

**LENDRUM COURT
INVESTIGATION SUMMARY REPORT AND
SCREENING RISK EVALUATION**

PRESIDIO OF SAN FRANCISCO, CALIFORNIA

Prepared for:
The Presidio Trust
San Francisco, CA

Prepared by:
Erler & Kalinowski, Inc.
Burlingame, California
EKI B00025.07

February 2014

Appendix G

Armistead Playground Sampling Results and Workplan



28 February 2014

MEMORANDUM

To: Eileen Fanelli, Presidio Trust

From: John DeWitt, Erler & Kalinowski, Inc.

Subject: Sampling Results at Armistead Playground
(EKI B00025.07 T3)

On behalf of the Presidio Trust (“Trust”), on 23 December 2013 Erler & Kalinowski, Inc. (“EKI”) collected surface soil samples in accordance with the 20 December 2013 *Work Plan for Sampling at Lendrum Court Playground*. The playground is located between Lendrum Court and Ramsel Court (Figure 1), and is named Armistead Playground in Trust Construction documents. Surface soil samples were collected to evaluate if existing surface soils (at grade and from surface soils immediately below playground sand or wood chips) present a potential threat to human health or the environment.

SURFACE SOIL SAMPLING

EKI collected surface soil samples at locations shown on Figure 2.

- Soil samples 1282SB101, 1282SB102, and 1282SB103 were collected from surface soil beneath the wood chips area. The depth of wood chips ranged from approximately 3 to 12 inches at these locations; the samples were collected from the ground surface immediately below the chips. A duplicate sample was collected at location 1282SB102.
- Soil sample 1282SB104 was collected from surface soil beneath the sand box area. The depth of sand was approximately 12 to 18 inches deep; the sample was collected from the ground surface immediately below the play sand.
- Soil sample 1282SB105 was collected from the hillside surface soil approximately 25 feet southwest of the paved area of the playground in an area of bare ground. Soil sample 1282SB106 was collected from surface soil approximately 70 feet southwest of the paved area of the playground at the top of a small rise.

Soil samples from below the sand and wood chips were collected as discrete samples, and the samples from the hillside were multi-point samples.



Soil samples were analyzed for the following:

- Polycyclic Aromatic Hydrocarbons (“PAHs”) by EPA Method 8270C with Selective Ion Monitoring;
- Title 22 Metals by EPA Method 6020/7471; and
- Percent moisture.

ANALYTICAL RESULTS

Analytical results are presented in the attached Tables 1 and 2, along with the soil screening levels and background screening concentrations used for the Lendrum Court investigation. After taking into account background metals values, no metals were detected above the residential or ecological soil screening levels. No PAHs were detected above the residential or ecological screening levels, and benzo(a)pyrene equivalents were below residential screening levels.

CONCLUSIONS

Based on the sample results, no chemicals of concern were identified in the playground sample results.

Therefore, no further action is recommended for the Armistead Playground.

Please contact me at 650-292-9100 if you have questions.

Attachments:

Table 1, Summary of Soil Results for Metals

Table 2, Summary of Soil Results for PAHs

Figure 1, Site Location Map

Figure 2, Soil Sample Locations

Curtis and Tompkins Analytical Report (electronic version only)

TABLE 1
SUMMARY OF SOIL RESULTS FOR METALS
 Armistead Playground
 Presidio of San Francisco, California

Trench Location	Sample ID	Sample Date	Analytical Results in mg/kg (a)																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
1282SB101	1282SB101	12/23/2013	0.29	4.2	96	0.39	<0.16	350	28	19	41	0.046	0.59	560	<0.27	<0.16	0.098	61	59
1282SB102	1282SB102	12/23/2013	4.0	5.3	92	0.36	<0.16	200	23	16	34	0.046	0.38	260	<0.27	<0.16	<0.080	56	49
	DUP122313-1	12/23/2013	0.32	4.8	100	0.44	<0.15	150	17	17	61	0.054	0.53	180	<0.25	<0.15	<0.075	59	53
1282SB103	1282SB103	12/23/2013	<0.30	4.0	97	0.34	<0.17	140	20	17	50	0.027	0.33	200	<0.28	<0.17	<0.084	52	54
1282SB104	1282SB104	12/23/2013	<0.25	4.0	100	0.49	<0.14	190	21	17	17	0.066	0.74	240	<0.23	<0.14	0.095	63	49
1282SB105	1282SB105	12/23/2013	0.36	4.0	130	0.38	0.19	240	31	19	61	0.097	0.79	460	<0.26	<0.15	0.081	53	62
1282SB106	1282SB106	12/23/2013	0.46	3.5	160	0.38	0.25	60	7.6	16	70	0.11	0.75	37	0.33	<0.15	0.11	50	62
<i>Residential Soil Screening Level (b)</i>			29	6.2	5,000	140	1.7	1,200	4,000	--	80	20	360	1,400	360	360	5.7	650	22,000
<i>Ecological Buffer Zone Soil Screening Level (b)</i>			5	64	500	10	0.23	23	48	120	300	1.6	300	71	1.1	2	1	5	50
<i>Colma Formation/Serpentine Presidio Background Metals Concentrations (c)</i>			3/3	6.2/5.4	180/230	0.99/1.1	0.8/1.9	140/1700	21/170	49/85	7.5/66	0.2/0.2	2/2	110/4,500	0.5/0.5	1/1.7	1/1	90/74	79/160

Abbreviations:

-- - Not applicable
 <0.50 - Compound not detected at or above indicated laboratory reporting limit
 DUP - Duplicate Sample
 mg/kg - milligrams per kilogram

Notes:

- (a) Samples were collected from exposed surface soil or surface soil immediately below play sand or wood chips, where applicable. Samples were analyzed by Curtis & Tompkins, Ltd, of Berkeley, California using EPA Method 6020/7471A. Results are reported to two significant figures.
- (b) Residential Soil Screening Levels are Residential Human Health Preliminary Remediation Goals ("PRGs") from Table 7-2 of the Cleanup Level Document (EKI, 2002; with updates through 2013). For lead, the California Human Health Screening Level of 80 mg/kg is applied (DTSC, 2013). Ecological Buffer Zone Soil Screening Levels are ecological PRGs from Table 7-2 of the Cleanup Level Document (EKI, 2002; with updates through 2013).
- (c) Site lithology is a mixture of Colma Formation and serpentine. For screening purposes, site concentrations are compared with the higher of the two background values.

TABLE 2
SUMMARY OF SOIL RESULTS FOR PAHs
 Armistead Playground
 Presidio of San Francisco, California

Location	Sample ID	Sample Date	Analytical Results (mg/kg) (a)																	
			PAHs																B(a)P Equivalents (b)	
			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Naphthalene	Pyrene		
1282SB101	1282SB101	12/23/2013	<0.0059	<0.0059	<0.0059	0.012	0.011	0.012	0.0083	<0.0059	0.018	<0.0059	0.015	<0.0059	<0.0059	0.019	<0.0059	0.031	0.017	
1282SB102	1282SB102	12/23/2013	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	0.0092	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	0.0063	0.0072	
	DUP122313-1	12/23/2013	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	ND	
1282SB103	1282SB103	12/23/2013	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	ND	
1282SB104	1282SB104	12/23/2013	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	ND	
1282SB105	1282SB105	12/23/2013	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	ND	
1282SB106	1282SB106	12/23/2013	<0.011	0.015	<0.011	<0.011	<0.011	0.019	<0.011	<0.011	0.013	<0.011	0.013	<0.011	<0.011	<0.011	<0.011	0.021	0.014	
<i>Residential Soil Screening Level (c)</i>			2,700	--	5,900	0.46	0.046	0.46	620	4.6	46	0.046	820	770	0.46	910	600	620	0.046	
<i>Ecological Buffer Zone Soil Screening Level (c)</i>			40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	--
<i>Northern California PAH Background (d)</i>			--	--	--	--	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--

Abbreviations:

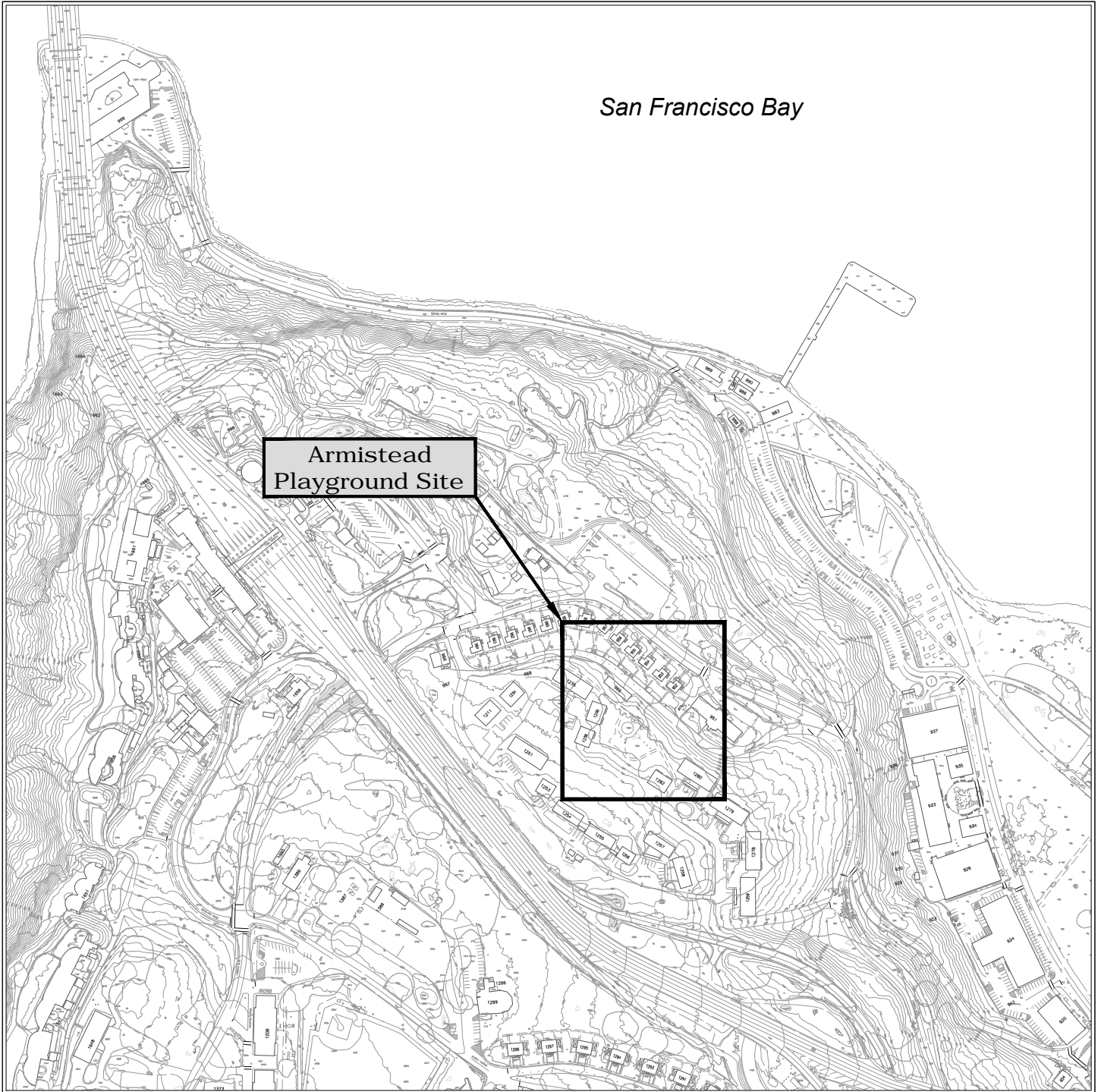
- - Not applicable
- <0.50 - Compound not detected at or above indicated laboratory reporting limit
- B(a)P - Benzo(a)pyrene
- Base - Below "Debris layer"
- Debris - Debris layer
- DUP - Duplicate Sample
- mg/kg - milligrams per kilogram
- ND - Compound not detected
- Overburden - Overburden layer
- PAH - Polycyclic aromatic hydrocarbons

Notes:

- (a) Samples were collected from exposed surface soil or surface soil immediately below play sand or wood chips, where applicable. Samples were analyzed by Curtis & Tompkins, Ltd, of Berkeley, California using EPA Method 8270C-SIM for PAHs. Results are reported to two significant figures.
- (b) Benzo(a)pyrene equivalents calculated with Toxicity Equivalency Factors for Carcinogenic Polycyclic Aromatic Hydrocarbons from EPA Region 9 Regional Screening Levels User's Guide, November 2013. For PAHs not included in the November 23013 User's Guide, values from the June 2011 HHRA Note Number 4 were used, as requested by DTSC. Values of one half the detection limit are used for results below the detection limit.
- (c) Residential Soil Screening Levels are Residential Human Health Preliminary Remediation Goals ("PRGs") from Tables 7-2 and 7-5 of the Cleanup Level Document (EKI, 2002; with updates through 2013). Ecological Buffer Zone Soil Screening Levels are ecological PRGs from Tables 7-2 and 7-5 of the Cleanup Level Document (EKI, 2002; with updates through 2013).
- (d) Northern California upper tolerance limit background concentration for benzo(a)pyrene potency equivalent from ENVIRON, et al., 2002.

San Francisco Bay

Armistead
Playground Site



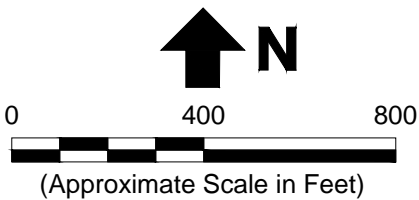
Reference: Basemap source: Presidio Trust, 30 April 2011.

Note:

- 1. All locations are approximate.

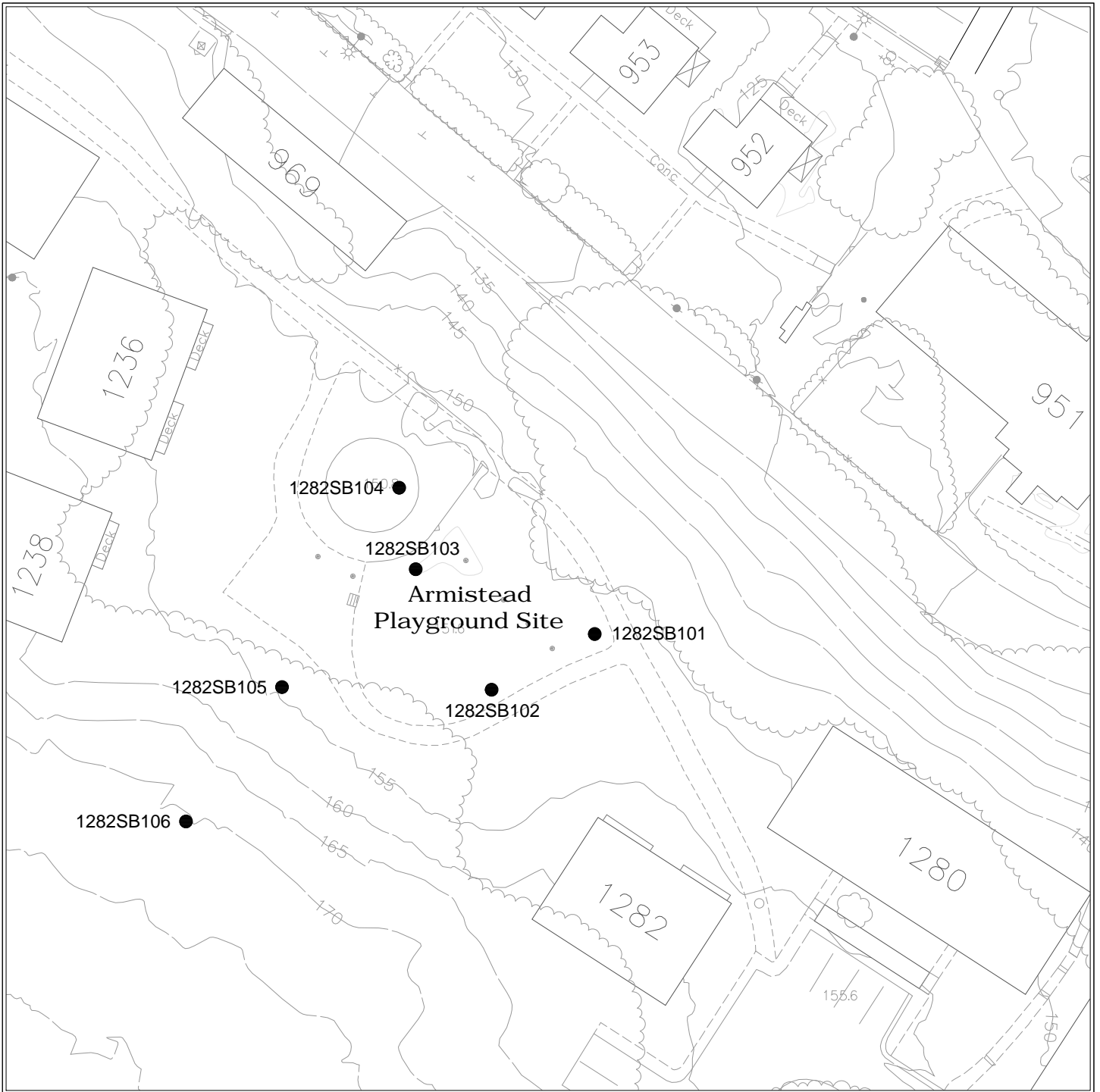
**Erler &
Kalinowski, Inc.**

Site Location Map



Armistead Playground Site
 The Presidio Trust
 San Francisco, CA
 January 2014
 EKI B00025.07

Figure 1



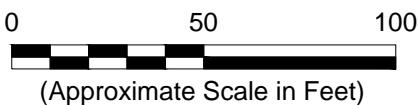
Reference: Basemap source: Presidio Trust, 30 April 2011.

Legend:

● 1282SB101 Approximate Soil Sample Location

Note:

1. All locations are approximate.
2. Samples collected below sand or wood chips in sample 1282SB101-1282SB104. Samples collected from surface soil at locations 1282SB105 and 1282SB106.



Erler & Kalinowski, Inc.

Soil Sample Locations

Armistead Playground Site
 The Presidio Trust
 San Francisco, CA
 January 2014
 EK1 B00025.07



Figure 2

20140109_09361417 C:\Users\rिकासता\appdata\local\temp\AcPublish_3656\Figure 2.dwg Figure 1



Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 251929
ANALYTICAL REPORT

Erler & Kalinowski, Inc.
1870 Ogden Drive
Burlingame, CA 94010-5306

Project : B00025.07 T2
Location : Presidio-Lendrum Ct.
Level : II

Table with 2 columns: Sample ID and Lab ID. Rows include 1282SB101-106 and DUP122313-1.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

Date: 01/03/2014

CASE NARRATIVE

Laboratory number: 251929
Client: Erler & Kalinowski, Inc.
Project: B00025.07 T2
Location: Presidio-Lendrum Ct.
Request Date: 12/23/13
Samples Received: 12/23/13

This data package contains sample and QC results for seven soil samples, requested for the above referenced project on 12/23/13. The samples were received cold and intact.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM):

High RPD was observed for pyrene in the MS/MSD for batch 206525; the parent sample was not a project sample. 1282SB105 (lab # 251929-005) was diluted due to the dark and viscous nature of the sample extract. 1282SB106 (lab # 251929-006) was diluted due to high non-target analytes. No other analytical problems were encountered.

Metals (EPA 6020 and EPA 7471A):

Matrix spikes QC722730, QC722731 (batch 206715) were not reported because the parent sample was reextracted in another batch. Low recoveries were observed for antimony in the MS/MSD of 1282SB106 (lab # 251929-006); the BS/BSD were within limits, and the associated RPD was within limits. High recovery was observed for mercury in the MS for batch 206715; the parent sample was not a project sample, and the BS/BSD were within limits. High RPD was also observed for mercury in the MS/MSD for batch 206715; the RPD was acceptable in the BS/BSD. No other analytical problems were encountered.

Moisture (ASTM D2216/CLP):

No analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 251929 Date Received 12/23/13 Number of coolers 1
 Client EKI Project PRECIDIO-LENDRUM CT
 (B00025.07 T3)
 Date Opened 12/23/13 By (print) JR (sign) Jung Runka
 Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
 Shipping info _____

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? _____ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) _____ YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap
- Foam blocks
- Bags
- None
- Cloth material
- Cardboard
- Styrofoam
- Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) _____

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ YES NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Field ID:	1282SB101	Batch#:	206525
Lab ID:	251929-001	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	ug/Kg	Prepared:	12/26/13
Basis:	dry	Analyzed:	01/02/14
Diln Fac:	1.000		

Moisture: 16%

Analyte	Result	RL
Naphthalene	ND	5.9
Acenaphthylene	ND	5.9
Acenaphthene	ND	5.9
Fluorene	ND	5.9
Phenanthrene	19	5.9
Anthracene	ND	5.9
Fluoranthene	15	5.9
Pyrene	31	5.9
Benzo(a)anthracene	12	5.9
Chrysene	18	5.9
Benzo(b)fluoranthene	12	5.9
Benzo(k)fluoranthene	ND	5.9
Benzo(a)pyrene	11	5.9
Indeno(1,2,3-cd)pyrene	ND	5.9
Dibenz(a,h)anthracene	ND	5.9
Benzo(g,h,i)perylene	8.3	5.9

Surrogate	%REC	Limits
Nitrobenzene-d5	65	23-120
2-Fluorobiphenyl	60	30-115
Terphenyl-d14	84	18-137

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Field ID:	1282SB102	Batch#:	206525
Lab ID:	251929-002	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	ug/Kg	Prepared:	12/26/13
Basis:	dry	Analyzed:	01/02/14
Diln Fac:	1.000		

Moisture: 20%

Analyte	Result	RL
Naphthalene	ND	6.2
Acenaphthylene	ND	6.2
Acenaphthene	ND	6.2
Fluorene	ND	6.2
Phenanthrene	ND	6.2
Anthracene	ND	6.2
Fluoranthene	ND	6.2
Pyrene	6.3	6.2
Benzo(a)anthracene	ND	6.2
Chrysene	9.2	6.2
Benzo(b)fluoranthene	ND	6.2
Benzo(k)fluoranthene	ND	6.2
Benzo(a)pyrene	ND	6.2
Indeno(1,2,3-cd)pyrene	ND	6.2
Dibenz(a,h)anthracene	ND	6.2
Benzo(g,h,i)perylene	ND	6.2

Surrogate	%REC	Limits
Nitrobenzene-d5	74	23-120
2-Fluorobiphenyl	59	30-115
Terphenyl-d14	75	18-137

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Field ID:	1282SB103	Batch#:	206525
Lab ID:	251929-003	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	ug/Kg	Prepared:	12/26/13
Basis:	dry	Analyzed:	12/27/13
Diln Fac:	1.000		

Moisture: 18%

Analyte	Result	RL
Naphthalene	ND	6.0
Acenaphthylene	ND	6.0
Acenaphthene	ND	6.0
Fluorene	ND	6.0
Phenanthrene	ND	6.0
Anthracene	ND	6.0
Fluoranthene	ND	6.0
Pyrene	ND	6.0
Benzo(a)anthracene	ND	6.0
Chrysene	ND	6.0
Benzo(b)fluoranthene	ND	6.0
Benzo(k)fluoranthene	ND	6.0
Benzo(a)pyrene	ND	6.0
Indeno(1,2,3-cd)pyrene	ND	6.0
Dibenz(a,h)anthracene	ND	6.0
Benzo(g,h,i)perylene	ND	6.0

Surrogate	%REC	Limits
Nitrobenzene-d5	89	23-120
2-Fluorobiphenyl	64	30-115
Terphenyl-d14	77	18-137

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Field ID:	1282SB104	Batch#:	206525
Lab ID:	251929-004	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	ug/Kg	Prepared:	12/26/13
Basis:	dry	Analyzed:	12/27/13
Diln Fac:	1.000		

Moisture: 16%

Analyte	Result	RL
Naphthalene	ND	5.9
Acenaphthylene	ND	5.9
Acenaphthene	ND	5.9
Fluorene	ND	5.9
Phenanthrene	ND	5.9
Anthracene	ND	5.9
Fluoranthene	ND	5.9
Pyrene	ND	5.9
Benzo(a)anthracene	ND	5.9
Chrysene	ND	5.9
Benzo(b)fluoranthene	ND	5.9
Benzo(k)fluoranthene	ND	5.9
Benzo(a)pyrene	ND	5.9
Indeno(1,2,3-cd)pyrene	ND	5.9
Dibenz(a,h)anthracene	ND	5.9
Benzo(g,h,i)perylene	ND	5.9

Surrogate	%REC	Limits
Nitrobenzene-d5	67	23-120
2-Fluorobiphenyl	56	30-115
Terphenyl-d14	73	18-137

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Field ID:	1282SB105	Batch#:	206525
Lab ID:	251929-005	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	ug/Kg	Prepared:	12/26/13
Basis:	dry	Analyzed:	12/31/13
Diln Fac:	5.000		

Moisture: 15%

Analyte	Result	RL
Naphthalene	ND	30
Acenaphthylene	ND	30
Acenaphthene	ND	30
Fluorene	ND	30
Phenanthrene	ND	30
Anthracene	ND	30
Fluoranthene	ND	30
Pyrene	ND	30
Benzo(a)anthracene	ND	30
Chrysene	ND	30
Benzo(b)fluoranthene	ND	30
Benzo(k)fluoranthene	ND	30
Benzo(a)pyrene	ND	30
Indeno(1,2,3-cd)pyrene	ND	30
Dibenz(a,h)anthracene	ND	30
Benzo(g,h,i)perylene	ND	30

Surrogate	%REC	Limits
Nitrobenzene-d5	101	23-120
2-Fluorobiphenyl	66	30-115
Terphenyl-d14	77	18-137

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Field ID:	1282SB106	Batch#:	206582
Lab ID:	251929-006	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	ug/Kg	Prepared:	12/27/13
Basis:	dry	Analyzed:	12/31/13
Diln Fac:	2.000		

Moisture: 11%

Analyte	Result	RL
Naphthalene	ND	11
Acenaphthylene	15	11
Acenaphthene	ND	11
Fluorene	ND	11
Phenanthrene	ND	11
Anthracene	ND	11
Fluoranthene	13	11
Pyrene	21	11
Benzo(a)anthracene	ND	11
Chrysene	13	11
Benzo(b)fluoranthene	19	11
Benzo(k)fluoranthene	ND	11
Benzo(a)pyrene	ND	11
Indeno(1,2,3-cd)pyrene	ND	11
Dibenz(a,h)anthracene	ND	11
Benzo(g,h,i)perylene	ND	11

Surrogate	%REC	Limits
Nitrobenzene-d5	107	23-120
2-Fluorobiphenyl	85	30-115
Terphenyl-d14	97	18-137

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Field ID:	DUP122313-1	Batch#:	206582
Lab ID:	251929-007	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	ug/Kg	Prepared:	12/27/13
Basis:	dry	Analyzed:	12/28/13
Diln Fac:	1.000		

Moisture: 19%

Analyte	Result	RL
Naphthalene	ND	6.1
Acenaphthylene	ND	6.1
Acenaphthene	ND	6.1
Fluorene	ND	6.1
Phenanthrene	ND	6.1
Anthracene	ND	6.1
Fluoranthene	ND	6.1
Pyrene	ND	6.1
Benzo(a)anthracene	ND	6.1
Chrysene	ND	6.1
Benzo(b)fluoranthene	ND	6.1
Benzo(k)fluoranthene	ND	6.1
Benzo(a)pyrene	ND	6.1
Indeno(1,2,3-cd)pyrene	ND	6.1
Dibenz(a,h)anthracene	ND	6.1
Benzo(g,h,i)perylene	ND	6.1

Surrogate	%REC	Limits
Nitrobenzene-d5	82	23-120
2-Fluorobiphenyl	71	30-115
Terphenyl-d14	96	18-137

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC721996	Batch#:	206525
Matrix:	Soil	Prepared:	12/26/13
Units:	ug/Kg	Analyzed:	12/27/13

Analyte	Result	RL
Naphthalene	ND	4.9
Acenaphthylene	ND	4.9
Acenaphthene	ND	4.9
Fluorene	ND	4.9
Phenanthrene	ND	4.9
Anthracene	ND	4.9
Fluoranthene	ND	4.9
Pyrene	ND	4.9
Benzo(a)anthracene	ND	4.9
Chrysene	ND	4.9
Benzo(b)fluoranthene	ND	4.9
Benzo(k)fluoranthene	ND	4.9
Benzo(a)pyrene	ND	4.9
Indeno(1,2,3-cd)pyrene	ND	4.9
Dibenz(a,h)anthracene	ND	4.9
Benzo(g,h,i)perylene	ND	4.9

Surrogate	%REC	Limits
Nitrobenzene-d5	64	23-120
2-Fluorobiphenyl	61	30-115
Terphenyl-d14	90	18-137

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC721997	Batch#:	206525
Matrix:	Soil	Prepared:	12/26/13
Units:	ug/Kg	Analyzed:	12/27/13

Analyte	Spiked	Result	%REC	Limits
Acenaphthene	33.56	21.60	64	31-137
Pyrene	33.56	25.42	76	35-142

Surrogate	%REC	Limits
Nitrobenzene-d5	78	23-120
2-Fluorobiphenyl	71	30-115
Terphenyl-d14	85	18-137

Batch QC Report
Semivolatile Organics by GC/MS SIM

Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC722215	Batch#:	206582
Matrix:	Soil	Prepared:	12/27/13
Units:	ug/Kg	Analyzed:	12/27/13

Analyte	Result	RL
Naphthalene	ND	5.1
Acenaphthylene	ND	5.1
Acenaphthene	ND	5.1
Fluorene	ND	5.1
Phenanthrene	ND	5.1
Anthracene	ND	5.1
Fluoranthene	ND	5.1
Pyrene	ND	5.1
Benzo(a)anthracene	ND	5.1
Chrysene	ND	5.1
Benzo(b)fluoranthene	ND	5.1
Benzo(k)fluoranthene	ND	5.1
Benzo(a)pyrene	ND	5.1
Indeno(1,2,3-cd)pyrene	ND	5.1
Dibenz(a,h)anthracene	ND	5.1
Benzo(g,h,i)perylene	ND	5.1

Surrogate	%REC	Limits
Nitrobenzene-d5	62	23-120
2-Fluorobiphenyl	62	30-115
Terphenyl-d14	80	18-137

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3550B
Project#:	B00025.07 T2	Analysis:	EPA 8270C-SIM
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC722216	Batch#:	206582
Matrix:	Soil	Prepared:	12/27/13
Units:	ug/Kg	Analyzed:	12/27/13

Analyte	Spiked	Result	%REC	Limits
Acenaphthene	33.18	19.74	59	31-137
Pyrene	33.18	18.86	57	35-142

Surrogate	%REC	Limits
Nitrobenzene-d5	72	23-120
2-Fluorobiphenyl	62	30-115
Terphenyl-d14	80	18-137

California Title 22 Metals			
Lab #:	251929	Project#:	B00025.07 T2
Client:	Erler & Kalinowski, Inc.	Location:	Presidio-Lendrum Ct.
Field ID:	1282SB101	Basis:	dry
Lab ID:	251929-001	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	mg/Kg		

Moisture: 16%

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.29	0.29	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Arsenic	4.2	0.27	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Barium	96	0.20	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Beryllium	0.39	0.18	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cadmium	ND	0.16	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Chromium	350	28	2,500	206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Cobalt	28	0.18	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Copper	19	0.18	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Lead	41	0.26	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Mercury	0.046	0.020	1.000	206715	01/02/14	01/02/14	METHOD	EPA 7471A
Molybdenum	0.59	0.18	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Nickel	560	28	2,500	206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Selenium	ND	0.27	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Silver	ND	0.16	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Thallium	0.098	0.081	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Vanadium	61	0.18	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Zinc	59	1.3	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020

ND= Not Detected
 RL= Reporting Limit

California Title 22 Metals

Lab #:	251929	Project#:	B00025.07 T2
Client:	Erler & Kalinowski, Inc.	Location:	Presidio-Lendrum Ct.
Field ID:	1282SB102	Basis:	dry
Lab ID:	251929-002	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	mg/Kg		

Moisture: 20%

Analyte	Result	RL	Diln	Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	4.0	0.29	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Arsenic	5.3	0.26	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Barium	92	0.19	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Beryllium	0.36	0.18	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cadmium	ND	0.16	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Chromium	200	0.28	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cobalt	23	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Copper	16	0.18	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Lead	34	0.26	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Mercury	0.046	0.022	1.000		206715	01/02/14	01/02/14	METHOD	EPA 7471A
Molybdenum	0.38	0.18	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Nickel	260	0.27	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Selenium	ND	0.27	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Silver	ND	0.16	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Thallium	ND	0.080	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Vanadium	56	0.18	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Zinc	49	1.3	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020

ND= Not Detected
 RL= Reporting Limit

California Title 22 Metals

Lab #:	251929	Project#:	B00025.07 T2
Client:	Erler & Kalinowski, Inc.	Location:	Presidio-Lendrum Ct.
Field ID:	1282SB103	Basis:	dry
Lab ID:	251929-003	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	mg/Kg		

Moisture: 18%

Analyte	Result	RL	Diln	Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.30	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Arsenic	4.0	0.28	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Barium	97	0.20	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Beryllium	0.34	0.19	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cadmium	ND	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Chromium	140	0.29	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cobalt	20	0.18	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Copper	17	0.19	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Lead	50	0.27	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Mercury	0.027	0.019	1.000		206715	01/02/14	01/02/14	METHOD	EPA 7471A
Molybdenum	0.33	0.19	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Nickel	200	0.29	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Selenium	ND	0.28	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Silver	ND	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Thallium	ND	0.084	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Vanadium	52	0.19	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Zinc	54	1.3	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020

ND= Not Detected
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	251929	Project#:	B00025.07 T2
Client:	Erler & Kalinowski, Inc.	Location:	Presidio-Lendrum Ct.
Field ID:	1282SB104	Basis:	dry
Lab ID:	251929-004	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	mg/Kg		

Moisture: 16%

Analyte	Result	RL	Diln	Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.25	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Arsenic	4.0	0.23	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Barium	100	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Beryllium	0.49	0.16	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cadmium	ND	0.14	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Chromium	190	0.24	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cobalt	21	0.15	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Copper	17	0.16	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Lead	17	0.22	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Mercury	0.066	0.018	1.000		206715	01/02/14	01/02/14	METHOD	EPA 7471A
Molybdenum	0.74	0.16	25.00		206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Nickel	240	0.24	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Selenium	ND	0.23	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Silver	ND	0.14	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Thallium	0.095	0.070	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Vanadium	63	0.16	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Zinc	49	1.1	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020

ND= Not Detected
 RL= Reporting Limit

California Title 22 Metals

Lab #:	251929	Project#:	B00025.07 T2
Client:	Erler & Kalinowski, Inc.	Location:	Presidio-Lendrum Ct.
Field ID:	1282SB105	Basis:	dry
Lab ID:	251929-005	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	mg/Kg		

Moisture: 15%

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.36	0.27	25.00	206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Arsenic	4.0	0.25	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Barium	130	0.19	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Beryllium	0.38	0.17	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cadmium	0.19	0.15	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Chromium	240	0.27	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cobalt	31	0.17	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Copper	19	0.17	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Lead	61	0.25	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Mercury	0.097	0.021	1.000	206715	01/02/14	01/02/14	METHOD	EPA 7471A
Molybdenum	0.79	0.17	25.00	206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Nickel	460	26	2,500	206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Selenium	ND	0.26	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Silver	ND	0.15	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Thallium	0.081	0.077	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Vanadium	53	0.17	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Zinc	62	1.2	25.00	206639	12/30/13	12/31/13	EPA 3050B	EPA 6020

ND= Not Detected
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	251929	Project#:	B00025.07 T2
Client:	Erler & Kalinowski, Inc.	Location:	Presidio-Lendrum Ct.
Field ID:	1282SB106	Basis:	dry
Lab ID:	251929-006	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	mg/Kg		

Moisture: 11%

Analyte	Result	RL	Diln	Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.46	0.26	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Arsenic	3.5	0.24	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Barium	160	0.18	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Beryllium	0.38	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cadmium	0.25	0.15	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Chromium	60	0.26	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cobalt	7.6	0.16	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Copper	16	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Lead	70	0.24	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Mercury	0.11	0.020	1.000		206715	01/02/14	01/02/14	METHOD	EPA 7471A
Molybdenum	0.75	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Nickel	37	0.25	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Selenium	0.33	0.25	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Silver	ND	0.15	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Thallium	0.11	0.074	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Vanadium	50	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Zinc	62	1.2	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020

ND= Not Detected
 RL= Reporting Limit

California Title 22 Metals

Lab #:	251929	Project#:	B00025.07 T2
Client:	Erler & Kalinowski, Inc.	Location:	Presidio-Lendrum Ct.
Field ID:	DUP122313-1	Basis:	dry
Lab ID:	251929-007	Sampled:	12/23/13
Matrix:	Soil	Received:	12/23/13
Units:	mg/Kg		

Moisture: 19%

Analyte	Result	RL	Diln	Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.32	0.27	25.00		206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Arsenic	4.8	0.25	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Barium	100	0.18	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Beryllium	0.44	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cadmium	ND	0.15	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Chromium	150	0.26	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Cobalt	17	0.16	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Copper	17	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Lead	61	0.24	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Mercury	0.054	0.022	1.000		206715	01/02/14	01/02/14	METHOD	EPA 7471A
Molybdenum	0.53	0.17	25.00		206639	12/30/13	01/02/14	EPA 3050B	EPA 6020
Nickel	180	0.26	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Selenium	ND	0.25	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Silver	ND	0.15	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Thallium	ND	0.075	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Vanadium	59	0.17	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020
Zinc	53	1.2	25.00		206639	12/30/13	12/31/13	EPA 3050B	EPA 6020

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3050B
Project#:	B00025.07 T2	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	25.00
Lab ID:	QC722427	Batch#:	206639
Matrix:	Soil	Prepared:	12/30/13
Units:	mg/Kg	Analyzed:	12/31/13

Analyte	Result	RL
Antimony	ND	0.22
Arsenic	ND	0.21
Barium	ND	0.15
Beryllium	ND	0.14
Cadmium	ND	0.13
Chromium	ND	0.22
Cobalt	ND	0.14
Copper	ND	0.14
Lead	ND	0.20
Molybdenum	ND	0.14
Nickel	ND	0.21
Selenium	ND	0.21
Silver	ND	0.13
Thallium	ND	0.063
Vanadium	ND	0.14
Zinc	ND	1.0

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3050B
Project#:	B00025.07 T2	Analysis:	EPA 6020
Matrix:	Soil	Batch#:	206639
Units:	mg/Kg	Prepared:	12/30/13
Diln Fac:	25.00	Analyzed:	12/31/13

Type: BS Lab ID: QC722428

Analyte	Spiked	Result	%REC	Limits
Antimony	25.00	24.94	100	75-125
Arsenic	25.00	25.54	102	75-125
Barium	25.00	26.54	106	75-125
Beryllium	25.00	26.31	105	75-125
Cadmium	25.00	26.26	105	75-125
Chromium	25.00	25.64	103	75-125
Cobalt	25.00	26.24	105	75-125
Copper	25.00	26.30	105	75-125
Lead	25.00	26.48	106	75-125
Molybdenum	25.00	24.49	98	75-125
Nickel	25.00	24.44	98	75-125
Selenium	25.00	25.69	103	75-125
Silver	25.00	26.55	106	75-125
Thallium	25.00	25.24	101	75-125
Vanadium	25.00	25.88	104	75-125
Zinc	25.00	27.14	109	75-125

Type: BSD Lab ID: QC722429

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	25.00	24.71	99	75-125	1	30
Arsenic	25.00	25.58	102	75-125	0	30
Barium	25.00	26.36	105	75-125	1	30
Beryllium	25.00	26.71	107	75-125	2	30
Cadmium	25.00	25.94	104	75-125	1	30
Chromium	25.00	25.86	103	75-125	1	30
Cobalt	25.00	26.55	106	75-125	1	30
Copper	25.00	26.38	106	75-125	0	30
Lead	25.00	26.16	105	75-125	1	30
Molybdenum	25.00	24.98	100	75-125	2	30
Nickel	25.00	24.91	100	75-125	2	30
Selenium	25.00	26.40	106	75-125	3	30
Silver	25.00	26.40	106	75-125	1	30
Thallium	25.00	25.39	102	75-125	1	30
Vanadium	25.00	26.16	105	75-125	1	30
Zinc	25.00	26.96	108	75-125	1	30

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	METHOD
Project#:	B00025.07 T2	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	206715
Lab ID:	QC722727	Prepared:	01/02/14
Matrix:	Soil	Analyzed:	01/02/14
Units:	mg/Kg		

Result	RL
ND	0.017

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	METHOD
Project#:	B00025.07 T2	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	206715
Matrix:	Soil	Prepared:	01/02/14
Units:	mg/Kg	Analyzed:	01/02/14
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC722728	0.2083	0.2083	100	75-125		
BSD	QC722729	0.2083	0.1933	93	75-125	7	35

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	METHOD
Project#:	B00025.07 T2	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	206715
MSS Lab ID:	251842-001	Sampled:	12/19/13
Matrix:	Soil	Received:	12/19/13
Units:	mg/Kg	Prepared:	01/02/14
Basis:	dry	Analyzed:	01/02/14

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moisture	RPD	Lim
MS	QC722730	0.06756	0.2661	0.4854	157 *	75-125	23%		
MSD	QC722731		0.2498	0.3197	101	75-125	23%	36 *	35

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Moisture			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	METHOD
Project#:	B00025.07 T2	Analysis:	ASTM D2216/CLP
Analyte:	Moisture, Percent	Batch#:	206679
Matrix:	Soil	Sampled:	12/23/13
Units:	%	Received:	12/23/13
Diln Fac:	1.000	Analyzed:	12/30/13

Field ID	Lab ID	Result	RL
1282SB101	251929-001	16	1
1282SB102	251929-002	20	1
1282SB103	251929-003	18	1
1282SB104	251929-004	16	1
1282SB105	251929-005	15	1
1282SB106	251929-006	11	1
DUP122313-1	251929-007	19	1

RL= Reporting Limit

Batch QC Report

Moisture			
Lab #:	251929	Location:	Presidio-Lendrum Ct.
Client:	Erler & Kalinowski, Inc.	Prep:	METHOD
Project#:	B00025.07 T2	Analysis:	ASTM D2216/CLP
Analyte:	Moisture, Percent	Units:	%
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SDUP	Batch#:	206679
MSS Lab ID:	251842-001	Sampled:	12/19/13
Lab ID:	QC722592	Received:	12/19/13
Matrix:	Soil	Analyzed:	12/30/13

MSS Result	Result	RL	RPD	Lim
22.74	23.02	1.000	1	10

RL= Reporting Limit

RPD= Relative Percent Difference



20 December 2013

MEMORANDUM

To: Eileen Fanelli, Presidio Trust

From: John DeWitt, Erler & Kalinowski, Inc. (“EKI”)

Subject: Work Plan for Sampling at Lendrum Court Playground
(EKI B00025.07 T3)

On behalf of the Presidio Trust (“Trust”), in June 2013, Erler & Kalinowski, Inc. (“EKI”) prepared a work plan to sample at Lendrum Court and documented those findings in a draft report dated November 2013. In a public meeting on 11 December 2013, the Trust proposed to collect soil samples in the playground west of Lendrum Court that were requested by the public. This is a work plan for the requested soil sampling. Lendrum Court site background and history and results of previous sampling are presented in the June 2013 work plan and November 2013 draft report.

The purpose of this sampling event is to evaluate if existing surface soils (at grade and below playground sand or wood chips) present a potential threat to human health or the environment. The objective of this work plan is to identify the procedures to collect soil samples and analyses planned to evaluate the potential threat from exposure to this soil; at this time no known issues exist.

Soil samples will be collected from the following areas, as shown on the attached figure:

- One sample from the sand box, below the sand layer (approximately 12 inches of sand was present during reconnaissance on 12 December 2013).
- Three samples from the wood chips area, one each on the east and west sides between the swings and play structure and a third from the northeast corner of the wood chip area. These areas appear to be heavily used (approximately 3 inches of chips were present during reconnaissance on 12 December 2013, though design drawings state that 12 inches was the initial design depth).
- Two samples from the hillside to the southwest, one on the bare ground of the slope, and a second sample from the soil at the top of the small rise where children are likely to wait before going down the hill. The top area is covered by leaves. Samples from these areas will be multi-point samples.

To collect soil samples below the sand and wood chip layers, EKI will use irrigation control boxes (or similar equipment) as a “conductor casing” to limit sand and wood chips from entering the soil sample area. Soil samples from below the sand and wood chips will be collected as discrete samples, and the samples from the hillside will be multi-point samples, which is a different procedure from the multi-incremental samples



collected from the trenches at Lendrum Court. Soil samples will be labeled 1282SB101 through 1282SB106. One duplicate soil sample will be collected and analyzed per the Trust Quality Assurance Project Plan.

Analytical methods proposed for soil samples are the following:

- Semivolatile organic compounds (“SVOCs”) including Polycyclic Aromatic Hydrocarbons (“PAHs”) by EPA Method 8270C with Selective Ion Monitoring; and
- Title 22 Metals by EPA Method 6020;

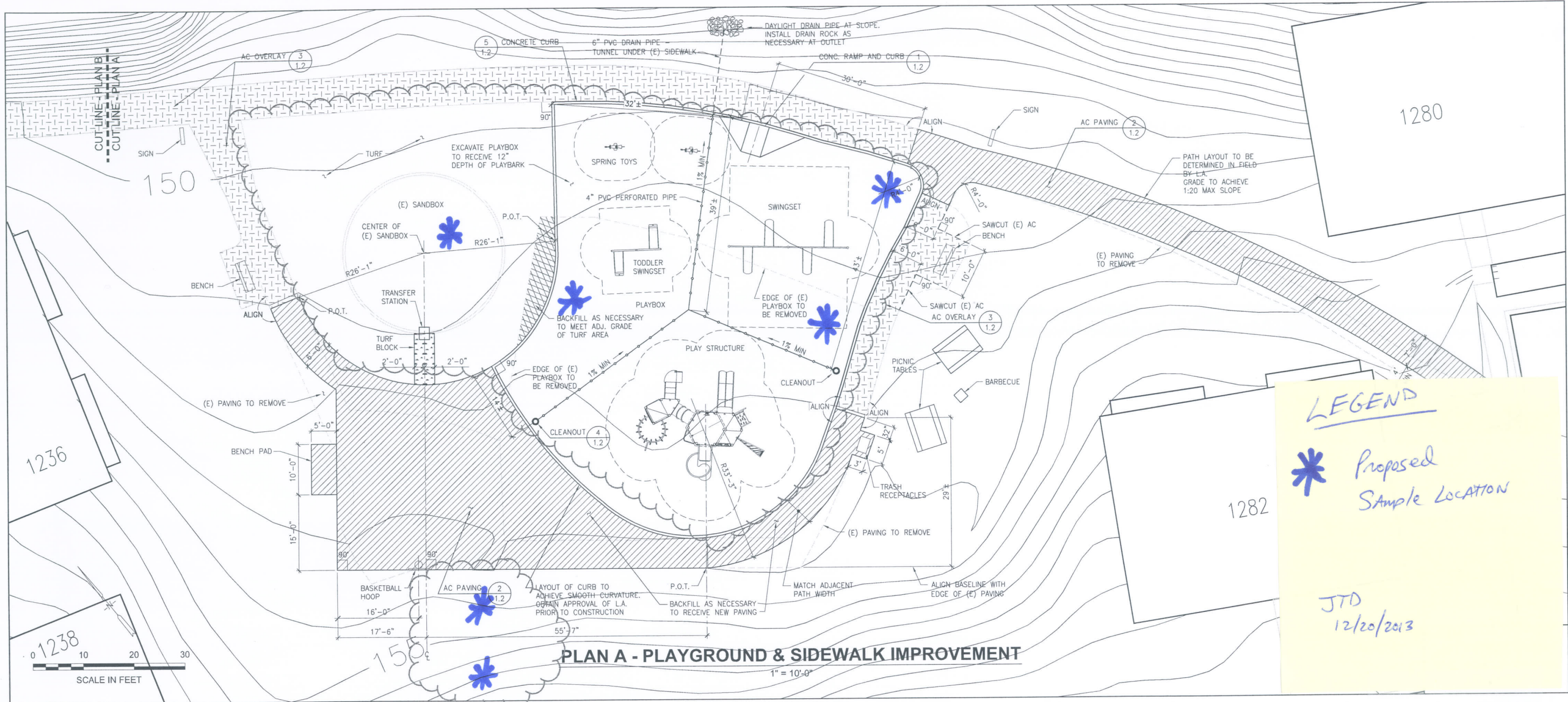
Because TPH diesel and motor oil were not detected in the Lendrum Court samples at concentrations exceeding 150 mg/kg (well below the residential human health screening levels of 1,380 and 1,900 mg/kg for TPH diesel and motor oil, respectively and also below the ecological buffer zone screening levels of 700 and 980 mg/kg, respectively), no samples will be analyzed for TPH diesel or motor oil.

Although dioxins were analyzed in the Lendrum Court samples, the concentrations detected in the overburden, debris, and base layers did not indicate the presence of dioxins above the background screening range. One soil sample will be collected for possible dioxin analysis and placed on hold. In the event that ash is encountered in sampling, then the Trust will consult with DTSC and evaluate the need for analysis for dioxins. The hold time for dioxins by EPA Method 1613B is one year; however, the sample will be discarded 30 days after the other analytical results have been presented to the DTSC unless the DTSC specifically request continued hold of the sample with reasoning for potential analysis.


Samples will be analyzed on a standard turnaround time. Sample locations will be documented by measuring distances from fixed items in the field (such as playground equipment or pavement edges marked on Trust maps); the locations will not be surveyed. No investigation derived waste is anticipated from this sampling event.

EKI plans to collect samples on December 23 or 24, 2013. Upon receipt of the results, EKI will prepare a letter report documenting findings with a table and figure to support sample results.

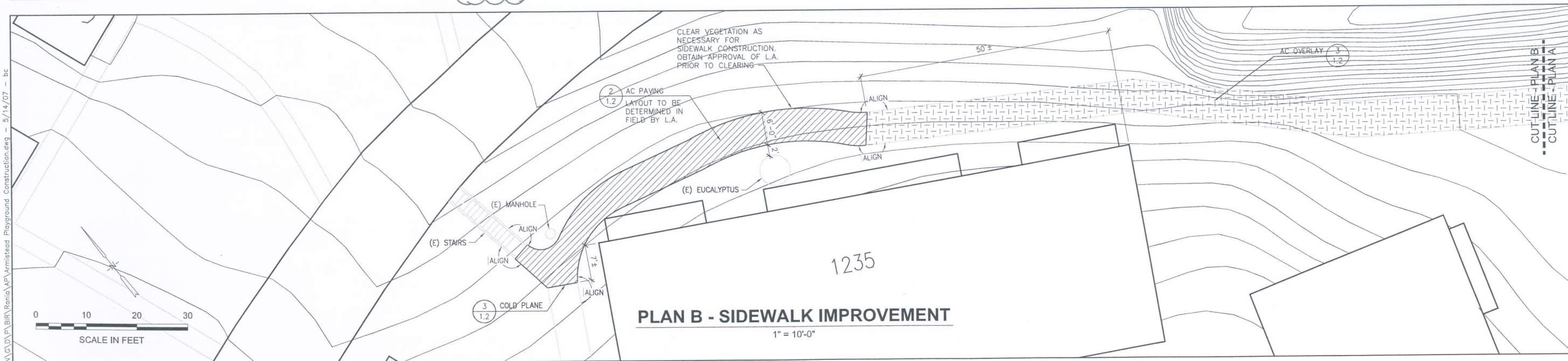
Please let me know if you have questions.



LEGEND

 Proposed Sample Location

JTD
 12/20/2013



Armistead Playground
North Fort Scott
Presidio of San Francisco

Date: June 28, 2006
 Scale: 1" = 10'-0"
 Drawn By: RR
 Checked by:

N:\GDA\PL\BIR\Plan\Armistead Playground Construction.dwg - 5/14/07 - bc