SITE-SPECIFIC LAND USE CONTROL
ADDENDUM TO THE PRESIDIO TRUST LAND USE CONTROLS MASTER REFERENCE REPORT

Fuel Distribution System | Section BR11-1
Buildings 127A, 127B, and 128A

Riley Avenue, Presidio of San Francisco
San Francisco, California

April 28, 2020

Riley Ave/No: 285830

Prepared For:
The Presidio Trust
103 Montgomery Street
San Francisco, California, 94129

Prepared By:
TRC
505 Sansome Street, Suite 1600
San Francisco, California 94111

Prepared by:
Daniel Parsons, QSP,EIT/Project Engineer

Reviewed and Approved by:
Alfonso Ang, PE/Project Manager

PROFESSIONAL CERTIFICATION

Site-Specific Land Use Control
Addendum to the Presidio Trust Land Use Controls Master Reference Report
Fuel Distribution System | Section BR11-1
Buildings 127A, 127B, and 128A
Riley Avenue, Presidio of San Francisco, San Francisco, California

This document was prepared by the staff of TRC Solutions, Inc. (TRC), under the supervision of a professional engineer whose seal and signature appear hereon. The findings, recommendations, specifications, and/or professional opinions presented in this document were prepared in accordance with generally accepted professional practices, and within the scope of the project. There is no other warranty, either express or implied.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Alfonso Ang, PE C81007
Senior Engineer / Project Manager

Table of Contents

TABLES

FIGURES

1.0 INTRODUCTION AND DECISION DOCUMENT

This Site-Specific Addendum to the Presidio Trust Land Use Controls Master Reference Report (LUCMRR; Presidio Trust [Trust], 2009) has been prepared for select areas of the former FDS Section BR11-1 (Site) at the Presidio of San Francisco (Presidio) in San Francisco, California. Residual chemicals of concern (COCs) in soil, sub-slab/soil vapor, and groundwater above applicable residential cleanup levels (CULs) remain at the Site. Mitigation actions to address residual COCs have been conducted in accordance with the *Revised Feasibility Study and Corrective Action Plan* (FS/CAP) (TRC, 2020), which was approved by the San Francisco Bay Regional Water Quality Control Board (RWQCB) on January 24, 2020 (RWQCB, 2020). The mitigation actions include implementation of land use controls (LUCs), which are described herein.

2.0 AREAS INCLUDED IN THE LAND USE CONTROL

The LUC areas associated with the Site include residential units 127A, 127B, and 128A, located on the west side of Riley Avenue in the Presidio. The extent of the LUC for each unit includes the building footprint (basement and sunroom), and select exterior landscaped and hardscaped areas in front yards of units 127A and 127B. The location, extent, and coordinates of the LUC areas are presented in **Figures 1 and 2.**

The LUC limits are defined based on conditions as documented in the previously conducted investigations (TRC 2019a) and summarized in the Revised FS/CAP. The LUC areas are located within the Main Post Area within Area B of the Presidio and managed by the Trust.

3.0 REMEDIATION SUMMARY AND REMAINING CHEMICALS OF CONCERN

This section describes remedial actions implemented at the Site and identifies COCs remaining in soil, sub-slab/soil vapor, and groundwater above unrestricted CULs in the three LUC areas.

3.1 Site History and Remedial Activities

The former FDS Section BR11-1 consisted of subsurface fuel oil distribution lines, which were used to service boilers in the basements of residential buildings on the west side of Riley Avenue, including units 127A, 127B, and 128A. A 1,500-gallon capacity underground storage tank (UST) located southwest of building 127B was removed in 1978 and received a no further action (NFA) determination from the RWQCB in 2013 (RWQCB, 2013). Removal of the FDS pipelines occurred throughout the Presidio between 1996 and 1999. The Presidio Trust requested closure of 27 FDS sections, including Section BR11-1 in 2006 (Trust, 2006). On September 16, 2009, the RWQCB determined that NFA was required at Section BR11-1 (RWQCB, 2009).

The RWQCB re-opened FDS Section BR11-1 in 2017 (RWQCB, 2017) based on the discovery of petroleum contaminated soil during maintenance work in the basement of Unit 127B. Between 2017 and 2018, the Trust conducted additional investigations into petroleum contamination in soil, sub-slab/soil vapor, and groundwater at the units formerly served by Section BR11-1 FDS lines and surrounding areas. These investigations determined the presence of petroleum contamination in soil and sub-slab/soil vapor beneath the basement and

in soil and groundwater in the front yard of Unit 127B; in soil and sub-slab/soil vapor in the basement and in soil in the front yard of Unit 127A; and in the soil and sub-slab/soil vapor beneath the basement slab of Unit 128A.

The Revised FS/CAP was prepared based on the additional investigations and presents a comparison of alternatives to address residual soil, groundwater, and soil vapor impacts at the Site and presents a recommended corrective action plan. The Revised FS/CAP received concurrence from RWQCB in a letter dated January 24, 2020 (RWQCB, 2020) and established a course of action that utilizes a vapor mitigation system (VMS) in Unit 127B installed in 2019 (TRC, 2019b), existing basement concrete slabs and landscaped/hardscape caps, groundwater monitoring, and LUCs for the management of residual contamination beneath Units 127A, 127B, and 128A.

3.2 Residual Chemicals that Necessitate the LUC

Impacted soil, sub-slab/soil vapor, and groundwater samples that were used to define the Site LUC Area boundaries are presented in **Figures 3, 4, and 5**, respectively. Summaries of COCs remaining above CULs and detected maximum concentrations are summarized in **Tables 1 through 3**. A description of the site investigation activities used to characterize the extent of residual contamination and determined the Site LUC Areas was presented in the *Revised Section BR11-1 Supplemental Site Investigation Report Fuel Distribution System (*Revised Supplemental Site Investigation) report (TRC,2019a). Impacted samples exceed environmental screening levels for at least one of the following: total petroleum hydrocarbons (as diesel, gasoline, motor oil, and bunker c oil), naphthalene, benzene, ethylbenzene, and methane. Screening levels for identified COCs have been established as current RWQCB Tier 1 and Residential Environmental Screening Levels (ESLs, RWQCB, 2019) and supplemented by specific screening levels established in the *Development of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water* (EKI, 2002, as amended). A summary of screening levels is presented in the Revised FS/CAP.

4.0 SITE-SPECIFIC LAND USE RESTRICTIONS

The following site-specific land use restrictions and notifications apply within the Site LUC Areas:

- Health & Safety Requirements - Personnel potentially exposed to soils in the Site LUC Areas shall follow a site-specific Health and Safety Plan, have the appropriate level of health and safety training, and use the appropriate level of personal protective equipment specified in a Health and Safety Plan.

- Soil Management Requirements - Soil excavated from the Site LUC Areas shall be managed and/or disposed in accordance with Presidio policies and procedures and applicable federal, state, and local laws and regulations. Earthwork associated with any activity beyond general Operations and Maintenance (O&M) will be performed in accordance with the *Presidio Wide Soil Management Plan* (currently in development) or equivalent Site-Specific Soil Management Plan.

- Surface Cover Requirements - Contaminated soil in the Site LUC Areas shall remain covered with a minimum of two (2) feet of clean soil or covered with hardscape elements equivalent to existing conditions.

- Groundwater Restrictions: Use of groundwater and installation of wells for beneficial groundwater reuse (i.e., drinking, irrigation, or construction) at the Site are prohibited.

- Tenant Disclosure and Restrictions Requirements - Disclosure of the LUCs to tenants of Buildings 127A, 127B, and 128A and continued enforcement of prohibition on any construction, modification, repair, planting, ground disturbance, or installation in or around the premises by tenants.

- Projects involving building alterations or sub-surface work are required to go through the Presidio Trust building or dig permit process, respectively, which notifies and requires adherence by project proponents to LUC area restrictions and requirements. Dig permits are tracked and reported annually via the Annual O&M Report.

- Project proponent of future development will be notified of the presence of residual COCs at concentrations exceeding human health CULs as part of the Trust's N^2 and dig permit1 process.

5.0 INSPECTION, MAINTENANCE, AND REPAIR REQUIREMENTS

Post-mitigation requirements for annual inspection, repair, and upkeep of the VMS and caps, indoor air monitoring, and groundwater monitoring are presented in the *Revised Operations, Monitoring, and Maintenance Plan* (OMMP, TRC, in progress).

Activities completed as part of the OMMP and the results of inspections, maintenance, and monitoring sampling will be summarized in the Presidio Annual O&M Report submitted to DTSC and RWQCB during the first quarter of the following calendar year in conformance with the approved *Operations & Maintenance Agreement* (DTSC, 2012). The Annual O&M Report documents Trust compliance with site specific O&M plans and informs DTSC and RWQCB of changes to the OMMP or the site specific LUCMRR Addendum.

6.0 REFERENCES

California Regional Water Quality Control Board (RWQCB). 2009. No Further Action, Fuel Distribution System, FDS Closure Certification Report Phase I, Presidio of San Francisco, San Francisco County, Water Board Case No. 38D9327. September 16.

RWQCB. 2013. No Further Action for Priority Tanks, Submittal No. 1, Presidio of San Francisco, San Francisco County. January 3.

RWQCB. 2017. Water Board Review of the January 17. 2020 Revised Feasibility Study and Corrective Action Plan Report, Riley Avenue Site, Building Units 127A, 127B, and 128A, Fuel Distribution System Section BR11-1, Presidio of San Francisco, San Francisco, California. January 24.

1 Projects in Area B of the Presidio are screened for compliance with the National Environmental Protection Act (NEPA) and the National Historic Preservation Act (NHPA), collectively referred to as N^2.

RWQCB. 2019. Environmental Screening Levels, Rev. 2. 2019. http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/esl.shtml

RWQCB. 2020. Presidio Trust – Re-Opening of Closed Case, FDS Section BR 11-1. Email message to Nina Larssen. January 24.

Department of Toxic Substances Control (DTSC), 2012, Operations and Maintenance Agreement. December 6.

Erler & Kalinowski, Inc. (EKI). 2002. Development of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water, Presidio of San Francisco, California. 2002. Updates through 2013.

The Presidio Trust (Trust). 2006. Fuel Distribution System, Draft FDS Closure Certification Report – Phase 1, Presidio of San Francisco, California, REQUEST FOR CLOSURE CERTIFICATION. January 27.

Presidio Trust, 2009. Presidio Trust Land Use Controls Master Reference Report, Presidio of San Francisco, California. September.

TRC. 2019a. Revised Section BR11-1 Supplemental Site Investigation Report, Fuel Distribution System, Riley Avenue, Presidio of San Francisco, San Francisco, California. August 2.

TRC. 2019b. Construction Completion Report, Vapor Mitigation System, Building 127B Riley Avenue, Section BR11-1, Fuel Distribution System, Riley Avenue, Presidio of San Francisco, San Francisco, California. August 30.

TRC. 2020. Revised Feasibility Study and Corrective Action Plan, Fuel Distribution System Section BR11-1, Buildings 127A. 127B, and 128A, Riley Avenue, Presidio of San Francisco, San Francisco, California. January 17.

TRC. In progress. Revised Operations, Monitoring, and Maintenance Plan Building 127B Vapor Mitigation System and Buildings 127A and 127B Cap, Section BR11-1 – Fuel Distribution System, Riley Avenue, Presidio of San Francisco, San Francisco, California. IN PROGRESS.

Tables

Table 1
LUC Soil COC Concentrations
BR11-1 Riley Avenue
Presidio of San Francisco, San Francisco, California

Sample ID	Depth (ft bgs)	Date	Total Petroleum Hydrocarbons (EPA 8015B)			Polycyclic Aromatic Hydrocarbons (EPA 8270C-SIM)
			Gasoline	Diesel	Motor Oil	Naphthalene
			Soil (mg/kg)			
127BEX111	3.0	07/05/2017	11 Y	**980**	80 Y	< 0.015
127BEX111	5.0	07/05/2017	29 Y	**490**	< 50	**< 0.05**
127BEX115	1.0	07/05/2017	49 Y	**590**	52 Y	**< 0.1**
SB001	3.0	10/02/2017	49 Y	**760**	48 Y	**< 0.041**
SB001	5.0	10/02/2017	27 Y	**550**	38 Y	**< 0.041**
SB001	7.0	10/02/2017	83 Y	**1400**	86 Y	**< 0.058**
SB003	1.0	10/02/2017	50 Y	**1400**	120 Y	**< 0.074**
SB003	3.0	10/02/2017	45 Y	**1500**	120 Y	**< 0.058**
SB003	5.0	10/02/2017	50 Y	**1600**	140 Y	**< 0.041**
SB003	7.0	10/02/2017	60 Y	**4100**	280 J,Y	**< 0.12**
SB003	8.0	10/02/2017	38 Y	**480**	48 Y	**< 0.058**
SB004	1.0	10/03/2017	0.047 J	12 Y	41	< 0.011
SB004	5.0	10/03/2017	0.039 J	46 Y	19	< 0.0059
SB004	10.0	10/03/2017	14 Y	**1000**	86 Y	**< 0.059**
SB004	15.0	10/03/2017	18 Y	**790**	65 Y	< 0.029
SB004 DUP	15.0	10/03/2017	25 Y	**820**	64 Y	**< 0.06**
SB004	20.0	10/03/2017	2.5 Y	**8200**	640 Y	**1.1**
SB004	25.0	10/03/2017	0.039 J	4.8 Y	< 5.9	< 0.0059
SB004	27.0	10/03/2017	**180 Y**	**12000**	950 Y	**< 0.59**
SB006	1.0	10/03/2017	0.0091 J	6.4 Y	35	< 0.012
SB006	5.0	10/03/2017	1.7 Y	**930**	83 Y	**< 0.05**
SB006 DUP	5.0	10/03/2017	16 Y	**900**	85 Y	**< 0.059**
SB006	10.0	10/03/2017	6.4 Y	**2700**	180 J,Y	**< 0.1**
SB006	15.0	10/03/2017	5.2 Y	**1300**	85 J,Y	**< 0.061**
SB006	20.0	10/03/2017	0.096 J	29 Y	2.6 J	< 0.0057
SB006 DUP	20.0	10/03/2017	0.13 J	68 Y	8.1	< 0.0057
SB006	25.0	10/03/2017	0.071 J	0.53 J,Y	< 5.9	< 0.0059
SB006	30.0	10/03/2017	0.025 J	0.58 J,Y	< 5.9	< 0.0059
SB008	0.0	10/12/2017	0.044 J	9.1 Y	9.5	< 0.0062
SB008	1.0	10/12/2017	1.5 Y	**270**	32	< 0.0063
SB008	3.0	10/12/2017	1.1 Y	**350**	21 Y	< 0.012
SB008	5.0	10/12/2017	5.9 Y	**450**	20 Y	< 0.017
SB008 DUP	5.0	10/12/2017	0.19 J	**350**	17 Y	< 0.012
SB008	6.0	10/12/2017	2.5 Y	**250**	12 Y	< 0.012
BR11-1SB010	3.0	06/28/2018	0.034 J	110 Y	120	N/A
BR11-1SB010	5.0	06/28/2018	66 Y	**18000**	1600 Y	N/A
BR11-1SB010	7.0	06/28/2018	78 Y	**4200**	340 Y	N/A
BR11-1SB010	10.0	06/28/2018	55 Y	**2200**	180 Y	N/A
BR11-1SB010	15.0	06/28/2018	57 Y	**3600**	290 Y	N/A
BR11-1SB010 DUP	15.0	06/28/2018	**120 Y**	**7700**	620 Y	N/A
BR11-1SB010	17.5	06/28/2018	**170 Y**	**10000**	880 Y	N/A
BR11-1SB010	20.0	06/28/2018	**130 Y**	**15000**	1400 Y	N/A
BR11-1SB010	25.0	06/28/2018	58 Y	**3500**	270 Y	N/A
BR11-1SB010	30.0	06/28/2018	0.18 J,Y	0.82 J,Y	< 6.0	N/A
BR11-1SB010	35.0	06/28/2018	0.048 J	26	2.8 J,Y	N/A
BR11-1SB016	3.0	06/06/2018	< 0.16	0.78 J,Y	< 6.0	N/A
BR11-1SB016	5.0	06/06/2018	0.020 J	1.5 Y,Z	< 6.0	N/A
BR11-1SB016	7.0	06/06/2018	0.024 J	2.8 Y	< 5.9	N/A
BR11-1SB016	10.0	06/06/2018	0.27 Y	23 Y	3.5 J,Y	N/A
BR11-1SB016 DUP	10.0	06/06/2018	0.64 Y	120	16	N/A
BR11-1SB016	15.0	06/06/2018	5.7 Y	**290**	34	N/A
BR11-1SB016	20.0	06/06/2018	0.18 J	0.82 J,Y	2.5 J	N/A

Table 1
LUC Soil COC Concentrations
BR11-1 Riley Avenue
Presidio of San Francisco, San Francisco, California

Sample ID	Depth (ft bgs)	Date	Total Petroleum Hydrocarbons (EPA 8015B)			Polycyclic Aromatic Hydrocarbons (EPA 8270C-SIM)
			Gasoline	Diesel	Motor Oil	Naphthalene
			Soil (mg/kg)			
BR11-1SB016	25.0	06/06/2018	0.013 J	1.5 Y	3.3 J	N/A
BR11-1SB016	30.0	06/06/2018	0.028 J	4.0 Y,Z	14	N/A
BR11-1SB016	35.0	06/06/2018	0.023 J	0.58 J,Y	< 5.9	N/A
BR11-1SB018	3.0	06/28/2018	0.050 J	35 Y	32	N/A
BR11-1SB018	5.0	06/28/2018	0.058 J	36 Y	39	N/A
BR11-1SB018	7.0	06/28/2018	3.2 Y	**1100**	94 Y	N/A
BR11-1SB018	10.0	06/28/2018	44 Y	**1000**	81 Y	N/A
BR11-1SB018	15.0	06/28/2018	32 Y	**980**	82 Y	N/A
BR11-1SB018 DUP	15.0	06/28/2018	63 Y	**2200**	160 Y	N/A
BR11-1SB018	20.0	06/28/2018	0.096 J,Y	3.8 Y	< 5.7	N/A
BR11-1SB018	25.0	06/28/2018	0.036 J,Y	1.2 Y	< 5.9	N/A
BR11-1SB018	30.0	06/28/2018	0.036 J	1.3 Y	< 5.9	N/A
BR11-1SB018	35.0	06/28/2018	0.034 J	0.69 J,Y	< 6.0	N/A
Soil Cleanup Level: Human Health Residential[a]			1030	1380	1900	480
RWQCB ESLs (Tier 1, February 2019)[b]			100	260	1600	0.042
RWQCB ESLs (Residential, 2019)[b]			430	260	12000	3.8

Notes:
BOLD values indicates the concentration exceeds the cleanup level and/or the ESL.
Shading indicates that the non detected value is above the ESL.

Abbreviations:
fbg = feet below ground surface
mg/kg = milligrams per kilogram
N/A = Not Analyzed
EPA = United States Environmental Protection Agency
J = Estimated value
Y = Sample exhibits chromatographic pattern which does not resemble standard

Footnotes:
[a] Soil cleanup levels from Tables 7-2 and 7-5 and groundwater cleanup levels from Table 7-6 from EKI's 2002 (with updates through 2013) *Development* of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water. Presidio of San Francisco.

[b] RWQCB ESLs are from RWQCB's 2019 (Rev. 2) Summary Tables of Soil ESLs (http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml).

As per RWQCB ESLs Summary of Groundwater ESLs Table, the groundwater diesel value was used for the groundwater motor oil value since motor oil is not soluble.

Table 2
LUC Sub-Slab/Soil Vapor COC Concentrations
BR11-1 Riley Avenue
Presidio of San Francisco, San Francisco, California

Residential Unit	Sample ID	Location	Date	Soil Vapor Constituents Method EPA TO-15						Soil Vapor Constituents Method EPA TO-03M LL	Soil Vapor Constituents Method EPA TO-17	Soil Vapor Constituents Method EPA TO-17	Fixed Gases ASTM D-1946					
				Benzene	Ethylbenzene	Naphthalene	Toluene	p/m-Xylene	o-Xylene	TPH-Gasoline	TPH-Gasoline	TPH-Diesel	Methane[b]	Nitrogen	Carbon Dioxide	Carbon Monoxide	Oxygen	Helium
				Soil Vapor ($\mu g/m^3$)									Soil Vapor (%volume)					
127A	127ASSP01	Sub-slab	10/5/2017	**21**	**37**	<130	47	<43	81	N/A	N/A	**39,000**	**1.51**	88.7	3.85	<0.5	5.91	<0.01
	127ASSP01		2/27/2018	<8.0	<11	<4.2	<9.4	<43	<11	**39,000**	N/A	7,500	**1.81**	87.5	7.89	<0.5	2.79	<0.01
	DUP02272018-01		2/27/2018	<8.0	<11	<4.2	<9.4	<43	<11	**40,000**	N/A	**25,000**	**2.01**	87.6	8.07	<0.5	2.34	<0.01
	127ASSP01		7/18/2018	**5.2**	13	<6.1	7.6	21 J	22	**120,000**	N/A	**30,000**	1.07	86.2	7.58	<0.5	5.12	<0.0790
	DUP07182018-01		7/18/2018	**5.6**	12	<5.7	9.9	18 J	21	**190,000**	N/A	**25,000**	1.09	86.3	7.67	<0.5	4.94	<0.0678
	127ASSP02	Sub-slab	10/5/2017	<1.7	<2.3	<28	7.7	<9.2	<2.3	N/A	N/A	<5,000	<0.5	79.3	7.51	<0.5	13.2	<0.01
	127ASSP02		2/27/2018	<1.7	<2.3	<0.88	<2.0	<9.0	<2.3	<930	N/A	<5,000	<0.5	82.3	3.54	<0.5	14.1	0.016
	127ASSP02		7/18/2018	<2.2	<2.6	<5.9	<2.6	<24	<12	1,000	N/A	<5,000	<0.5	79.8	6.64	<0.5	13.5	0.0331
127B	127BSSV01	Vent Riser	4/2/2019	**11**	5.1	<26	27	38	16	2,000	<6,700	**10,000**	<0.5	78.6	<0.5	<0.5	21.4	N/A
	127BSSV01		10/1/2019	<1.6	<2.2	<6.6	13	5.5 J	2.3	1,200	N/A	<6,700	<0.5	76.0	<0.5	<0.5	24.0	N/A
128A	128ASVP01	5.5	10/18/2017	**4.1**	<2.2	**<26**	16	<8.7	65	N/A	N/A	**210,000 E***	<0.5	81.6	11.6	<0.5	6.8	<0.01
	128ASVP02	5.5	10/18/2017	3.0	<2.2	<27	12	<8.9	<2.2	N/A	N/A	**10,000**	<0.5	81.9	7.33	<0.5	10.8	0.0103
	128ASVP02		2/27/2018	<1.6	<2.2	<0.85	<1.9	<8.7	<2.2	<930	N/A	<5000	<0.5	81.6	9.94	<0.5	8.48	0.0131
	128ASVP02		7/18/2018	<2.2	<3.0	<5.8	<2.6	<24	<36	950	N/A	<5000	<0.5	80.9	10.0	<0.5	9.07	--
RWQCB ESLs (Tier 1, January 2019)[a]				3.2	37	2.8	10,000	3,500	3,500	3,300	3,300	8,900	1.25	--	--	--	--	--
RWQCB Residential ESLs (Soil Gas, January 2019)[a]				3.2	37	2.8	10,000	3,500	3,500	20,000	20,000	8,900	1.25	--	--	--	--	--

Notes:
Bold values indicates reported detected concentration exceeds the current ESL (2019, Rev 02) or established screening level.
Shading indicates that the non detected value is above the ESL.

Abbreviations:
%v = percent volume
-- = not available
<# = not detected above the laboratory limit provided
$\mu g/m^3$ = micrograms per cubic meter
AF = attenuation factor
ASTM = American Society for Testing and Materials
ID = identification
ESLs = Environmental Screening Levels
N/A = Not Analyzed
J = Estimated value
LL = Low Level
N/A = not analyzed
RWQCB = Regional Water Quality Control Board
TPH = Total Petroleum Hydrocarbons
TO = toxic organic

Footnotes:
[a] RWQCB ESLs are from RWQCB's January 2019 (Rev. 02) Summary Table of Vapor ESLs (http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml).
[b] Methane screening level from *Revised Vapor Mitigation System Design, Building 127B Riley Avenue* , TRC 2019

Table 3
LUC Groundwater COC Concentrations
BR11-1 Riley Avenue
Presidio of San Francisco, San Francisco, California

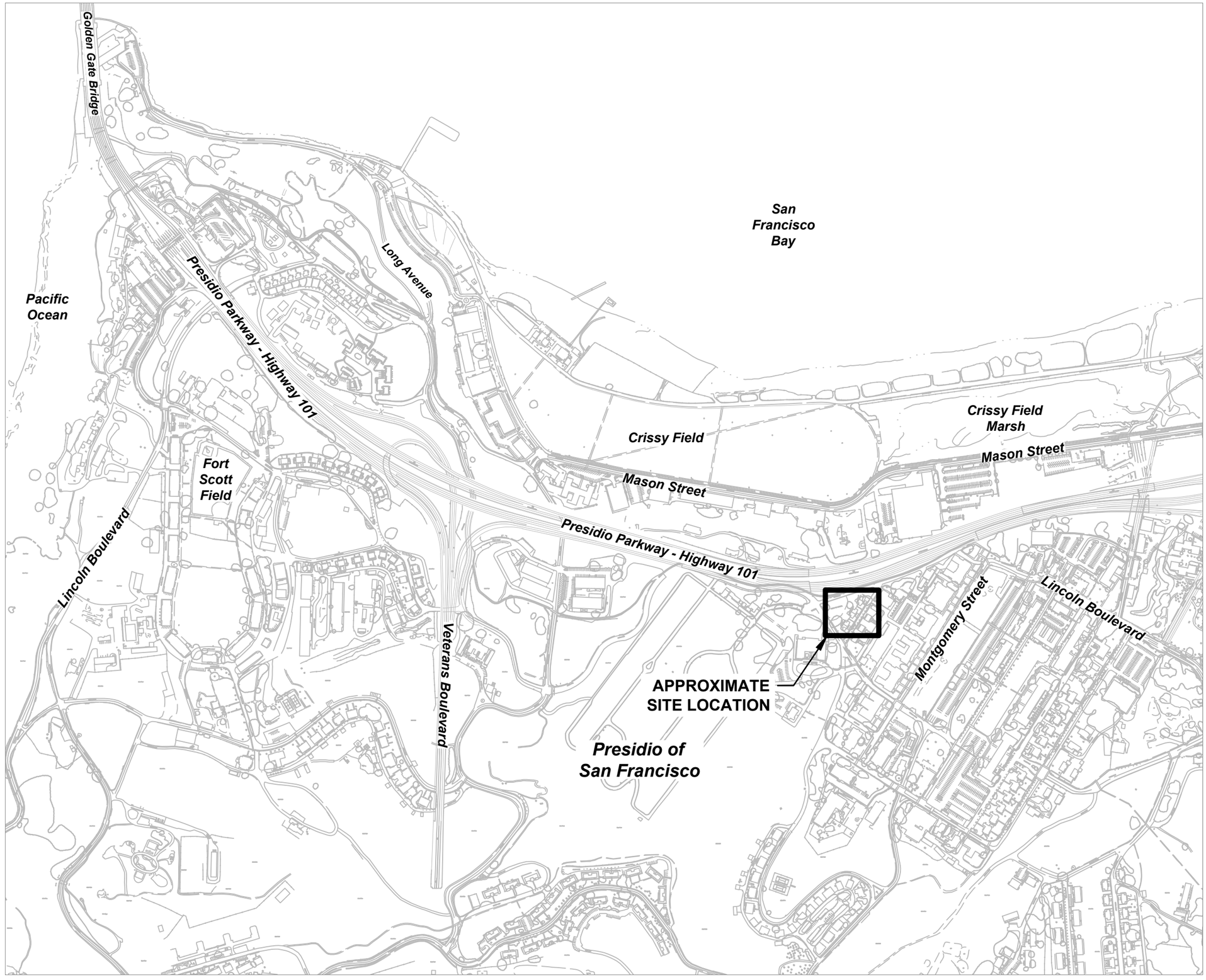
Sample ID	Depth (ft bgs)[1]	Date	Total Petroleum Hydrocarbons (EPA 8015B)						
			Gasoline (C7-C12)	Diesel (C10-C24)	Diesel w/ SGC	Motor Oil (C24-C36)	Motor Oil w/ SCG	Bunker C (C12-C40)	Bunker C w/ SGC
			Groundwater (µg/L)						
BR11-1GW01	23	07/06/2018	15 J	24 J,Y,Z	< 50	< 300	< 300	< 300	< 300
	24	10/03/2018	32 J	66 Y,Z	< 50	< 300	< 300	N/A	N/A
	24	1/18/2019	63	91 Y	<48	<290	<290	N/A	N/A
	21	4/18/2019	69	**460**	**160 Y**	<290	<290	930 Y	380 Y
SB004	27	10/03/2017	1900 Y	**170000**	N/A	**13000 JY**	N/A	**450000 Y**	N/A
Groundwater Cleanup Level: Drinking Water[a]			770	880		1200		--	
RWQCB ESLs (Tier 1, February 2019)[b]			100	100		--		--	
RWQCB ESLs (MCL Priority, February 2019)[b]			760	200		410[d]		410[d]	

Notes:
BOLD values indicates the concentration exceeds the cleanup level and/or the Tier 1 ESL.
Shading indicates that the non-detect value is above the Tier 1 ESL.

Abbreviations:
-- = not available
µg/L = micrograms per liter
fbg = feet below ground surface
N/A = not analyzed
EPA = United States Environmental Protection Agency
ESL = Environmental Screening Level
MCL = Maximum Contaminant Level
SGC = silica gel cleanup
J = Estimated value
Y = Sample exhibits chromatographic pattern which does not resemble standard
Z = Sample exhibits unknown single peaks or peaks

Footnotes:
[1] Measured depth to water in temporary or permanent well casing prior to sample collection.
[a] Soil cleanup levels from Tables 7-2 and 7-5 and groundwater cleanup levels from Table 7-6 from EKI's 2002 (with updates through 2013) *Development* of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water. Presidio of San Francisco.
[b] Tier 1 values from the San Francisco Regional Water Quality Control Board (RWQCB) January 2019 (Rev. 2) Summary of Environmental Screening Levels (ESLs).
[c] California Code of Regulations (CCR) Title 22 Division 4 Environmental Health Chapter 15. Domestic Water Quality and Monitoring Regulations. Article 16. May 2, 2006
[d] ESL shown is for Petroleum-hydrocarbon oxidation product (HOP). No ESL specific for motor oil or bunker c oil is available.

Figures



0 600 1200

SCALE IN FEET

SOURCE: Base map by Towill, Oct.- Nov. 2015, Apr. 2016, May 2017, and Jan. 2018

PROJECT:

THE PRESIDIO TRUST
BR11-1 FUEL DISTRIBUTION SYSTEM
RILEY AVENUE, SAN FRANCISCO, CALIFORNIA

TITLE:

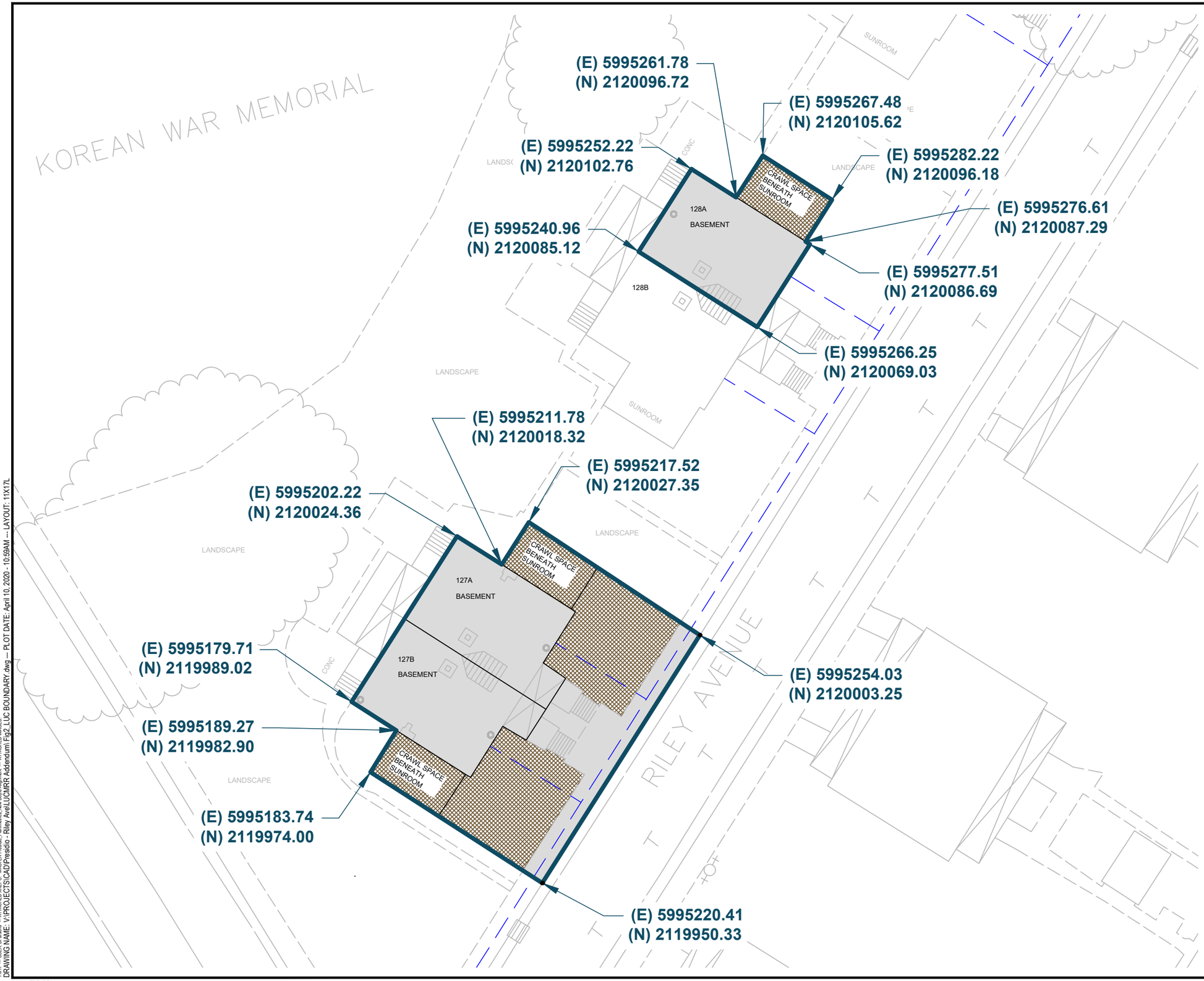
VICINITY MAP

DRAWN BY:	K. LI	PROJ NO.:	285830.00001A.TASK07
CHECKED BY:	A. ANG		
APPROVED BY:	A. ANG		**FIGURE 1**
DATE:	AUGUST 2019		

TRC

505 Sansome Street
Suite 1600
San Francisco, CA 94111
Phone: 415.434.2600

FILE NO.: Fig1 Vicinity Map_REV AUG19.dwg



LEGEND

- FORMER BR11-1 FDS LINE
- RESIDENTIAL UNITS BOUNDARY
- HARDSCAPE AREA
- NON-IMPACTED SOIL COVER AREA (2 FT. MINIMUM DEPTH)
- LAND USE CONTROL BOUNDARY
- (E) 5000000.00 (N) 2000000.00 — EASTINGS AND NORTHINGS ALONG THE LAND USE CONTROL BOUNDARY

NOTES

1. THE 2-FT. MINIMUM DEPTH FOR NON-IMPACTED SOIL COVER CONFIRMED VIA SOIL BORING LOGS FROM LOCATIONS ACROSS THE SITE AND WAS DOCUMENTED IN THE 2019 SUPPLEMENTAL SITE INVESTIGATION REPORT.
2. COORDINATES ARE SHOWN IN FEET AND BASED ON NAD 83, ON CCS83 (2007.00), ZONE 3.

0 20 40

SCALE IN FEET

PROJECT:
THE PRESIDIO TRUST
BR11-1 FUEL DISTRIBUTION SYSTEM
RILEY AVENUE, SAN FRANCISCO, CALIFORNIA

TITLE:
LUC AREA BOUNDARY

DRAWN BY:	D. PARSONS	PROJ NO.:	285830.02A.05
CHECKED BY:	A. ANG		
APPROVED BY:	A. ANG		**FIGURE 2**
DATE:	APRIL 2020		

TRC
505 Sansome Street
Suite 1600
San Francisco, CA 94111
Phone: 415.434.2600

FILE NO.: Fig2_LUC BOUNDARY.dwg

KOREAN WAR MEMORIAL

LANDSCAPE

CONC

SUNROOM

CRAWL SPACE BENEATH SUNROOM

128A

SB008

128B

127A

127B

127BEX115

127BEX111

SB003

SB001

BR11-1SB016

SB006

BR11-1SB018

BR11-1SB010

SB004

RILEY AVENUE

HISTORIC UST LOCATION

Area with NAPL suspected

LEGEND

- FORMER BR11-1 FDS LINE
- LAND USE CONTROL BOUNDARY
- IMPACTED SOIL SAMPLE (ABOVE ESLs)
- APPROXIMATE EXTENT OF TPH-d SOIL IMPACTS ABOVE SCREENING LEVEL (260 mg/kg)

NOTES

COC	CONTAMINANT OF CONCERN
ESL	ENVIRONMENTAL SCREENING LEVEL
FDS	FUEL DISTRIBUTION SYSTEM
mg/kg	MILLIGRAMS PER KILOGRAM
NAPL	NON-AQUEOUS PHASE LIQUIDS
TPH-d	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPH-g	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

SOIL SCREENING VALUES*

SITE COC	ESL (mg/kg)
TPH-g	100
TPH-d	260
NAPTHALENE	0.042

* SCREENING VALUES BASED ON TIER 1 ESLs FROM THE REGIONAL WATER QUALITY CONTROL BOARD'S 2019 (REV. 2) SUMMARY TABLE OF ESLs.

IMPACTED MEDIA BASED ON INVESTIGATIVE ANALYTICAL RESULTS PRESENTED IN THE 2019 REVISED SUPPLEMENTAL SITE INVESTIGATION REPORT.

0 20 40

SCALE IN FEET

PROJECT:
THE PRESIDIO TRUST
BR11-1 FUEL DISTRIBUTION SYSTEM
RILEY AVENUE, SAN FRANCISCO, CALIFORNIA

TITLE:
LUC AREA SOIL IMPACTS

DRAWN BY:	D. PARSONS	PROJ NO.:	285830.02A.05
CHECKED BY:	A. ANG		
APPROVED BY:	A. ANG		**FIGURE 3**
DATE:	APRIL 2020		

TRC
505 Sansome Street
Suite 1600
San Francisco, CA 94111
Phone: 415.434.2600

FILE NO.: Fig3_LUC Soil Impacts.dwg

LEGEND

- FORMER BR11-1 FDS LINE
- LAND USE CONTROL BOUNDARY
- EXTENT OF SUSPECTED SOIL VAPOR IMPACTS
- IMPACTED (ABOVE ESLs) SOIL VAPOR LOCATION

NOTES

COC	CONTAMINANT OF CONCERN
ESL	ENVIRONMENTAL SCREENING LEVEL
FDS	FUEL DISTRIBUTION SYSTEM
µg/m³	MICROGRAMS PER CUBIC METER
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

SOIL VAPOR SCREENING VALUES*

SITE COC	ESL (µg/m³)
TPH-g	3,333
TPH-d	8,900
BENZENE	3.2

* SCREENING VALUES BASED ON TIER 1 ESLs FROM THE REGIONAL WATER QUALITY CONTROL BOARD'S 2019 (REV. 2) SUMMARY TABLE OF ESLs.

IMPACTED MEDIA BASED ON INVESTIGATIVE ANALYTICAL RESULTS PRESENTED IN THE 2019 REVISED SUPPLEMENTAL SITE INVESTIGATION REPORT.

PROJECT:
THE PRESIDIO TRUST
BR11-1 FUEL DISTRIBUTION SYSTEM
RILEY AVENUE, SAN FRANCISCO, CALIFORNIA

TITLE:
LUC AREA SOIL VAPOR IMPACTS

DRAWN BY:	D. PARSONS	PROJ NO.:	285830.02A.05
CHECKED BY:	A. ANG		
APPROVED BY:	A. ANG		**FIGURE 4**
DATE:	APRIL 2020		

TRC
505 Sansome Street
Suite 1600
San Francisco, CA 94111
Phone: 415.434.2600

FILE NO.: Fig4_LUC Soil Vapor Impacts.dwg

LEGEND

- FORMER BR11-1 FDS LINE
- LAND USE CONTROL BOUNDARY
- IMPACTED (ABOVE ESLs GROUNDWATER SAMPLE - MONITORING WELL
- IMPACTED (ABOVE ESLs) GROUNDWATER SAMPLE BORING LOCATION
- APPROXIMATE EXTENT OF TPH-d GROUNDWATER IMPACTS ABOVE SCREENING LEVEL (100 mg/kg)

NOTES

COC	CONTAMINANT OF CONCERN
ESL	ENVIRONMENTAL SCREENING LEVEL
FDS	FUEL DISTRIBUTION SYSTEM
µg/L	MICROGRAMS PER LITER
NAPL	NON-AQUEOUS PHASE LIQUIDS
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

GROUNDWATER SCREENING VALUES*

SITE COC	ESL (µg/L)
TPH-g	100
TPH-d	100
NAPTHALENE	0.17

* SCREENING VALUES BASED ON TIER 1 ESLs FROM THE REGIONAL WATER QUALITY CONTROL BOARD'S 2019 (REV. 2) SUMMARY TABLE OF ESLs.

IMPACTED MEDIA BASED ON INVESTIGATIVE ANALYTICAL RESULTS PRESENTED IN THE 2019 REVISED SUPPLEMENTAL SITE INVESTIGATION REPORT.

PROJECT:
THE PRESIDIO TRUST
BR11-1 FUEL DISTRIBUTION SYSTEM
RILEY AVENUE, SAN FRANCISCO, CALIFORNIA

TITLE:
LUC AREA GROUNDWATER IMPACTS

DRAWN BY:	D. PARSONS	PROJ NO.:	285830.02A.05
CHECKED BY:	A. ANG		
APPROVED BY:	A. ANG		**FIGURE 5**
DATE:	APRIL 2020		

TRC
505 Sansome Street
Suite 1600
San Francisco, CA 94111
Phone: 415.434.2600

FILE NO.: Fig5_LUC Groundwater Impacts.dwg