

TABLE 1: SOIL ANALYTICAL SUMMARY - Metals

Perdido Bay Boat Ramp

Sample	Date Analyzed	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Copper	Nickel	Zinc	Mercury
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
B-10A	10/12/2017	6.8	9.8	0.60 U	20	24	1.2 I	0.12 I	14	6.7	71	0.16
B-10A2	10/12/2017	3.9	6.3	0.47 U	13	18	0.64 I	0.054 I	9.4	4.2	40	0.1
B-10B	10/12/2017	2.2	2.8	0.37 U	7	5.5	0.46 I	0.046 I	4.3	1.9	18	0.037
B-10B2	10/12/2017	3.4	6.8	0.45 U	14	5.9	0.83 I	0.043 U	3.4	5.2	15	0.027 I
B-10C	10/12/2017	1.6	3.3	0.35 U	6.7	11	0.46 I	0.043 I	3.6	2	17	0.037
B-10C2	10/12/2017	4.3	7	0.31 U	16	6.4	0.77 I	0.030 U	3.8	5.8	18	0.022
B-10D	10/12/2017	8.7	12	0.62 U	26	25	1.3 I	0.091 I	18	8.6	84	0.19
B-10D2	10/12/2017	3.3	5.4	0.58 U	8.8	11	0.46 I	0.055 U	6.5	3	34	0.085
B-11A	10/12/2017	8.5	13	0.66 U	28	28	1.3 I	0.11 I	18	9.6	86	0.18
B-11A2	10/12/2017	7.8	11	0.47 U	23	18	1.0 I	0.095 I	12	6.9	62	0.12
B-11B	10/12/2017	9.9	14	0.53 U	29	24	1.1 I	0.076 I	15	8.7	77	1.5
B-11B2	10/12/2017	15	19	0.73 U	44	34	1.9	0.14 I	25	13	120	0.000022
B-11C	10/12/2017	8.5	13	0.61 U	28	11	1.1 I	0.058 U	6.6	9.7	35	0.035 I
B-11C2	10/12/2017	7.42	13.4	0.62 U	28.7	10.7	1.15 I	0.059 U	6.46	8.98	34.9	0.0343 I
Leachability Based on Groundwater Criteria (mg/kg)		*	1600	7.5	38	*	5.2	17	*	130	*	2.1
Direct Exposure Residential (mg/kg)		2.1	120	82	210	400	440	410	150	340	26000	3
Direct Exposure Commercial/Industrial (mg/kg)		12	130000	1700	470	1400	11000	8200	89000	35000	630000	17

Notes:

NA = Not Available

NS = Not Sampled

Bold = Exceeds Cleanup Target Levels

mg/kg = Milligrams per kilogram

U = Compound was analyzed for but not detected

J = The value is outside laboratory established criteria

I = The reported value is between the Laboratory method detection limit and the laboratory practical quantitation limit.

* = Leachability value may be determined

Exceeds Direct Exposure Residential Limits

Exceeds Direct Exposure Commercial/Industrial Limits

TABLE 2. SOIL ANALYTICAL SUMMARY -SEMIVOLATIVE ORGANIC COMPOUNDS BY GCMS

Perdido Bay Boat Ramp

See notes at end of table

Sample		Laboratory Analyses																			
Sample	Date Analyzed	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthra-cene	Benzo (a) pyrene	Benzo (b) fluoran-thene	Benzo(g,h,i,j)erylene	Benzo (k) fluoran-thene	Chrysene	Dibenz (a,h) anthra-cene	Fluoranthene	Fluorene	Indeno (1,2,3 cd) pyrene	1-Methylnapht halene	2-Methylnapht halene	Naphthalene	Phenanthrene	Pyrene	TRPH	
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
B-10A	10/12/2017	0.0091 U	0.0091 U	0.010 I	0.022 I	0.030 I	0.051 I	0.018 U	0.0091 U	0.027 I	0.018 U	0.038 I	0.0091 U	0.018 U	0.0091 U	0.0091 U	0.0091 U	0.011 I	0.043 I	320	
B-10A2	10/12/2017	0.0015 U	0.0015 U	0.0015 U	0.012	0.015	0.031	0.0031 U	0.0098 I	0.012	0.0031 U	0.03	0.0015 U	0.011	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.028	150	
B-10B	10/12/2017	0.0012 U	0.0012 U	0.0016 I	0.0076 I	0.0091	0.016	0.0057 I	0.0052 I	0.0078 I	0.0024 U	0.0098	0.0012 U	0.0058 I	0.0012 U	0.0012 U	0.0012 U	0.0020 I	0.0092	68	
B-10B2	10/12/2017	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.051	0.0014 U	0.0028 U	0.0014 U	0.0014 U	0.0028 U	0.0038 I	0.0014 U	0.0028 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0036 I	170	
B-10C	10/12/2017	0.0011 U	0.0011 U	0.0011 U	0.0027 I	0.0039 I	0.008	0.0021 U	0.0023 I	0.0022 I	0.0021 U	0.0050 I	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.0011 U	0.0018 I	0.0060 I	43	
B-10C2	10/12/2017	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.026	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.0021 U	0.0022 I	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0017 I	74	
B-10D	10/12/2017	0.0021 U	0.0055 I	0.0055 I	0.025	0.027	0.058	0.023	0.015	0.029	0.0042 U	0.048	0.0021 U	0.02	0.0021 U	0.0021 U	0.0021 U	0.0079 I	0.04	280	
B-10D2	10/12/2017	0.0042 I	0.0085 I	0.011 I	0.05	0.045	0.097	0.035	0.031	0.064	0.0039 U	0.12	0.0076 I	0.035	0.0019 I	0.0019 U	0.0019 U	0.067	0.11	200	
B-11A	10/12/2017	0.0023 I	0.0021 U	0.0053 I	0.015	0.018	0.038	0.016	0.0086 I	0.011 I	0.0042 U	0.029	0.0021 U	0.013 I	0.0037 I	0.0051 I	0.0029 I	0.0056 I	0.026	290	
B-11A2	10/12/2017	0.0016 U	0.0026 I	0.0034 I	0.013	0.0016 U	0.0016 U	0.010 I	0.0016 U	0.015	0.0032 U	0.034	0.0016 U	0.0085 I	0.0016 U	0.0016 U	0.0016 U	0.0041 I	0.027	300	
B-11B	10/12/2017	0.0024 I	0.0027 I	0.0046 I	0.012	0.016	0.034	0.014	0.011	0.010 I	0.0034 U	0.029	0.0017 U	0.0093 I	0.0017 U	0.0017 U	0.0017 U	0.0047 I	0.026	220	
B-11B2	10/12/2017	0.0028 I	0.0047 I	0.0056 I	0.028	0.0025 U	0.0025 U	0.022	0.0025 U	0.029	0.0049 U	0.036	0.0025 U	0.019	0.0025 U	0.0025 U	0.0025 U	0.0068 I	0.04	290	
B-11C	10/12/2017	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.24	0.0055 I	0.0038 U	0.0019 U	0.0019 U	0.0038 U	0.0063 I	0.0019 U	0.0038 U	0.0036 I	0.0053 I	0.0026 I	0.0019 U	0.0035 I	87	
B-11C2	10/12/2017	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.349	0.0019 U	0.0038 U	0.0019 U	0.0019 U	0.0038 U	0.00752 I	0.0019 U	0.0038 U	0.00434 I	0.00643 I	0.00267 I	0.0019 U	0.00480 I	83.8	
Leachability Based on Groundwater Criteria (mg/kg)		2.1	27	2500	NA	NA	2.4	NA	NA	77	0.7	1200	160	6.6	3.1	8.5	1.2	250	880	340	
Direct Exposure Residential (mg/kg)		2400	1800	21000	#	0.1	#	2500	#	#	#	3200	2600	#	200	210	55	2200	2400	460	
Direct Exposure Commercial/Industrial (mg/kg)		20000	20000	300000	#	0.7	#	52000	#	#	#	59000	33000	#	1800	2100	300	36000	45000	2700	

Notes:

- NA = Not Available
- NS = Not Sampled
- Bold** = Exceeds Cleanup Target Levels
- mg/kg = Milligrams per kilogram
- J = The value is outside laboratory established criteria
- U = Compound was
- I = The reported value is between the Laboratory method detection limit and the laboratory practical quantitation limit.
- * = Leachability value may

Exceeds Direct Exposure Residential Limits

= Benzo (a) Pyren equivalent conversion required for concentration limits.

Benzo(a)pyrene Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Instructions can be found below the table

Facility/Site Name:	Perdido Bay Boat Ramp
Site Location:	
Facility/Site ID No.:	

SCTL Type	Value	Units
Residential Direct Exposure SCTL	0.1	mg/kg
Industrial Direct Exposure SCTL	0.7	mg/kg
Alternative SCTL (Optional)		mg/kg
Site Specific Background (Optional)		mg/kg

TEF = Toxic Equivalency Factor

Soil Sample #	B-10A	B-10A2	B-10B	B-10B2	B-10C	B-10C2	B-10D	B-10D2	B-11A	B-11A2
Sample Date	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017
Sample Location:	Boring B-10	Boring B-10	Boring B-10	Boring B-10	Boring B-10	Boring B-10	Boring B-10	Boring B-10	Boring B-10	Boring B-11
Depth (ft):										

Contaminant Concentrations

Contaminant	TEF	B-10A (mg/kg)	B-10A2 (mg/kg)	B-10B (mg/kg)	B-10B2 (mg/kg)	B-10C (mg/kg)	B-10C2 (mg/kg)	B-10D (mg/kg)	B-10D2 (mg/kg)	B-11A (mg/kg)	B-11A2 (mg/kg)
Benzo(a)pyrene	1.0	0.03	0.015	0.0091	0.051	0.0039	0.026	0.027	0.045	0.018	0.0008
Benzo(a)anthracene	0.1	0.009	0.012	0.0076	0.0007	0.0027	0.00055	0.025	0.05	0.015	0.013
Benzo(b)fluoranthene	0.1	0.051	0.031	0.016	0.0007	0.008	0.00055	0.058	0.097	0.038	0.0008
Benzo(k)fluoranthene	0.01	0.00455	0.0098	0.0052	0.0007	0.0023	0.00055	0.015	0.031	0.0086	0.0008
Chrysene	0.001	0.027	0.012	0.0078	0.0007	0.0022	0.00055	0.029	0.064	0.011	0.015
Dibenz(a,h)anthracene	1.0	0.022	0.00155	0.0012	0.0014	0.00105	0.00105	0.0021	0.00195	0.0021	0.0016
Indeno(1,2,3-cd)pyrene	0.1	0.009	0.011	0.0058	0.0014	0.00105	0.00105	0.02	0.035	0.013	0.0085

Benzo(a)pyrene Equivalents

Contaminant	TEF	B-10A (mg/kg)	B-10A2 (mg/kg)	B-10B (mg/kg)	B-10B2 (mg/kg)	B-10C (mg/kg)	B-10C2 (mg/kg)	B-10D (mg/kg)	B-10D2 (mg/kg)	B-11A (mg/kg)	B-11A2 (mg/kg)
Benzo(a)pyrene	1.0	0.0300	0.0150	0.0091	0.0510	0.0039	0.0260	0.0270	0.0450	0.0180	0.0008
Benzo(a)anthracene	0.1	0.0009	0.0012	0.0008	0.0001	0.0003	0.0001	0.0025	0.0050	0.0015	0.0013
Benzo(b)fluoranthene	0.1	0.0051	0.0031	0.0016	0.0001	0.0008	0.0001	0.0058	0.0097	0.0038	0.0001
Benzo(k)fluoranthene	0.01	0.0000	0.0001	0.0001	0.0000	0.0000	0.0000	0.0002	0.0003	0.0001	0.0000
Chrysene	0.001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000
Dibenz(a,h)anthracene	1.0	0.0220	0.0016	0.0012	0.0014	0.0011	0.0011	0.0021	0.0020	0.0021	0.0016
Indeno(1,2,3-cd)pyrene	0.1	0.0009	0.0011	0.0006	0.0001	0.0001	0.0001	0.0020	0.0035	0.0013	0.0009

Total Equivalents

Total Benzo(a)pyrene Equivalents	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0

Comparisons to SCTLs

Does This Sample Exceed:	B-10A (mg/kg)	B-10A2 (mg/kg)	B-10B (mg/kg)	B-10B2 (mg/kg)	B-10C (mg/kg)	B-10C2 (mg/kg)	B-10D (mg/kg)	B-10D2 (mg/kg)	B-11A (mg/kg)	B-11A2 (mg/kg)
The Residential Direct Exposure SCTL of 0.1 mg/kg?	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
The Industrial Direct Exposure SCTL of 0.7 mg/kg?	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
No Alternative SCTL Given	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No Site Specific Background Given	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Benzo(a)pyrene Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Instructions can be found below the table

Facility/Site Name:	Perdido Bay Boat Ramp
Site Location:	
Facility/Site ID No.:	

SCTL Type	Value	Units
Residential Direct Exposure SCTL	0.1	mg/kg
Industrial Direct Exposure SCTL	0.7	mg/kg
Alternative SCTL (Optional)		mg/kg
Site Specific Background (Optional)		mg/kg

TEF = Toxic Equivalency Factor

Soil Sample #	B-11B	B-11B2	B-11C	B-11C2							
Sample Date	10/12/2017	10/12/2017	10/12/2017	10/12/2017							
Sample Location:	Boring B-11	Boring B-11	Boring B-11	Boring B-11							
Depth (ft):											
Contaminant Concentrations											
Contaminant	TEF	B-11B (mg/kg)	B-11B2 (mg/kg)	B-11C (mg/kg)	B-11C2 (mg/kg)						
Benzo(a)pyrene	1.0	0.016	0.00125	0.24	0.348						
Benzo(a)anthracene	0.1	0.012	0.028	0.00095	0.00095						
Benzo(b)fluoranthene	0.1	0.034	0.00125	0.0055	0.00095						
Benzo(k)fluoranthene	0.01	0.011	0.00125	0.00095	0.00095						
Chrysene	0.001	0.01	0.029	0.00095	0.00095						
Dibenz(a,h)anthracene	1.0	0.0017	0.00245	0.0019	0.0019						
Indeno(1,2,3-cd)pyrene	0.1	0.0093	0.019	0.0019	0.0019						
Benzo(a)pyrene Equivalents											
Contaminant	TEF	B-11B (mg/kg)	B-11B2 (mg/kg)	B-11C (mg/kg)	B-11C2 (mg/kg)						
Benzo(a)pyrene	1.0	0.0160	0.0013	0.2400	0.3480	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(a)anthracene	0.1	0.0012	0.0028	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(b)fluoranthene	0.1	0.0034	0.0001	0.0006	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(k)fluoranthene	0.01	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Chrysene	0.001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dibenz(a,h)anthracene	1.0	0.0017	0.0025	0.0019	0.0019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Indeno(1,2,3-cd)pyrene	0.1	0.0009	0.0019	0.0002	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total Equivalents											
Total Benzo(a)pyrene Equivalents		0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Comparisons to SCTLs											
Does This Sample Exceed:	B-11B (mg/kg)	B-11B2 (mg/kg)	B-11C (mg/kg)	B-11C2 (mg/kg)							
The Residential Direct Exposure SCTL of 0.1 mg/kg?	OK	OK	EXCEEDS	EXCEEDS	OK	OK	OK	OK	OK	OK	OK
The Industrial Direct Exposure SCTL of 0.7 mg/kg?	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
No Alternative SCTL Given	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No Site Specific Background Given	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A