C) Conduct a daily visual inspection of all covered VOC contaminated soil stockpiles to ensure the integrity of the plastic covered surfaces. A daily inspection record must be maintained on site.

(D) Comply with the provisions in subparagraph (c) (1)(A) and clause (c)(1)(D)(i).

(E) Maintain a record of the identification and business addresses of the generator, transporter and storage/treatment facilities. Such record shall be signed by each party at the time custody is transferred.

(F) Treat or remove contaminated soil from an excavation or grading site within 30 days from the time of excavation.

(3) If the VOC concentration in the excavated soil is measured at greater than 1000 ppm, spray the soil with water or vapor suppressant and:

(A) As soon as possible, but not more than 15 minutes, place the soil in sealed containers, or

(B) As soon as possible, but not more than 15 minutes, load into trucks, moisten with additional water, cover and transport off site, or

(C) Implement other alternative storage methods approved in writing by the Executive Officer.

(4) A person treating VOC-contaminated soil shall:

(A) Obtain a permit to construct and operate treatment equipment, as applicable, from the Executive Officer, and

(B) Implement VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology applied during all segments, and which include, but are not limited to, at least one of the following:

(i) Installation and operation of an underground VOC collection system and a disposal system prior to excavation.

(ii) Collection and disposal of the VOC from the excavated soil on-site using equipment approved by the Executive Officer.

(iii) Any equivalent VOC-contaminated soil control measure previously approved in writing by the Executive Officer.

(5) A person shall not engage in or allow any on-site or off-site spreading, grading or screening of VOC-contaminated soil, which results in uncontrolled evaporation of VOC to the atmosphere.

(6) Loading trucks for contaminated soil must meet the following:

(A) The truck and trailer shall be adequately tarped prior to leaving the site; no excavated materials shall extend above the sides or rear of the truck or trailer to prevent soil spillage during transport, and

(B) The exterior of the truck, trailer and tires shall be cleaned off prior to the truck leaving the site.

(d) Exemptions

(1) The provisions of this rule shall not apply to the following:

(A) Excavation, handling, and treating of less than one (1) cubic yard of contaminated soil.

(B) Removal of soil for sampling purposes.

(C) Accidental spillage of five (5) gallons or less of VOC containing material.

(2) The provisions of paragraphs (c)(1) and (c)(2) shall not apply to soil excavation or handling as a result of an emergency as declared by an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. Whenever possible, the Executive Officer shall be notified by telephone prior to commencing such excavation. The Executive Officer shall be notified in writing no later than 48 hours following such excavation. Written notification shall include written emergency declaration from the authorized officer.

(e) Test Methods

(1) A person shall measure excavated soils for volatile organic compounds to determine contamination by:

(A) Using an organic vapor analyzer calibrated with hexane, complying with 40 CFR Part 60 Appendix A, EPA Reference Method 21 Section 3 or any equivalent method with prior approval in writing by the Executive Officer. If other calibrating gases are used, then the measured readings shall be correlated to and expressed as hexane.

(B) Placing the probe inlet at a distance of no more than three inches from the surface of the excavated soil and while slowly moving the probe across the soil surface, observe the instrument readout. If an increased meter reading is observed, continue to sample the excavated soil until the maximum meter reading is obtained. Leave the probe inlet at this maximum reading location for approximately double the instrument response time. If the maximum observed meter reading is greater than the 50 ppm standard in the regulation, record and report the results.

(2) The presence of VOC in stored or spillage materials shall be determined by SCAQMD Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in Headspace] and/or Method 304 (Determination of Volatile Organic Compounds in Various Materials) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(f) Enforcement

(1) Violation of any provision of this rule or the violation of the approved mitigation plan shall be grounds for the Executive Officer to amend or revoke the mitigation plan, in addition to penalties provided by the Health & Safety Code.

(2) If the owner or operator is served with a Notice of Violation for creating a public nuisance, the owner or operator shall suspend operation until the public nuisance is mitigated to the satisfaction of the Executive Officer.

ATTACHMENT A
GENERAL MITIGATION PLANS REQUIREMENTS

VOC Contaminated Soil Mitigation Plans shall be written to minimize VOC emissions to the atmosphere during excavation, grading, handling and treatment of VOC contaminated soil. VOC Contaminated Soil Mitigation Plans shall consist of three types: Various Locations, Site Specific and Facility Treatment.

(1) General Requirements

(A) A plan is not transferable.

(B) A person responsible for the excavation, grading or handling of VOC contaminated soil must be completely familiar with the plan and must adhere to the plan requirement. The Executive Officer may require that the plan be signed by the owner and/or operator.

(C) A plan may be amended upon renewal.

(D) Permission to excavate, grade or handle VOC contaminated soil may be withdrawn by the District upon a finding by the Executive Officer that the excavation, grading or handling of the VOC contaminated soil is causing a public nuisance or violating other AQMD rules or regulations.

(2) Various Location Plans:

(A) Shall be limited to the excavation of 2000 cubic yards or less of VOC contaminated soil in any consecutive 12 month period at the same site.

(B) Shall not be used in conjunction with any other various location plan at the same site within a consecutive 12-month period.

(C) Shall expire after one year from issuance unless renewed.

(D) Shall not be issued for nor used for operations that involve grading, soil treatment or remediation, or landfills.

(3) Site Specific Plans:

(A) Shall be for excavation of greater than 2000 cubic yards of VOC contaminated soil.

(B) Shall be issued for specific excavation or grading locations for a period not to exceed two years.

(C) Shall not be renewable.

(4) Facility Treatment Plans:

(A) Shall be issued for a treatment facility at a permanent location.

(B) Shall expire after one year from issuance unless renewed.

(5) Applications for Site Specific Plans shall contain as a minimum:

(A) Reasons for excavation or grading.

(B) Cause of VOC soil contamination and history of the site.

(C) Description of tanks or piping associated with the soil contamination.

(D) An estimate of the amount of contaminated soil.

(E) The operating schedule for excavation and removal.

(F) Description of how the excavation or grading will be conducted.

(G) Description of mitigation measures for dust, odors and VOC.

(H) Details of disposal of VOC contaminated soil, including the ultimate receptor.

(I) Description of monitoring equipment and techniques.

(J) A map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential areas or other sensitive receptors such as hospitals or locations where children or elderly people live or work.

(K) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.

(6) Applications for Facility Treatment Plans shall at a minimum:

(A) Include a list of all AQMD permits to construct or operate which have been issued for that treatment and control equipment.

(B) Provide for the implementation of VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology during all operations.

(C) Provide a map showing the facility layout including the location of all proposed VOC and non-VOC contaminated soil stockpiles.

(D) Specify the total amount of VOC contaminated soil proposed to be stockpiled on site.

(E) Provide for VOC contaminated soil stockpiles to be kept moist with water or suppressant and be covered to prevent fugitive emissions.

(F) Provide for VOC contaminated soil stockpiles to be segregated from non-VOC contaminated soil stockpiles.

(G) Provide for maintenance of records for stockpiles according to the source name, address and dates of reception.

(H) Provide for records of the generator, transporter and storage/treatment facilities and indicate their identification and business addresses. Such records shall be signed by each party at the time custody is transferred.

(I) Provide a map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential area or other sensitive receptors such as hospitals, or locations where children or elderly people live or work.

(J) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.

(K) Specify the operating schedule and maximum amount of VOC-contaminated soil proposed to be remediated on a daily basis.

(7) In approving a plan, the Executive Officer require reasonable conditions deemed necessary to ensure the operations comply with the plan and AQMD rules. The conditions may include, but shall not be limited to, procedures for ensuring responsibility for the implementation of the plan, accessibility to the site for AQMD staff, notification of actions required by the plan, identification of emission receptors, monitoring and testing, suppression and covering of stockpiles, prevention of public nuisance from VOC or dust emissions, prevention of fugitive emissions of VOC contaminated soil, loading of truck trailers, and disposal and treatment.

(8) In approving a plan, the Executive Officer may require any records deemed necessary to be maintained by the operator to demonstrate compliance with the plan. Such records shall be retained for at least 2 years and be made available to the Executive officer upon request.

(Adopted July 7, 2017)(Amended December 1, 2017)(Amended June 4, 2021)

RULE 1466. CONTROL OF PARTICULATE EMISSIONS FROM SOILS WITH TOXIC AIR CONTAMINANTS

(a) Purpose

The purpose of this rule is to minimize the amount of off-site fugitive dust emissions containing toxic air contaminants by reducing particulate emissions in the ambient air as a result of earth-moving activities, including, dredging, excavating, grading, earth-cutting and filling, loading, unloading, handling, mechanized land clearing, treating, stockpiling, transferring, and removing of soil that contains applicable toxic air contaminants, from sites that meet the applicability requirements of subdivision (b).

(b) Applicability

(1) This rule shall apply to any owner or operator conducting earth-moving activities of soil with applicable toxic air contaminant(s) as defined in paragraph (c)(16) that have been identified as contaminant(s) of concern at a site that has been designated and notified by:

(A) The U.S. Environmental Protection Agency (U.S. EPA) as a Superfund National Priorities List site;

(B) The California Department of Toxic Substances Control (DTSC) as a Brownfield or Cleanup Program site;

(C) The State Water Resources Control Board (State Water Board) or Regional Water Quality Control Board (Regional Water Board) as a Site Cleanup Program site;

(D) A county, local, or state regulatory agency as a Hazardous Material Release site, as defined in California Health and Safety Code Section 25260; or

(E) The Executive Officer pursuant to subdivision (i).

(2) This rule shall not apply to:

(A) Earth-moving activities of soil with applicable toxic air contaminant(s) of less than 50 cubic yards; or

(B) Removal of soil for sampling purposes.

(c) Definitions

(1) ADEQUATELY WET means the condition of being sufficiently mixed or penetrated with water to prevent the release of particulates or visible emissions. The process by which an adequately wet condition is achieved is by using a dispenser

or water hose with a nozzle that permits the use of a fine, low-pressure spray or mist.

(c) (2) ADJACENT ATHLETIC AREA means any outdoor athletic field or park where youth organized sports occur that is in physical contact or separated solely by a public roadway or other public right-of-way to a SCHOOL.

(3) ADJOINING means in physical contact with or separated solely by a public roadway or other public right-of-way.

(4) CHEMICAL STABILIZERS means any non-toxic chemicals that are used to bind soil together to control FUGITIVE DUST emissions.

(5) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for FUGITIVE DUST. This definition excludes those areas which have:

(A) Been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) Been paved or otherwise covered by a permanent structure; or

(C) Sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(6) DUST SUPPRESSANTS means water or hygroscopic materials, other than CHEMICAL STABILIZERS, that are used as a treatment material to reduce FUGITIVE DUST emissions.

(7) EARTH-MOVING ACTIVITIES means, for the purpose of this rule, any activity on a site that meets the applicability requirements of subdivision (b) where SOIL WITH APPLICABLE TOXIC AIR CONTAMINANT(S) is being moved or uncovered, including: dredging, excavating, grading, earth-cutting and filling operations, loading, unloading, handling, mechanized land clearing, treating, transferring, removing, and adding to or removing from STOCKPILES, and vehicular movement of equipment associated with these activities. EARTH-MOVING ACTIVITIES do not include vehicular movement from: delivery vehicles, passenger vehicles transporting personnel to and from the site, vehicles used for administrative purposes, vehicles transporting personnel for the purposes of soil sampling and conducting ambient PM_{10} monitoring requirements, watering trucks, and equipment used exclusively on a portion(s) of the site where there is no SOIL WITH APPLICABLE TOXIC AIR CONTAMINANT(S).

(c) (8) FUGITIVE DUST means, for the purpose of this rule, any solid particulate matter that is in contact with ambient air and has the potential to become airborne, other than solid particulate matter that is emitted from an exhaust stack.

(9) JOINT USE AGREEMENT PROPERTY means a shared public facility in which a formal agreement exists between a SCHOOL and another government entity setting forth the terms and conditions for shared use.

(10) OWNER OR OPERATOR means any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, contractor, or other capacity.

(11) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excludes access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal, or any other governmental or quasi-governmental agencies. Private paved roads are any PAVED ROADS not defined as public.

(12) PROPERTY LINE means the boundary of an area where a person has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(13) SCHOOL means any public or private education center, including juvenile detention facilities with classrooms, used for the education of more than 12 children at the education center in kindergarten through grade 12. A SCHOOL also includes an Early Learning and Developmental Program by the U.S. Department of Education or any state or local early learning and development programs such as preschools, Early Head Starts, Head Start, First Five, and Child Development Centers. A SCHOOL does not include any private education center in which education is primarily conducted in private homes. A SCHOOL includes any building or structure, playground, athletic field, or other area of school property.

(14) SLAG means, for the purpose of this rule, the by-product material that is separated from metals during smelting or refining of ore.

(15) SOIL means dirt, sand, gravel, clay, SLAG, and aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(16) SOIL WITH APPLICABLE TOXIC AIR CONTAMINANT(S) means, for the purpose of this rule, SOIL that has been identified by the U.S. EPA, the DTSC, the

State Water Board, the Regional Water Board, or a county, local, or state regulatory agency, to contain one or more of the applicable toxic air contaminants listed in Table I that exceed action levels as specified by the designating agency, or soil that has been identified by the Executive Officer to contain one or more of the toxic air contaminants listed in Rule 1401 – New Source Review of Toxic Air Contaminants (Table I) or Hazardous Air Pollutants Identified as Toxic Air Contaminants as listed in California Code of Regulations Section 93001, excluding volatile organic compounds regulated under Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil.

(c) (17) STABILIZED SURFACE means any previously DISTURBED SURFACE AREA or STOCKPILE, which through the application of CHEMICAL STABILIZERS or DUST SUPPRESSANTS, shows visual or other evidence of surface crusting and is resistant to WIND-DRIVEN FUGITIVE DUST, and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the most current version of the South Coast AQMD *Rule 403 Fugitive Dust Implementation Handbook* or in Volumes I and II of South Coast AQMD's *Dust Control in the Coachella Valley*.

(18) STOCKPILE means any accumulation of SOIL, which is not fully enclosed and which attains a height of three feet or more and a total surface area of 150 square feet or more.

(19) TRACK-OUT means, for the purpose of this rule, any SOIL that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that has been released onto a PAVED ROAD and that can be removed by a vacuum sweeper under normal operating conditions.

(20) WIND-DRIVEN FUGITIVE DUST means visible emissions from any DISTURBED SURFACE AREA, which is generated by wind action alone.

(d) Monitoring Requirements

(1) When on-site earth-moving activities occur, the owner or operator shall conduct continuous direct-reading near real-time ambient monitoring of PM_{10} concentrations pursuant to paragraph (d)(3).

(2) If the PM_{10} concentration exceeds 25 micrograms per cubic meter, as measured pursuant to paragraph (d)(3) and as determined pursuant to paragraph (d)(9), the owner or operator shall cease on-site earth-moving activities, apply dust suppressant to fugitive dust sources, or implement other dust control measures as

necessary until the PM_{10} concentration is equal to or less than 25 micrograms per cubic meter averaged over 30 minutes.

(d) (3) The owner or operator conducting on-site earth-moving activities shall install PM_{10} monitors and conduct ambient PM_{10} monitoring:

(A) In accordance with a U.S. EPA-approved equivalent method for PM_{10} monitoring or using a Rule 1466 Approved PM_{10} Monitor;

(B) Using a minimum of two monitors, placing each monitor as close to the property line as feasible, where:

(i) One or more monitors is in the seasonal prevailing wind direction upwind of the area(s) of on-site earth-moving activity, indicative of background PM_{10} levels, and not generally influenced by fugitive dust sources from the site; and

(ii) One or more monitors is in the seasonal prevailing wind direction downwind of the area(s) of on-site earth-moving activity;

(C) Using PM_{10} monitors that are identical in: make and model, settings, and configuration; and

(D) Using ambient PM_{10} monitors that are operated, maintained, and calibrated in accordance with appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent methods for PM_{10} and manufacturer's instructions.

(4) On and before December 31, 2021, the owner or operator shall collect ambient PM_{10} data with a data acquisition system (DAS) that is capable of logging direct-reading near real-time data providing the date, time, and PM_{10} concentration in micrograms per cubic meter every 10 minutes or less.

(5) On and after January 1, 2022, the owner or operator shall collect ambient PM_{10} data with a DAS that is capable of logging direct-reading near real-time data providing the date and time, calibrated to Pacific Standard Time (PST), and PM_{10} concentration in micrograms per cubic meter every 1 minute or less.

(6) On and after January 1, 2022, the owner or operator shall operate PM_{10} monitors with the heated sampler inlet on.

(7) On and after January 1, 2022, prior to conducting any on-site earth-moving activities, and weekly thereafter, the owner operator shall conduct intra-instrument precision tests with the PM_{10} monitors in accordance with *Appendix 2 – Procedures to Demonstrate Intra-Instrument Precision*, or make available documentation and supporting data certifying that such intra-instrument precision tests were run by an

equipment rental company or other third party, that demonstrate an intra-instrument precision of:

(d) (7) (A) No more than 25 percent as calculated pursuant to Step 7a in *Appendix 2* when ambient PM_{10} concentrations are equal to or greater than 15 micrograms per cubic meter; or

(B) No more than 5 micrograms per cubic meter as calculated pursuant to Step 7b in *Appendix 2* when ambient PM_{10} concentrations are less than 15 micrograms per cubic meter.

(8) On and after January 1, 2022, each day prior to conducting on-site earth-moving activities, the owner or operator shall conduct a passing zero check on each PM_{10} monitor in accordance with:

(A) Steps 4 and 5 of *Appendix 2* that demonstrates an average PM_{10} concentration of 0 ± 3 micrograms per cubic meter; or

(B) Manufacturer's instructions if a monitor is operated using an auto-zero check procedure that directs filtered particle-free air into the measurement chamber.

(9) The owner or operator shall calculate the PM_{10} concentration as a 120-minute rolling average, where:

(A) The initial average starts at the commencement of on-site earth-moving activities and ends 120 minutes after the commencement of on-site earth-moving activities;

(B) On and before December 31, 2021, the averages subsequent to the initial average specified in subparagraph (d)(9)(A) are to be calculated every 10 minutes and cover the previous 120-minute period;

(C) On and after January 1, 2022, the averages subsequent to the initial average specified in subparagraph (d)(9)(A) are to be calculated every 1 minute and cover the previous 120-minute period;

(D) The PM_{10} concentration is calculated by subtracting the results of the upwind monitor(s) from the downwind monitor(s) for the same averaging period;

(i) If the wind direction is in the seasonal prevailing wind direction, then the monitor(s) described pursuant to clause (d)(3)(B)(i) shall be designated as the upwind monitor(s) and the monitor(s) described pursuant to clause (d)(3)(B)(ii) shall be designated as the downwind monitor(s); and

(d) (9) (D) (ii) If there is greater than a ± 90 degree change in wind direction from the seasonal prevailing wind direction, then the monitor(s) described pursuant to clause (d)(3)(B)(i) shall be designated as the downwind monitor(s) and the monitor(s) described pursuant to clause (d)(3)(B)(ii) shall be designated as the upwind monitor(s);

(E) If there is more than one upwind monitor, the upwind result is the average concentration of all upwind monitors for the same rolling averaging period;

(F) If there is more than one downwind monitor, the downwind result is the maximum concentration of any of the downwind monitors for the same rolling averaging period;

(G) On and before December 31, 2021, when on-site earth-moving activities resume after ceasing pursuant to paragraph (d)(2), the average shall start when on-site earth-moving activities resume and shall end 120 minutes after on-site earth-moving activities resume, and the subsequent averages are to be calculated every 10 minutes and shall cover the previous 120-minute period; and

(H) On and after January 1, 2022, when on-site earth-moving activities resume after ceasing pursuant to paragraph (d)(2), the average shall start when on-site earth-moving activities resume and shall end 120 minutes after on-site earth-moving activities resume, and the subsequent averages are to be calculated every one minute and shall cover the previous 120-minute period.

(10) An owner or operator that elects to move the monitors accordingly when there is a change in wind direction in place of meeting the requirements specified in clauses (d)(3)(B)(i), (d)(3)(B)(ii), (d)(9)(D)(i), and (d)(9)(D)(ii), shall:

(A) Place a minimum of one upwind monitor in the upwind direction of the area(s) of on-site earth-moving activity, indicative of background PM_{10} levels, and not generally influenced by fugitive dust sources from the site;

(B) Place a minimum of one downwind monitor in the downwind direction of the area(s) of on-site earth-moving activity; and

(C) Move the monitor(s) in subparagraph (d)(10)(A) to the new upwind location and the monitor(s) in subparagraph (d)(10)(B) to the new downwind location when there is a change in wind direction.

(11) In the event that a DAS fails to log ambient PM_{10} data pursuant to paragraph (d)(5) or that the data management system integrated with the PM_{10} monitor(s) and

DAS(s) fails to calculate PM_{10} concentrations pursuant to subparagraph (d)(9)(C) due to a technical issue beyond the reasonable control of an owner or operator, including, but not limited to, internet connection disruptions and computer malfunctions, the owner or operator shall:

(d) (11) (A) Restore the DAS or data management system to working condition as soon as practicable and no later than the start of the next working day; and

(B) Manually record the PM_{10} concentration from the monitor(s) associated with the non-operational DAS once every 10 minutes or less and calculate the PM_{10} concentration pursuant to the averages specified in subparagraph (d)(9)(B) until the DAS is restored or calculate the PM_{10} concentration pursuant to the averages specified in subparagraph (d)(9)(B) until the data management system is restored.

(12) When conducting ambient PM_{10} monitoring as required in paragraph (d)(1), the owner or operator shall monitor wind direction and speed using a minimum of one stationary anemometer or wind sensor that:

(A) Is sited over open, level terrain within the project site with minimal obstructions to the wind flow at a minimum height of eight feet above grade;

(B) Meets the performance criteria of:

(i) Wind direction accuracy of ± 7 degrees and resolution of 1 degree; and

(ii) Wind speed accuracy of 2 miles per hour (mph) or ± 5 percent of the observed wind speed, whichever is greater, and resolution of 1 mph;

(C) Has a National Institute of Standards and Technology (NIST) Traceability certification;

(D) Is equipped with a data logger that records wind direction and speed data once every 1 minute or less and archives the recorded wind direction and speed data, including the date and time, calibrated to PST; and

(E) Is operated, calibrated, and maintained in accordance with manufacturer's specifications, but no less frequent than once every 6 months of cumulative operation.

(13) The Executive Officer may approve a PM_{10} monitor to be added as a Rule 1466 Approved PM_{10} Monitor if the PM_{10} monitor meets the specifications listed in *Appendix 1 – Rule 1466 Approved PM_{10} Monitors*. The request for a PM_{10} monitor to be added as a Rule 1466 Approved PM_{10} Monitor shall:

(A) Be submitted to Rule1466ApprovedMonitors@aqmd.gov;

(d) (13) (B) Include a description of the PM_{10} monitor, any accessories, and all monitor specifications; and

(C) Include documentation demonstrating compliance with each specification listed in *Appendix 1*.

(e) Requirements to Minimize Fugitive Dust Emissions

(1) On and before December 31, 2021, an owner or operator shall not conduct on-site earth-moving activities unless the area is surrounded with fencing that is a minimum of 6 feet tall and at least as tall as the height of the tallest stockpile, with a windscreen that has a porosity of 50 ± 5 percent. A section of the perimeter surrounding an on-site earth-moving activity area may be excluded from this requirement if that section:

(A) Has a solid physical barrier, such as a solid wall or other solid feature that minimizes air flow, that is a minimum of 6 feet tall but at least 6 inches taller than the height of the tallest stockpile; or

(B) Does not have on-site earth-moving activity occurring within 300 feet from the perimeter of that section.

(2) On and after January 1, 2022, an owner or operator shall not conduct on-site earth-moving activities unless the area is surrounded with fencing that is a minimum of 6 feet tall but at least 6 inches taller than the height of the tallest stockpile, with a windscreen that has a porosity of 50 ± 5 percent or a mesh windscreen that has a shade value or opacity of 85 ± 5 percent. A section of the perimeter surrounding an on-site earth-moving activity area may be excluded from this requirement if that section meets the conditions as specified in subparagraph (e)(1)(A) or (e)(1)(B).

(3) An owner or operator conducting on-site earth-moving activities shall:

(A) Adequately wet to the depth of earth-moving activity and allow time for penetration; and

(B) Adequately wet at frequencies to prevent the generation of visible dust plumes.

(4) An owner or operator that is moving vehicles on, within, or off a site shall:

(A) Post signs at all entrances of the site to designate the speed limit as 15 mph;

(B) Stabilize the surface of all vehicular traffic and parking areas by applying gravel, paving, chemical stabilizers pursuant to paragraph (e)(13), or dust suppressant;

(C) Not allow any track-out outside of the property line that is 25 feet or more in cumulative length. Remove any track-out at a minimum frequency of

once each day using a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97 percent control efficiency for 0.3 micron particles;

(e) (4) (D) Clean the soil from the exterior of trucks, trailers, and tires prior to the truck leaving the site, without the use of forced air; and

(E) Utilize at least one of the following measures at each vehicle egress from the site to a public road:

(i) Install a pad consisting of washed gravel (minimum-size: 1 inch), maintained in a clean condition, to a depth of at least 6 inches and extending at least 30 feet wide and at least 50 feet long;

(ii) Pave the surface extending at least 100 feet from the property line and at least 30 feet wide;

(iii) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipes, or grates) at least 24 feet long and 30 feet wide; or

(iv) Install and utilize a wheel washing system to remove soil from tires and vehicle undercarriages.

(5) An owner or operator conducting on-site earth-moving activities shall ensure that stockpiles with any soil with applicable toxic air contaminant(s) be:

(A) Segregated from non-contaminated stockpiles;

(B) Labelled with "South Coast AQMD Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminant(s) Applicable Soil";

(C) Maintained to avoid steep sides or faces that exceed the angle of repose;

(D) No more than 400 cubic yards of soil;

(E) Maintained to minimize fugitive dust emissions containing toxic air contaminants by applying chemical stabilizers pursuant to paragraph (e)(13), applying dust suppressant, or completely covering pursuant to paragraph (e)(14); and

(F) Either chemically stabilized pursuant to paragraph (e)(13) and/or completely covered pursuant to paragraph (e)(14) at all times when earth-moving activities and ambient PM_{10} monitoring are not occurring.

(6) An owner or operator conducting truck and trailer loading activities of soil containing applicable toxic air contaminant(s) shall:

(A) Apply dust suppressant to material prior to loading;

(B) Empty the loader bucket slowly so that no visible dust plumes are generated;

(e) (6) (C) Minimize the drop height from the loader bucket;

(D) Maintain at least 6 inches of space between the soil and the top of the truck bed and trailer while transporting within a site; and

(E) Completely cover the truck bed and trailer prior to leaving the site.

(7) An owner or operator conducting truck and trailer unloading activities of soil containing applicable toxic air contaminant(s) shall:

(A) Apply dust suppressant to material prior to unloading; and

(B) Empty the trailer slowly so that no visible dust plumes are generated.

(8) The owner or operator shall immediately remove any spilled soil.

(9) The owner or operator shall cease on-site earth-moving activities if the wind speed is greater than 15 mph averaged over a 15-minute period or the instantaneous wind speed exceeds 25 mph.

(10) During on-site earth-moving activities, the owner or operator shall have an on-site dust control supervisor that:

(A) Is employed by or contracted with the owner or operator;

(B) Is located on the site during working hours;

(C) Is in a position to expeditiously employ sufficient dust control measures to ensure compliance with all rule requirements;

(D) Has completed the South Coast AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(E) Has the following credentials, if asbestos is an applicable toxic air contaminant:

(i) Successfully completed the Asbestos Abatement Contractor/Supervisor course pursuant to the Asbestos Hazard Emergency Response Act (AHERA), and obtained and maintained accreditation as an AHERA Asbestos Abatement Contractor/Supervisor; and

(ii) Trained on the provisions of 40 CFR Part 61.145, 61.146, 61.147 and 61.152 (Asbestos NESHAP provisions) and Part 763, and has the means to comply with these provisions.

(11) An owner or operator shall apply a chemical stabilizer pursuant to paragraph (e)(13) and/or use a cover pursuant to paragraph (e)(14) on potential sources of fugitive dust when earth-moving activities are not occurring in the specific location(s) containing the potential source(s) of fugitive dust.

(e) (12) An owner or operator shall inspect daily, including days when no on-site earth-moving activities are occurring, labeled stockpiles pursuant to subparagraph (e)(5)(B) and stabilized or covered stockpiles pursuant to (e)(5)(F).

(A) For a stabilized stockpile, such inspections shall include a demonstration of stabilization by one or more of the applicable test methods contained in the most current version of the South Coast AQMD *Rule 403 Fugitive Dust Implementation Handbook* or Volumes I and II of South Coast AQMD's *Dust Control in the Coachella Valley*.

(B) For a covered stockpile, such inspections shall include a visual inspection of all seams and plastic cover surfaces to ensure that no portion of the soil is exposed to the atmosphere.

(13) When utilizing a chemical stabilizer, an owner or operator shall:

(A) Ensure the chemical stabilizer meets any specifications, criteria, or tests required by any federal, state, or local agency or any applicable law, rule, or regulation; and

(B) Unless otherwise indicated, use a sufficient concentration of the chemical stabilizer and an application frequency sufficient to maintain a stabilized surface and no less than what is specified by the manufacturer for the period of inactivity.

(14) When using a cover for stockpiles, an owner or operator shall ensure the cover:

(A) Is at least 10 mil thick plastic sheeting that overlaps a minimum of 24 inches; and

(B) Is anchored and secured so that no portion of the soil is exposed to the atmosphere.

(15) An owner or operator that is conducting earth-moving activities of soil with applicable toxic air contaminant(s) at a school, joint use agreement property, adjacent athletic area, or at a site that is adjoining a school, joint use agreement property, or adjacent athletic area shall:

(A) Only conduct earth-moving activities at a school or at a site that is adjoining a school outside of the hours between 7:30 a.m. and 4:30 p.m. on days when the school is in session;

(B) Not conduct earth-moving activities at a school, joint use agreement property, adjacent athletic area, or at a site that is adjoining a school, joint use agreement property, or adjacent athletic area if there is a school sponsored activity or youth organized sports taking place at that site;

(e) (15) (C) Handle excavated soils with applicable toxic air contaminant(s) by:

(i) Immediately placing soil in a leak-tight container whereby any contained solids or liquids are prevented from escaping or spilling out;

(ii) Directly loading soil in truck beds, trailers, and bins for transport, applying chemical stabilizer pursuant to paragraph (e)(13) or dust suppressant, and completely covering prior to transporting; or

(iii) Stockpiling pursuant to paragraph (e)(5), in a fenced area that is not accessible to the general public, and locked when not in use; and

(D) Within five days of its excavation, remove all soil with applicable toxic air contaminant(s) from the site.

(f) Notification Requirements

(1) The owner or operator shall electronically submit an initial notification to the Executive Officer, using a format approved by the Executive Officer, of the intent to conduct any on-site earth-moving activities.

(A) Initial notifications shall be submitted:

(i) At least 72 hours but no more than 30 days prior to conducting any earth-moving activities on any site meeting the applicability requirements of subdivision (b); or

(ii) As soon as the information becomes available but no later than 48 hours after the information becomes available that on-site earth-moving activities of soil with applicable toxic air contaminant(s) exceed 50 cubic yards.

(B) Initial notifications shall include the following requirements:

(i) Name, address, telephone number, and e-mail address of the owner or operator;

(ii) Name, telephone number, and e-mail address of the on-site dust control supervisor;

(iii) Project name and, if applicable, the project identification number from the designating agency;

(iv) Project location (address and/or coordinates);

(v) Identify whether the site is a school, joint use agreement property, adjacent athletic area, or is adjoining a school, joint use agreement property, or adjacent athletic area;

(f) (1) (B) (vi) A map indicating the specific location(s) of each on-site earth-moving activity and the concentrations of the applicable toxic air contaminant(s) and location of PM_{10} monitors;

(vii) A description of the on-site earth-moving activities, estimated volume of soil with applicable toxic air contaminant(s), and a schedule that includes the anticipated start and completion dates of on-site earth-moving activities;

(viii) Current and/or previous type of operation(s) and use(s) at the site;

(ix) Applicable exemption(s); and

(x) Whether the notice being provided is a revised notification.

(2) Notification Updates

Initial notifications pursuant to paragraph (f)(1) shall be updated when any of the following conditions arise:

(A) Earlier Start Date

A change in the start date of on-site earth-moving activities to an earlier date shall be reported to the South Coast AQMD no later than 72 hours before any on-site earth-moving activities begin.

(B) Later Start Date

A delay in the start date of on-site earth-moving activities shall be reported to the South Coast AQMD as soon as the information becomes available, but no later than the original start date.

(C) Change in Exemption Status

Any change(s) in exemption status pursuant to subdivision (k) shall be reported to the South Coast AQMD as soon as the information becomes available, but no later than 48 hours after the information becomes available.

(D) Completion Date

The completion date of on-site earth-moving activities shall be reported to the South Coast AQMD no later than 48 hours after on-site earth-moving activities are completed.

(3) Within 72 hours of an exceedance of the PM_{10} emission limit specified in paragraph (d)(2), the owner or operator shall electronically submit a notification to the Executive Officer, using a format approved by the Executive Officer, of the exceedance and shall include the following information:

(f) (3) (A) Name, address, telephone number, and e-mail address of the owner or operator;

(B) Name, telephone number, and e-mail address of the on-site dust control supervisor;

(C) Project name and, if applicable, the project identification number from the designating agency;

(D) Project location (address and/or coordinates);

(E) PM_{10} monitoring results and wind direction and speed results pursuant to subdivision (d), including location of monitors, result, date and time of exceedance(s), 12 hours before first exceedance, and 12 hours after last exceedance;

(F) On-site earth-moving activities occurring at the date and time of exceedance(s); and

(G) Dust control measure(s) taken to mitigate fugitive dust.

(g) Signage Requirements

When conducting on-site earth-moving activities, the owner or operator shall install and maintain project signage.

(1) Unless otherwise approved in writing by the Executive Officer, signage shall:

(A) Be installed at all entrances and at intervals of 1,000 feet or less along the property line or perimeter of the site, with a minimum of one sign along each side;

(B) Be located between 6 and 8 feet above grade from the bottom of the sign;

(C) Display lettering at least 4 inches tall with text contrasting with the sign background; and

(D) Display the following information:

(i) Local or toll-free phone number for the site contact or pre-recorded notification center that is accessible 24 hours a day; and

(ii) Warning statement:

"THIS SITE CONTAINS SOILS THAT CONTAIN THE FOLLOWING CHEMICALS: [LIST APPLICABLE TOXIC AIR CONTAMINANT(S)]
TO REPORT ANY DUST LEAVING THE SITE PLEASE CALL [FACILITY CONTACT AND PHONE NUMBER] OR THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG".

(g) (2) If signage pursuant to paragraph (g)(1) exceeds 48 inches by 96 inches, the owner or operator or designating agency shall include the warning statement referenced in clause (g)(1)(D)(ii), displaying lettering at least 4 inches tall with text contrasting with the sign background, but may use 2.5 inch tall lettering to list applicable toxic air contaminant(s). All other signage requirements set forth in paragraph (g)(1) shall remain the same. If signage continues to exceed 48 inches by 96 inches with these parameters, the owner or operator or designating agency may use alternative signage as set forth in paragraph (g)(3).

(3) The owner or operator or designating agency may use alternative signage approved by the Executive Officer pursuant to subdivision (j). Notwithstanding subdivision (j), the request shall include a visual representation of the alternative sign, including proposed lettering height, and locations and, at a minimum, the alternative signage shall:

(A) Display text contrasting with the sign background; and

(B) Display the following warning statement:

"THIS SITE CONTAINS SOILS THAT CONTAIN THE FOLLOWING CHEMICALS: [LIST APPLICABLE TOXIC AIR CONTAMINANT(S)] TO REPORT ANY DUST LEAVING THE SITE PLEASE CALL THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG".

(4) The owner or operator may be excluded from installing and maintaining project signage pursuant to subparagraph (g)(1)(A) at any entrance(s) or interval(s) along the property line or perimeter of the site that is not visible and not accessible to the public unless the site is a school, joint use agreement property, or adjacent athletic area or the site is adjoining a school, joint use agreement property, or adjacent athletic area.

(h) Recordkeeping Requirements

The owner or operator shall maintain records for a period of not less than 3 years and shall make such records available to the Executive Officer upon request. At a minimum, records shall be maintained daily and shall include:

(1) Inspections of all stabilized or covered stockpiles containing soils with applicable toxic air contaminant(s) and all re-stabilization, cover repair, and label maintenance activities, including dates and times the specific activities were conducted;

(2) Results of wind and PM_{10} monitoring, including: ambient PM_{10} data; rolling average PM_{10} concentrations and calculations; wind direction and speed

corresponding to the rolling average PM_{10} concentrations; movement of monitoring instruments corresponding to wind direction changes; instrument make and model; settings; proof of valid calibration in accordance with manufacturer's recommended schedule; configuration; calibration, correction, and correlation factors; maintenance; operator training; daily instrument performance check records and manual zero or auto-check results; weekly zero calibration records and intra-instrument precision test data and calculation results; and all instrument logs for all monitoring instruments;

(h) (3) All instrument maintenance activities, including: zero calibration, cleaning, filter replacement, and performance checks, including dates and times of the specific procedures;

(4) Documentation of all DAS and data management system failures, including date and time of the failure, date and time of the correction, the technical issue(s) causing the failure, and activities performed to restore the failed DAS or data management system to working condition;

(5) On-site earth-moving activities conducted and the corresponding volume of soil with applicable toxic air contaminant(s);

(6) Names and business addresses of the transporting and receiving facilities, and a copy of the shipping manifest;

(7) Complaints called in, including the name of complainant and contact information, date and time, on-site earth-moving activities occurring at the date and time, complaint, and action taken to mitigate the source of the complaint; and

(8) A copy of all submitted notifications for the project.

(i) Executive Officer Designated Sites

(1) The Executive Officer may designate a site if the Executive Officer has evidence that the site contains soil with applicable toxic air contaminant(s) as defined in paragraph (c)(16), after consultation with U.S. EPA, DTSC, the State Water Resources Control Board, the Regional Water Quality Control Board, and/or local, county, or state regulatory agencies, and consideration of the following:

(A) Site history, including current and/or previous type(s) of operation(s) and use(s) at the site and regulatory history;

(B) Concentration(s) of applicable toxic air contaminant(s) in the soil;

(C) Background concentration(s) of applicable toxic air contaminant(s);

(D) Volume of soil with applicable toxic air contaminant(s);

(i) (1) (E) Distance to a residence, park, school, joint use agreement property, adjacent athletic area, or a site adjoining a school, joint use agreement property, or adjacent athletic area;

(F) Meteorological data;

(G) Health risk information or other data provided by the owner or operator, if available; and

(H) Ambient monitoring data and other applicable data, if available.

(2) Prior to making a determination, the Executive Officer will notify the owner or operator in writing that the site may be subject to this rule.

(A) In the event the owner or operator exercises this opportunity to demonstrate that this rule does not apply, the owner or operator shall submit information to the Executive Officer within 14 days of the notification substantiating why the site should be excluded from this rule.

(B) Upon final determination, the Executive Officer will notify the owner or operator in writing if the site is subject to this rule.

(3) During the determination period, the owner or operator shall comply with the provisions of this rule or cease all on-site earth-moving activities until a determination is made.

(j) Alternative Provisions

(1) If requesting an alternative provision pursuant to paragraph (g)(3), the owner or operator or designating agency shall submit the request in writing at least 30 days prior to conducting any earth-moving activities and include all information to the Executive Officer to substantiate its position.

(2) The Executive Officer may request additional information from the owner or operator or designating agency.

(3) The owner or operator or designating agency shall submit all requested information within 14 days of the request for additional information.

(4) The Executive Officer will review the request for an alternative provision and will approve or reject the data and notify the owner or operator or designating agency in writing. Approved alternative provisions may not be used retroactively.

(5) Alternative provisions that were approved and notified in writing by the Executive Officer before June 4, 2021 shall be deemed compliant with the requirements of the applicable provisions of the rule, shall remain in effect only for the period of time and for the specific project for which they were granted, and shall not be renewed or extended.

(k) Exemptions

(1) The owner or operator may be exempt from one or more provisions of this rule provided there is written confirmation that the designating agency under subparagraphs (b)(1)(A) through (b)(1)(D) has consulted with the Executive Officer and has determined that the provision(s) are not needed based on information specified in subparagraphs (i)(1)(A) through (i)(1)(H).

(2) On-site earth-moving activities performed within an enclosed system vented to South Coast AQMD permitted air pollution control equipment shall be exempt from all requirements except: subparagraphs (e)(4)(C) through (e)(4)(E), subparagraphs (e)(6)(D) and (e)(6)(E), and subdivisions (f), (g), and (h).

(3) Linear trenching for natural gas, power, sewer, and water projects on roadways with soil with applicable toxic air contaminant(s), directly loaded into a truck bed, trailer, or bin for transport, shall be exempt from all requirements except: paragraphs (e)(3) through (e)(9), paragraphs (e)(13) and (e)(15), and subdivisions (f), (h), and (i).

(4) On-site earth-moving activities consisting only of excavation activities of soil with applicable toxic air contaminant(s) of less than 500 cubic yards, directly loaded into a truck bed, trailer, or bin for transport, shall be exempt from all requirements except: paragraphs (e)(3) through (e)(9), paragraphs (e)(13) and (e)(15), and subdivisions (f), (h), and (i).

(5) On-site earth-moving activities conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency as declared by an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer shall be exempt from all requirements. The Executive Officer shall be notified electronically no later than 48 hours following such on-site earth-moving activities. Written notification shall include written emergency declaration from the authorized officer.

(6) On-site earth-moving activities conducted by essential service utilities to provide electricity, natural gas, telephone, water, or sewer during periods of service outages and emergency disruptions shall be exempt from all requirements. The Executive Officer shall be notified electronically no later than 48 hours following such on-site earth-moving activities.

Table I – Applicable Toxic Air Contaminants

CAS Number	Substance
7440-38-2	**arsenic and arsenic compounds (inorganic)**
	including, but not limited to:
	arsenic compounds (inorganic)
7784-42-1	arsine
1332-21-4	Asbestos
7440-43-9	cadmium and cadmium compounds
57-74-9	chlordane
	dibenzo-p-dioxins (chlorinated)
1746-01-6	tetrachlorodibenzo-p-dioxin, 2,3,7,8-
40321-76-4	pentachlorodibenzo-p-dioxin, 1,2,3,7,8-
39227-28-6	hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-
57653-85-7	hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-
19408-74-3	hexachlorodibenzo-p-dioxin, 1,2,3,7,8,9-
35822-46-9	heptachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8-
3268-87-9	octachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8,9-
41903-57-5	total tetrachlorodibenzo-p-dioxin
36088-22-9	total pentachlorodibenzo-p-dioxin
34465-46-8	total hexachlorodibenzo-p-dioxin
37871-00-4	total heptachlorodibenzo-p-dioxin
72-54-8	dichlorodiphenyldichloroethane
72-55-9	dichlorodiphenyldichloroethylene
50-29-3	dichlorodiphenyltrichloroethane

Table I – Applicable Toxic Air Contaminants (cont.)

CAS Number	Substance
18540-29-9	**chromium (hexavalent) and chromium compounds**
	including, but not limited to:
10294-40-3	barium chromate
13765-19-0	calcium chromate
7758-97-6	lead chromate
10588-01-9	sodium dichromate
7789-06-2	strontium chromate
13530-65-9	zinc chromate
7439-92-1	**lead and lead compounds (inorganic, including elemental lead)**
	including, but not limited to:
	lead compounds (inorganic)
301-04-2	lead acetate
7758-97-6	lead chromate
7446-27-7	lead phosphate
1335-32-6	lead subacetate
7439-97-6	**mercury and mercury compounds (inorganic)**
	including, but not limited to:
7487-94-7	mercuric chloride
593-74-8	methyl mercury

Table I – Applicable Toxic Air Contaminants (cont.)

CAS Number	Substance
7440-02-0	**nickel and nickel compounds**
	including, but not limited to:
373-02-4	nickel acetate
3333-67-3	nickel carbonate
13463-39-3	nickel carbonyl
12054-48-7	nickel hydroxide
1313-99-1	nickel oxide
12035-72-2	nickel subsulfide
1271-28-9	nickelocene
	refinery dust from the pyrometallurgical process
1336-36-3	**polychlorinated biphenyls (PCBs)**
32598-13-3	3,3’,4,4’-tetrachlorobiphenyl (PCB 77)
70362-50-4	3,4,4’,5-tetrachlorobiphenyl (PCB 81)
32598-14-4	2,3,3’,4,4’-pentachlorobiphenyl (PCB 105)
74472-37-0	2,3,4,4’,5-pentachlorobiphenyl (PCB 114)
31508-00-6	2,3’,4,4’,5-pentachlorobiphenyl (PCB 118)
65510-44-3	2,3',4,4',5'-pentachlorobiphenyl (PCB 123)
57465-28-8	3,3’,4,4’,5-pentachlorobiphenyl (PCB 126)
38380-08-4	2,3,3’,4,4’,5-hexachlorobiphenyl (PCB 156)
69782-90-7	2,3,3’,4,4’,5’-hexachlorobiphenyl (PCB 157)
52663-72-6	2,3’,4,4’,5,5’-hexachlorobiphenyl (PCB 167)
32774-16-6	3,3’,4,4’,5,5’-hexachlorobiphenyl (PCB 169)
39635-31-9	2,3,3’4,4’,5,5’-heptachlorobiphenyl (PCB 189)

Table I – Applicable Toxic Air Contaminants (cont.)

CAS Number	Substance
	polycyclic aromatic hydrocarbons (PAHs)
56-55-3	benzo[a]anthracene
50-32-8	benzo[a]pyrene
205-99-2	benzo[b]fluoranthene
207-08-9	benzo[k]fluoranthene
218-01-9	chrysene
53-70-3	dibenz[a,h]anthracene
193-39-5	indeno[1,2,3-c,d]pyrene

Appendix 1 – Rule 1466 Approved PM_{10} Monitors

The Executive Officer may approve PM_{10} monitors that meet the following physical and performance requirements.

1. Physical Requirements
   - 1.1. PM_{10} monitors shall be continuous direct-reading near-real time monitors and shall monitor particulate matter less than 10 microns.
   - 1.2. PM_{10} monitors shall be equipped with:
     - 1.2.a. Omni-directional heated sampler inlet;
     - 1.2.b. Sample pump with active flow control mechanism;
     - 1.2.c. Enclosure;
     - 1.2.d. Data logger capable of logging each data point with average concentration, time, date, and data point number; and
     - 1.2.e. Conductive tubing that minimizes particle loss for any external tubing used to carry sampled air prior to measurement.

2. Performance Requirements
   - 2.1 PM_{10} monitors shall have the following minimum performance standards:
     - 2.1.a. Range: 0 - 10,000 $\mu g/m^3$;
     - 2.1.b. Accuracy, determined through factory testing against a U.S. EPA Federal Reference Method or Federal Equivalent Method, for a minimum of 30 measurements each averaged over 24 hours, to show:
       - 2.1.b.i. ± 5% of reading ± precision; or
       - 2.1.b.ii. Coefficient of determination (R^2) of ≥ 0.95 through simple linear regression;
     - 2.1.c. Resolution: 1.0 $\mu g/m^3$;
     - 2.1.d. Flow control accuracy of ± 5% of factory setpoint; and
     - 2.1.e. Measurement Cycle: User selectable (30 minute and 2 hour).
   - 2.2 Monitors that have a valid *Monitoring Certification Scheme* certification meeting the latest version of the *Monitoring Certification Scheme* (*MCERTS): Performance Standard for Indicative Ambient Particulate Monitors* may be exempt from meeting the performance requirements listed above, but shall meet all stated physical requirements.

3. Quality Assurance/Quality Control Requirements

In order to ensure the validity of the PM_{10} measurements performed, there shall be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the owner or operator to adequately supplement QA/QC Plans to include the following critical features: instrument calibration, instrument maintenance, operator training, and daily instrument performance checks.

Appendix 2 – Procedures to Demonstrate Intra-Instrument Precision

An owner or operator shall perform the following procedures to demonstrate the intra-instrument precision of all PM_{10} monitors as required in paragraph (d)(7).

1. Ensure monitors are identical in make and model, settings, and configuration.
2. Ensure monitor inlets are at the same height and located within 4 meters of each other but no less than 1 meter apart for the duration of the test.
3. Power on the monitors and turn on the heated sampler inlet. Allow the monitors to warm-up per manufacturer's recommendations or when readings have stabilized.
4. For each monitor, conduct a zero calibration in accordance with manufacturer's instructions, then conduct a manual zero check by removing any sampling inlet and installing a filter, rated by the manufacturer to achieve a 99.97 percent control efficiency for 0.3 micron particles, on the inlet of the monitor for a minimum of 10 minutes. If the monitors are operated using an auto-zero check procedure that directs filtered particle-free air into the measurement chamber, conduct the zero check in accordance with manufacturer's instructions.
5. Log the PM_{10} concentration reading every minute, and calculate and record the average of the readings of the manual zero check. The average of the manual zero check readings shall be 0 ± 3 micrograms per cubic meter before proceeding to Step 6. If conducting an auto-zero check, the monitor shall pass the zero check in accordance with manufacturer's instructions before proceeding to Step 6. If any monitors fail either the manual zero check or the auto-zero check, the owner or operator shall conduct a zero calibration in accordance with manufacturer's instructions and/or correct any issue(s) causing the failure, followed by conducting a passing zero check on the PM_{10} monitor(s) in accordance with Steps 4 and 5.
6. Remove the filter and install the monitor inlet as required. After waiting 10 minutes, operate the monitors simultaneously and log the PM_{10} concentration reading every minute for a minimum of 60 minutes.

7. Calculate the intra-instrument precision using either of the following equations:
   a. Intra-instrument precision in relative standard deviation or correlation of variation (%) when ambient PM_{10} concentrations are greater than or equal to 15 micrograms per cubic meter:

$$P = \frac{S_t}{C_t} \, x \, 100\%$$

where,

P = Intra-instrument precision in percent (%);

S_t = Standard deviation of the averaged PM_{10} concentration readings from all tested monitors over the time t of testing duration, to be calculated as:

$$S_t = \sqrt{\frac{\sum(x_i - \bar{x})^2}{(n-1)}}$$

where,

x_i = Mean of the PM_{10} concentration readings for a tested monitor over time t of testing duration,

$\bar{x}$ = Mean of the averaged PM_{10} concentration readings from all tested monitors over the time t of testing duration, and

n = Number of tested monitors; and

C_t = Mean of the averaged PM_{10} concentration readings from all tested monitors over the time t of testing duration; or

   b. Intra-instrument precision in absolute value (micrograms per cubic meter) when ambient PM_{10} concentrations are less than 15 micrograms per cubic meter:

$$P = S_t$$

where,

P = Intra-instrument precision in micrograms per cubic meter, and

S_t = Standard deviation of the averaged PM_{10} concentration readings from all tested monitors over the time t of testing duration.

8. Record the results of the calculations.

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

Appendix D

DTSC Advisory Clean Imported Fill Material

DTSC Information Advisory Clean Imported Fill Material Fact Sheet

October 2001

Executive Summary

This fact sheet has been prepared to ensure that inappropriate fill material is not introduced onto sensitive land use properties under the oversight of the DTSC or applicable regulatory authorities. Sensitive land use properties include those that contain facilities such as hospitals, homes, day care centers, and schools. This document only focuses on human health concerns and ecological issues are not addressed.

It identifies those types of land use activities that may be appropriate when determining whether a site may be used as a fill material source area. It also provides guidelines for the appropriate types of analyses that should be performed relative to the former land use, and for the number of samples that should be collected and analyzed based on the estimated volume of fill material that will need to be used.

The information provided in this fact sheet is not regulatory in nature, rather is to be used as a guide, and in most situations the final decision as to the acceptability of fill material for a sensitive land use property is made on a case-by-case basis by the appropriate regulatory agency.

Introduction

The use of imported fill material has recently come under scrutiny because of the instances where contaminated soil has been brought onto an otherwise clean site. However, there are currently no established standards in the statutes or regulations that address environmental requirements for imported fill material. Therefore, the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) has prepared this fact sheet to identify procedures that can be used to minimize the possibility of introducing contaminated soil onto a site that requires imported fill material. Such sites include those that are undergoing site remediation, corrective action, and closure activities overseen by DTSC or the appropriate regulatory agency. These procedures may also apply to construction projects that will result in sensitive land uses.

The intent of this fact sheet is to protect people who live on or otherwise use a sensitive land use property. By using this fact sheet as a guide, the reader will minimize the chance of introducing fill material that may result in potential risk to

human health or the environment at some future time.

Overview

Both natural and man-made fill materials are used for a variety of purposes. Fill material properties are commonly controlled to meet the necessary site specific engineering specifications. Because most sites requiring fill material are located in or near urban areas, the fill materials are often obtained from construction projects that generate an excess of soil, and from demolition debris (asphalt, broken concrete, etc.). However, materials from those types of sites may or may not be appropriate, depending on the proposed use of the fill, and the quality of the assessment and/or mitigation measures, if necessary. Therefore, unless material from construction projects can be demonstrated to be free of contamination and/or appropriate for the proposed use, the use of that material as fill should be avoided.

Selecting Fill Material

In general, the fill source area should be located in nonindustrial areas, and not from sites undergoing an environmental cleanup. Nonindustrial sites include those that were previously undeveloped, or used solely for residential or agricultural purposes. If the source is from an agricultural area, care should be taken to insure that the fill does not include former agricultural waste process byproducts such as manure or other decomposed organic material. Undesirable sources of fill material include industrial and/or commercial sites where hazardous materials were used, handled or stored as part of the business operations, or unpaved parking areas where petroleum hydrocarbons could have been spilled or leaked into the soil.

Undesirable commercial sites include:

- Former gasoline service stations
- Retail strip malls that contained dry cleaners or photographic processing facilities
- Paint stores
- Auto repair and/or painting facilities

Undesirable industrial facilities include:

- Metal processing shops
- Manufacturing facilities
- Aerospace facilities
- Oil refineries
- Waste treatment plants, etc.

Alternatives to using fill from construction sites include the use of fill material obtained from a commercial supplier of fill material or from soil pits in rural or suburban areas. However, care should be taken to ensure that those materials are also uncontaminated.

Recommended Fill Material Sampling Schedule

Area of Individual Borrow Area	Sampling Requirements
2 acres or less	Minimum of 4 samples
2 to 4 acres	Minimum of 1 sample every 1/2 acre
4 to 10 acres	Minimum of 8 samples

Area of Individual Borrow Area	Sampling Requirements
Greater than 10 acres	Minimum of 8 locations with 4 subsamples per location

Volume of Borrow Area Stockpile	Samples per Volume
Up to 1,000 cubic yards	1 sample per 250 cubic yards
1,000 to 5,000 cubic yards	4 samples for first 1000 cubic yards +1 sample per each additional 500 cubic yards
Greater than 5,000 cubic yards	12 samples for first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards

Documentation and Analysis

In order to minimize the potential of introducing contaminated fill material onto a site, it is necessary to verify through documentation that the fill source is appropriate and/or to have the fill material analyzed for potential contaminants based on the location and history of the source area. Fill documentation should include detailed information on the previous use of the land from where the fill is taken, whether an environmental site assessment was performed and its findings, and the results of any testing performed. It is recommended that any such documentation should be signed by an appropriately licensed (CA-registered) individual. If such documentation is not available or is inadequate, samples of the fill material should be chemically analyzed. Analysis of the fill material should be based on the source of the fill and knowledge of the prior land use.

Detectable amounts of compounds of concern within the fill material should be evaluated for risk in accordance with the DTSC Preliminary Endangerment Assessment (PEA) Guidance Manual. If metal analyses are performed, only those metals (CAM 17 / Title 22) to which risk levels have been assigned need to be evaluated.

At present, the DTSC is working to establish California Screening Levels (CSL) to determine whether some compounds of concern pose a risk. Until such time as these CSL values are established, DTSC recommends that the DTSC PEA Guidance Manual or an equivalent process be referenced. This guidance may include the Regional Water Quality Control Board's (RWQCB) guidelines for reuse of non-hazardous petroleum hydrocarbon contaminated soil as applied to Total Petroleum Hydrocarbons (TPH) only. The RWQCB guidelines should not be used for volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCS). In addition, a standard laboratory data package, including a summary of the QA/QC (Quality Assurance/Quality Control) sample results should also accompany all analytical reports.

When possible, representative samples should be collected at the borrow area while the potential fill material is still in place, and analyzed prior to removal from the borrow area. In addition to performing the appropriate analyses of the fill material, an appropriate number of samples should also be determined based on the approximate volume or area of soil to be used as fill material. The table above can be used as a guide to determine the number of samples needed to adequately characterize the fill material when sampled at the borrow site.

Alternative Sampling

A Phase I or PEA may be conducted prior to sampling to determine whether the borrow area may have been impacted by previous activities on the property. After the property has been evaluated, any sampling that may be required can be determined during a meeting with DTSC or appropriate regulatory agency. However, if it is not possible to analyze the fill material at the borrow area or determine that it is appropriate for use via a Phase I or PEA, it is recommended that one (1) sample per truckload be collected and analyzed for all compounds of concern to ensure that the imported soil is

uncontaminated and acceptable. (See chart on Potential Contaminants Based on the Fill Source Area for appropriate analyses).

This sampling frequency may be modified upon consultation with the DTSC or appropriate regulatory agency if all of the fill material is derived from a common borrow area. However, fill material that is not characterized at the borrow area will need to be stockpiled either on or off-site until the analyses have been completed. In addition, should contaminants exceeding acceptance criteria be identified in the stockpiled fill material, that material will be deemed unacceptable and new fill material will need to be obtained, sampled and analyzed. Therefore, the DTSC recommends that all sampling and analyses should be completed prior to delivery to the site to ensure the soil is free of contamination, and to eliminate unnecessary transportation charges for unacceptable fill material.

Composite sampling for fill material characterization may or may not be appropriate, depending on quality and homogeneity of source/borrow area, and compounds of concern. Compositing samples for volatile and semivolatile constituents is not acceptable. Composite sampling for heavy metals, pesticides, herbicides or PAH's from unanalyzed stockpiled soil is also unacceptable, unless it is stockpiled at the borrow area and originates from the same source area. In addition, if samples are composited, they should be from the same soil layer, and not from different soil layers.

When very large volumes of fill material are anticipated, or when larger areas are being considered as borrow areas, the DTSC recommends that a Phase I or PEA be conducted on the area to ensure that the borrow area has not been impacted by previous activities on the property. After the property has been evaluated, any sampling that may be required can be determined during a meeting with the DTSC.

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