TABLE 9

SUMMARY OF ANALYTICAL RESULTS: METALS
SEISMIC RETROFIT OF THE WEST APPROACH
SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT

BORING	DEPTH	SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	MO	NI	SE	AG	TL	V	ZN
R1-1	Surface	<5.0	<5.0	29	<0.5	<0.5	17	4.5	4.8	130 (5.5) {0.15}	<0.05	<2.5	17	<2.5	<0.5	<5.0	14	21
	2	<5.0	<5.0	130	<0.5	0.5	22	12	19	43	0.05	<2.5	28	<2.5	<0.5	<5.0	21	62
	4	<5.0	6.8	300	0.7	<0.5	17	19	29	27	0.1	<2.5	32	<2.5	<0.5	7.4	19	69
	10	<5.0	<5.0	83	<0.5	<0.5	26	7.4	14	5.9	<0.05	<2.5	19	<2.5	<0.5	<5.0	31	41
R1-2	Surface	<5.0	9.5	120	<0.5	0.5	25	7.9	31	56 (2.1)	0.07	<2.5	26	<2.5	<0.5	6	25	75
	2	<5.0	6.3	170	<0.5	<0.5	22	9.3	23	34	0.12	<2.5	32	<2.5	<0.5	6.4	24	75
	4	<5.0	8.4	270	0.6	0.5	24	17	52	20	0.05	<2.5	39	<2.5	<0.5	8.6	25	91
	10	<5.0	5.8	300	0.6	<0.5	20	19	28	20	0.07	<2.5	36	<2.5	<0.5	8.4	22	78
R2-1	Surface	<5.0	<5.0	140	<0.5	<0.5	29	10	19	37	0.08	<2.5	28	<2.5	<0.5	<5.0	30	55
	3	<5.0	<5.0	210	0.7	0.6	24	18	35	22	0.06	<2.5	39	8.1	<0.5	<5.0	24	85
	5	<5.0	5.8	290	0.8	0.7	25	15	33	19	0.05	<2.5	41	<2.5	<0.5	5.8	26	86
	10	<5.0	10	84	0.5	0.7	22	4.6	25	8.4	0.09	<2.5	29	<2.5	<0.5	<5.0	26	57
	15	<5.0	5.3	200	0.5	<0.5	23	11	32	21	0.09	<2.5	37	<2.5	<0.5	<5.0	23	77
	20	<5.0	<5.0	50	0.5	<0.5	20	5.2	18	8.1	<0.05	<2.5	18	<2.5	<0.5	<5.0	25	40
R2-2	Surface	<5.0	<5.0	140	<0.5	0.7	31	8	42	170 (8.6) {0.49}	0.28	<2.5	26	<2.5	<0.5	<5.0	28	140
	3	<5.0	<5.0	280	0.7	0.8	23	15	38	140 (2.0)	0.08	<2.5	40	<2.5	<0.5	<5.0	23	94
	5	<5.0	7.3	310	0.6	0.7	20	16	27	290 (14) {0.16}	<0.05	<2.5	36	<2.5	<0.5	6	21	110
	10	<5.0	<5.0	300	0.6	0.5	18	15	25	14	0.05	<2.5	34	<2.5	<0.5	<5.0	19	69
	15	<5.0	5.2	400	0.7	<0.5	23	22	31	56 (2.4)	0.05	<2.5	51	<2.5	<0.5	5.6	23	95
	20	<5.0	6.5	480	<0.5	0.9	27	13	180	660 (45) {0.34}	0.57	<2.5	32	<2.5	<0.5	<5.0	22	380
	25	<5.0	7.2	190	0.5	0.5	23	14	32	17	<0.05	<2.5	41	<2.5	<0.5	7.3	23	83
	30	<5.0	6	120	<0.5	0.7	42	8	16	22	0.13	<2.5	30	<2.5	<0.5	<5.0	36	51
	35	<5.0	<5.0	300	0.7	0.6	19	15	26	63 (3.4)	0.16	<2.5	34	<2.5	<0.5	5.2	20	140
	40	<5.0	<5.0	120	<0.5	0.5	31	11	13	18	0.09	<2.5	28	<2.5	<0.5	<5.0	32	49
	45	<5.0	<5.0	120	0.5	0.6	63	15	14	7.3	0.18	<2.5	48	<2.5	<0.5	5.1	49	58
	50	<5.0	<5.0	170	0.6	<0.5	22	8.2	20	17	0.09	<2.5	24	<2.5	<0.5	<5.0	26	55
	55	<5.0	5.8	310	0.6	0.6	21	11	24	15	0.08	<2.5	31	<2.5	<0.5	<5.0	22	65

BORING	DEPTH	SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	MO	NI	SE	AG	TL	V	ZN
R3-1	Surface	<5.0	<5.0	110	<0.5	0.6	36	7.6	23	76 (6.0) {0.19}	0.17	<2.5	30	<2.5	<0.5	<5.0	33	83
	2	<5.0	<5.0	110	<0.5	<0.5	60 (0.3)	10	17	25	0.08	<2.5	39	<2.5	<0.5	<5.0	41	49
	5	<5.0	6	180	0.5	0.7	43	11	45	140 (7.2) {0.13}	0.2	<2.5	40	<2.5	<0.5	5.6	35	110
	10	<5.0	<5.0	20	<0.5	<0.5	0.7	<1.0	<2.5	2	0.12	<2.5	1.2	<2.5	<0.5	<5.0	0.8	2.7
	15	<5.0	13	320	0.6	0.7	25	14	48	72 (6.0) {<0.02}	0.14	<2.5	38	<2.5	<0.5	8.3	25	110
	20	<5.0	8	270	0.5	0.6	21	18	27	35	0.07	<2.5	40	<2.5	<0.5	7.1	22	77
	25	<5.0	7.9	250	0.6	0.6	26	19	28	13	0.08	<2.5	44	<2.5	<0.5	7.7	27	77
R3-2	Surface	<5.0	5.6	75	<0.5	0.6	32	11	14	33	0.06	<2.5	28	<2.5	<0.5	10	39	60
	2	<5.0	5.3	260	<0.5	0.9	22	11	28	110 (6.4) {0.19}	0.19	<2.5	27	<2.5	<0.5	7.5	29	130
	4	<5.0	<5.0	380	0.6	<0.5	11	9.5	13	42	0.16	<2.5	18	<2.5	<0.5	3.7	15	66
	15	<5.0	10	230	0.7	0.8	26	16	45	120 (8.1) {0.18}	0.14	<2.5	41	<2.5	<0.5	5.8	25	150
	20	<5.0	12	260	0.6	0.7	23	17	33	15	0.09	<2.5	40	<2.5	<0.5	8.4	25	85
	25	<5.0	8.6	270	0.7	0.7	25	20	37	74 (5.3) {0.10}	0.09	<2.5	44	<2.5	<0.5	8.5	27	92
	30	---	---	---	---	---	---	---	---	36	---	---	---	---	---	---	---	---
R4-1	Surface	<5.0	6.3	170	<0.5	0.6	24	10	28	63 (4.5)	0.48	<2.5	27	<2.5	<0.5	<5.0	22	73
	2	<5.0	6.6	220	<0.5	0.7	33	14	33	80 (5.2) {0.04}	0.08	<2.5	40	<2.5	<0.5	7.2	28	95
	5	<5.0	<5.0	120	<0.5	<0.5	37	16	16	61 (2.1)	0.13	<2.5	29	<2.5	<0.5	<5.0	28	61
	10	<5.0	<5.0	91	<0.5	<0.5	54 (1.7)	8.7	10	25	0.06	<2.5	31	<2.5	<0.5	<5.0	43	37
	15	<5.0	<5.0	170	<0.5	<0.5	41	11	26	43	0.13	<2.5	35	<2.5	<0.5	<5.0	34	83
	20	<5.0	<5.0	320	0.5	<0.5	15	10	12	47	0.21	<2.5	20	<2.5	<0.5	<5.0	20	52
	25	<5.0	5.1	350	0.9	0.6	21	7.5	31	14	0.07	<2.5	31	<2.5	<0.5	6.5	21	67

BORING	DEPTH	SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	MO	NI	SE	AG	TL	V	ZN
R5-1	Surface	<5.0	<5.0	130	<0.5	<0.5	27	9.4	20	49	0.19	<2.5	28	<2.5	<0.5	<5.0	22	76
	2	<5.0	5.2	170	<0.5	0.9	25	8.3	73	160 (7.7) {<0.02}	0.52	<2.5	29	<2.5	<0.5	<5.0	25	120
	4	<5.0	<5.0	150	<0.5	<0.5	20	6.9	52	65 (7.4) {0.59}	0.16	<2.5	20	<2.5	<0.5	<5.0	20	62
	10	<5.0	<5.0	170	<0.5	0.5	24	7.8	32	110 (5.0) {<0.02}	0.20	<2.5	25	<2.5	<0.5	<5.0	21	120
	15	<5.0	<5.0	110	<0.5	<0.5	37	7.1	10	31	0.78	<2.5	29	<2.5	<0.5	<5.0	29	35
	20	<5.0	<5.0	95	<0.5	<0.5	47	6.4	12	69 (5.1) {0.06}	0.24	<2.5	31	<2.5	<0.5	<5.0	31	53
	25	<5.0	<5.0	86	<0.5	<0.5	41	7.5	17	63 (3.7)	0.24	<2.5	31	<2.5	<0.5	<5.0	33	70
	30	<5.0	<5.0	140	<0.5	0.7	34	8.7	24	42	5.53 (<0.01)	<2.5	26	<2.5	<0.5	<5.0	30	56
	35	<5.0	7.9	190	0.7	0.7	21	9.9	32	19	0.13	<2.5	31	<2.5	<0.5	5.8	22	67
R5-2	Surface	<5.0	<5.0	99	<0.5	<0.5	19	6.8	22	29	0.22	<2.5	19	<2.5	<0.5	<5.0	27	53
	2	<5.0	<5.0	99	<0.5	<0.5	18	5.6	23	47	0.28	<2.5	21	<2.5	<0.5	<5.0	19	120
	4	<5.0	<5.0	100	<0.5	0.7	25	6.6	26	85 (8.5) {0.12}	0.18	<2.5	25	<2.5	<0.5	<5.0	22	69
	10	<5.0	<5.0	170	<0.5	0.6	37	7.4	29	47	0.13	<2.5	33	<2.5	<0.5	<5.0	29	64
	15	<5.0	5.4	210	<0.5	0.6	15	12	25	13	0.07	<2.5	25	<2.5	<0.5	<5.0	15	62
	20	<5.0	9.2	300	<0.5	1.1	21	12	39	120 (11) {<0.02}	0.14	<2.5	33	<2.5	<0.5	7.5	20	130
	25	<5.0	<5.0	260	<0.5	0.8	18	9.3	33	140 (12) {<0.02}	0.25	<2.5	24	<2.5	<0.5	<5.0	20	140
	30	<5.0	<5.0	120	<0.5	<0.5	31	7.1	21	93 (11) {NS}	0.14	<2.5	24	<2.5	<0.5	<5.0	25	84
TTLC		500	500	10,000	75	100	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

Notes:
<0.01 = not detected at or above the laboratory detection limits
Metals are designated by their symbol on the periodic table of elements.
All samples are reported as total concentration in milligrams per kilogram (mg/kg), unless indicated.
Boring R4-2/T27-2 was drilled as a duel boring with the samples labeled for boring T27-2
(3.3) = Soluable concentration after a WET, presented in milligrams per liter (mg/l)
{3.3} = Soluble concentration after a TCLP, presented in mg/l.
{NS} = Not sufficient sample to analyze
TTLC = total threshold limit concentration
STLC = soluable threshold limit concentration.
Depth in feet below ground surface