ATTACHMENT 15

CHAIN-OF-CUSTODY SHEETS, GAMMA SURVEY RECORDS, AND ANCILLARY INFORMATION ASSOCIATED WITH SURVEY UNITS CONTAINING ANOMALOUS SOIL SAMPLE RESULTS AS LISTED IN TABLES 2 AND 3

(on CD only)

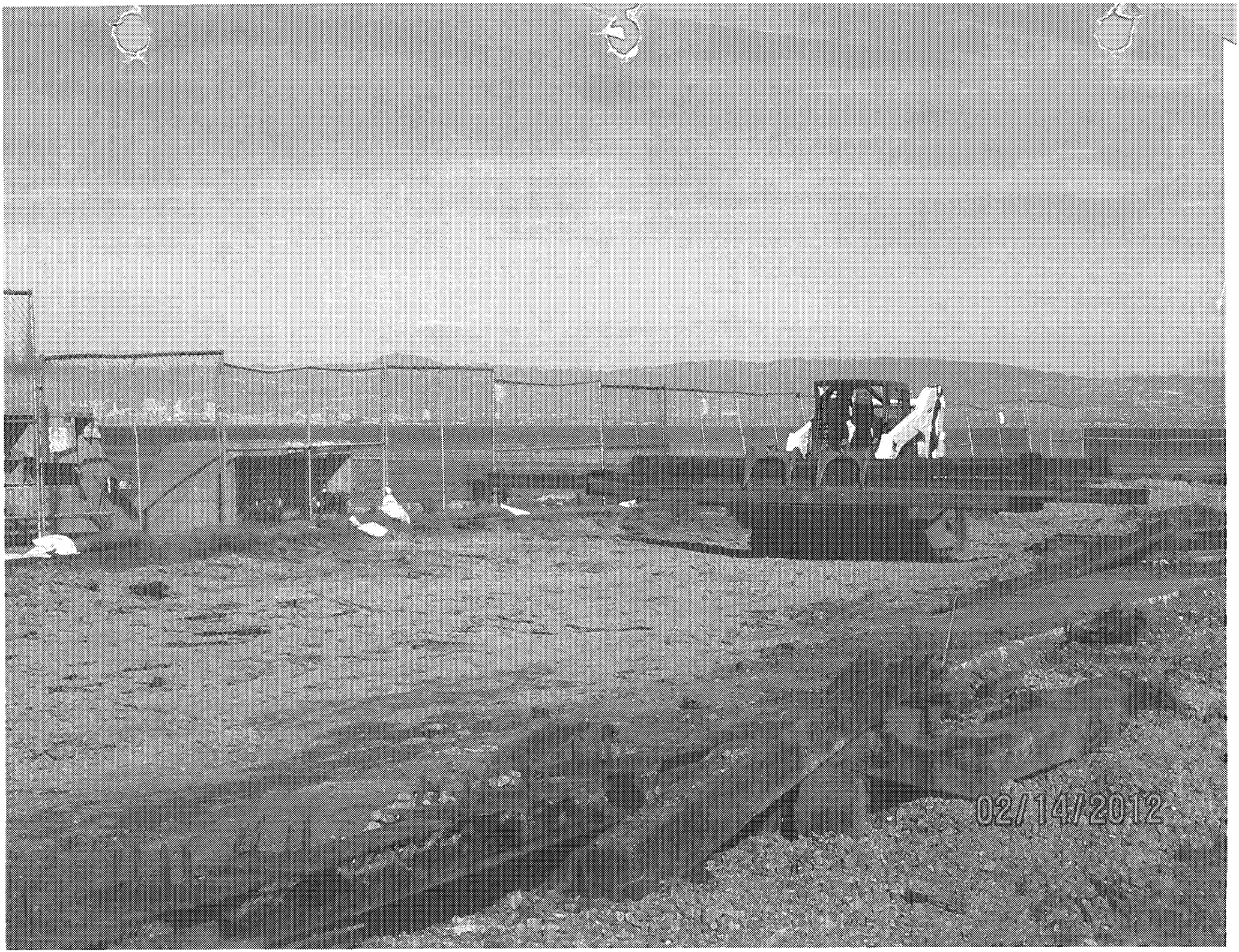
ED_004747_00010903-00001

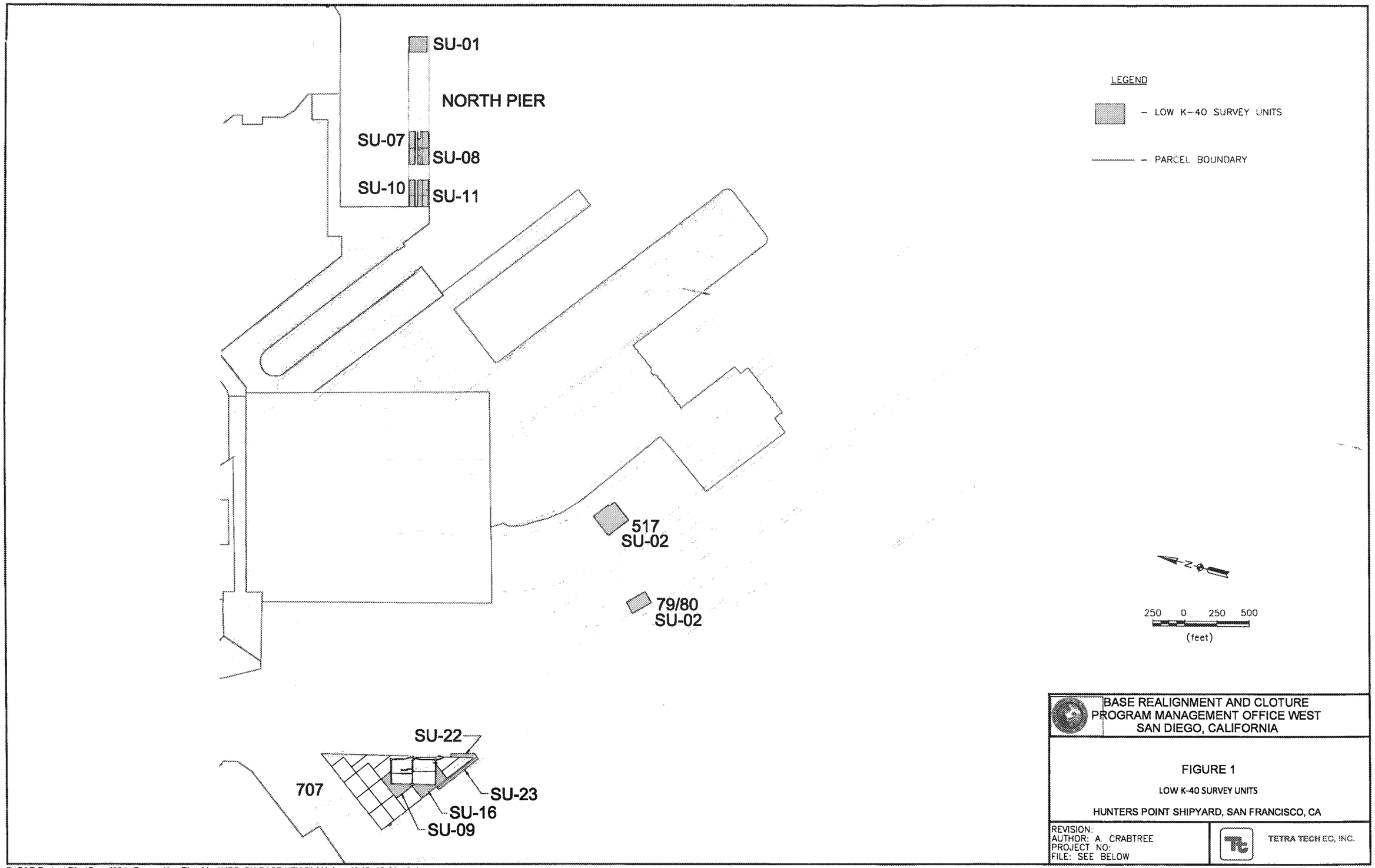
This page intentionally left blank.

ED_004747_00010903-00002

Survey Units with Final Systematic (K-40 < 3pCi/g) Grouped by Collection Date			Sample Sets Sumbitted to the On-Site Laboratory on the Same Collecion Date				Average pCi/g for each Sample Set				
Area	Survey Unit	Date	Other Sets Collected	Other Sets' Work Area(s)	Sample Type	# of Samples	K-40	[illegible]	Cs-137	Bi-214	Pb-214
707	16	7-Jun-11	TU192	WA33	Post-Remediation	3	8.6816667	1.6016667	-0.002302	0.9235333	1.0553333
			TU194	WA33	Post-Remediation	15	8.9774	1.7384933	-0.0002165	1.1592533	1.2522
			503-1	WA36	Systematic	20	11.05	0.5903385	0.01651934	0.32879	0.39105
			503-12	WA36	Systematic	20	11.6591	0.7018	0.02464353	0.44671	0.49574
707	9	8-Jun-11	707-17	WA21	Systematic	20	5.4452	0.426523	-0.0022822	0.1902325	0.201465
			503-2	WA36	Systematic	20	11.0699	0.654845	0.01359965	0.283955	0.34918
			503-3	WA36	Systematic	20	11.46345	0.5296545	0.01241905	0.27648	0.33993
			503-4	WA36	Systematic	20	10.56035	0.49279	0.005210645	0.32902	0.3919
			503-5	WA36	Systematic	20	10.65195	0.58565	0.002949475	0.322905	0.35349
			503-6	WA36	Systematic	20	12.3204	0.68816485	0.012116105	0.351625	0.39877
7980	2	4-Apr-12	C0670	RSY2 Closeout	Closeout	3	11.749667	0.854	0.00201	0.5408667	0.5111667
			E0626	WA36	Characterization	2	9.0665	1.225	-0.0016095	1.059	1.187
			500SA-3	WA36	Post-Remediation	10	1.53473	0.146627	0.0014229	0.100825	0.144147
			500SA-18	WA36	Post-Remediation	3	10.530333	0.6224333	-0.0010542	0.3780667	0.4409667
			MH1275	WA36	Sediment	1	20.53	0.6118	0.2828	0.4252	0.446
			MH1276	WA36	Sediment	1	14.19	0.7705	0.09744	0.3214	0.4232
517	2	10-Apr-12	ES0659	WA33/36	Biased/Systematic	24	11.649292	0.7707633	0.0001171	0.5520667	0.5704
			MH1281	WA36	Sediment	1	21.61	0.8152	0.03745	0.5686	0.6727
NPR	1	31-May-12	TU304	WA32	Systematic	18	11.473944	0.5690478	-0.0004078	0.3517944	0.4014111
	8		500SA-17	WA36	Characterization	6	9.787	0.6317333	0.0024228	0.3844667	0.4284
	10		MH1257	WA36	Sediment	1	11.13	1.026	0.06539	0.3858	0.3451
	11		MH1261	WA36	Sediment	1	11.23	0.8495	0.0002898	0.2319	0.6089
			MH1266	WA36	Sediment	1	12.11	0.4134	0.08382	0.3947	0.4069
			MH1267	WA36	Sediment	1	12.66	-0.04509	0.04731	0.3573	0.4896
NPR	7	4-Jun-12	MH1255	WA36	Sediment	1	17.78	0.9314	1.374	0.335	0.5439
			MH1258	WA36	Sediment	1	10.63	0.2356	0.06291	0.3154	0.4803
			MH1259	WA36	Sediment	1	11.98	0.7576	0.2475	0.4214	0.4241
			MH1260	WA36	Sediment	1	12.79	0.7244	0.01177	0.3565	0.432
			MH1262	WA36	Sediment	1	13.02	0.7402	0	0.2318	0.2836

Survey Units with Final Systematic (K-40 < 3pCi/g) Grouped by Collection Date			Sample Sets Sumbitted to the On-Site Laboratory on the Same Collecion Date				Average pCi/g for each Sample Set				
Area	Survey Unit	Date	Other Sets Collected	Other Sets' Work Area(s)	Sample Type	# of Samples	K-40	Ra-226	Cs-137	Bi-214	Pb-214
707	23	31-Jul-12	C0733	Shaw Ship Sheilding	Biased/Systematic	33	12.933273	0.881003	0.0131708	0.5715273	0.6571333
			C0739	Shaw Ship Sheilding	Biased/Systematic	36	12.667528	0.8115389	0.0097074	0.5586833	0.6640972
			D0743	Shaw Ship Sheilding	Biased/Systematic	36	9.4631111	0.9326028	-0.0006936	0.7903333	0.8757722
			ERRU000159	WA36	Waste Bin	1	18.82	0.5284	0.002127	0.408	0.378
			500SA-15	WA36	Post-Remediation	3	8.001666667	0.484166667	0.000109267	0.3973	0.351333333
			506-ANC247	WA36	Ancillary	1	18.76	0.4323	0.469	0.181	0.2582
			707-22	WA21	Systematic	20	13.58942	0.492767	0.0487368	0.28277	0.32243
707	22	23-Aug-12									


02/14/2012



BASE REALIGNMENT AND CLOTURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

FIGURE 1

LOW K-40 SURVEY UNITS

HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA

REVISION:
AUTHOR: A. CRABTREE
PROJECT NO:
FILE: SEE BELOW

TETRA TECH EC, INC.

P:\CAD Project Files\Base Wide Survey Key Plan Map\HPS SU BASE KEY PLAN_Low K-40_10-26-12.dwg

10/26/12

NPR	11	48	Systematic	02NPR-S0011-F048-01	30-Oct-12	J Taylor/M Winder
NPR	11	49	Systematic	02NPR-S0011-F049-01	30-Oct-12	J Taylor/M Winder
NPR	11	50	Systematic	02NPR-S0011-F050-01	30-Oct-12	J Taylor/M Winder
NPR	11	51	Systematic	02NPR-S0011-F051-01	30-Oct-12	J Taylor/M Winder
NPR	11	52	Systematic	02NPR-S0011-F052-01	30-Oct-12	J Taylor/M Winder
NPR	11	53	Systematic	02NPR-S0011-F053-01	30-Oct-12	J Taylor/M Winder
NPR	11	54	Systematic	02NPR-S0011-F054-01	30-Oct-12	J Taylor/M Winder
NPR	11	55	Systematic	02NPR-S0011-F055-01	30-Oct-12	J Taylor/M Winder
NPR	11	56	Systematic	02NPR-S0011-F056-01	30-Oct-12	J Taylor/M Winder
NPR	11	57	Systematic	02NPR-S0011-F057-01	30-Oct-12	J Taylor/M Winder
NPR	11	58	Systematic	02NPR-S0011-F058-01	30-Oct-12	J Taylor/M Winder
NPR	11	59	Systematic	02NPR-S0011-F059-01	30-Oct-12	J Taylor/M Winder
NPR	11	60	Systematic	02NPR-S0011-F060-01	30-Oct-12	J Taylor/M Winder
NPR	11	61	Systematic	02NPR-S0011-F061-01	30-Oct-12	J Taylor/M Winder
NPR	11	62	Systematic	02NPR-S0011-F062-01	30-Oct-12	J Taylor/M Winder
NPR	11	63	Systematic	02NPR-S0011-F063-01	30-Oct-12	J Taylor/M Winder
NPR	11	64	Systematic	02NPR-S0011-F064-01	30-Oct-12	J Taylor/M Winder
NPR	11	65	Systematic	02NPR-S0011-F065-01	30-Oct-12	J Taylor/M Winder
NPR	11	66	Systematic	02NPR-S0011-F066-01	30-Oct-12	J Taylor/M Winder

12.14	0.2555	0.005146	0.4333	0.409
9.099	0.25	-0.001031	0.1485	0.4051
16.97	0.6765	-0.004835	0.5016	0.5628
13.41	1.043	0.007397	0.4005	0.4926
8.479	-0.03818	0.008437	0.3315	0.2834
7.729	0.7058	-0.001774	0.2842	0.2897
7.245	0.3539	0.005391	0.1395	0.3227
8.09	0.7814	-0.00497	0.2325	0.4314
7.659	0.4121	-0.0006429	0.1912	0.2862
7.622	0.7293	-0.008737	0.297	0.1676
13.23	0.8045	0.009238	0.4011	0.3905
10.76	0.7667	0.01065	0.1496	0.3622
5.482	0.2624	0.01339	0.101	0.2512
9.871	0.731	0.002692	0.3444	0.3717
7.096	0.4656	0.004129	0.3798	0.356
7.92	0.8474	0	0.2265	0.1184
7.835	0.3401	-0.007842	0.1825	0.1433
10.78	0.8868	0	0.379	0.4846
4.761	0.2135	-0.001662	0.004619	0.04502

12.2	0.53
9.04	0.363
18.1	0.616
12.7	0.604
9.26	0.384
8.9	0.377
6.87	0.176
6.2	0.304
8.42	0.34
7.41	0.388
15.9	0.632
10.5	0.388
6.81	0.263
9.89	0.445
9.49	0.34
7.31	0.475
7.53	0.272
11.4	0.432
6	0.154

Highlighted Activities: K-40 ≤ 3 ; Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.375 ; Pb-214 ≥ 1.375 (pCi/g)

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
500SA	3	Complete	All	Mean	12.99621222	0.683494889	0.007534049	0.433250444	0.505590889	9.444722222	0.441138889	0.013055806	0.441138889	0.480694444
				Median	11.265	0.56505	0.0048795	0.37125	0.4509	9.77	0.429	0.01385	0.429	0.466
				Std Dev	8.661011939	0.587010798	0.010593207	0.316484894	0.315435349	2.323737736	0.1417878	0.01510582	0.1417878	0.148926409
		Systematic 1	1 to 36	Mean	18.34113333	1.058046944	0.007472389	0.623861667	0.695954722					
				Median	17.215	0.89045	0.0048795	0.57345	0.61215					
				Std Dev	9.405391318	0.631667105	0.01119883	0.31345425	0.320588433					
		Post-Remediation	45 to 54	Mean	1.53473	0.146627	0.00142287	0.100825	0.144147					
				Median	1.334	0.1534	0.00137105	0.081605	0.1736					
				Std Dev	0.894199973	0.180318641	0.004391025	0.073026849	0.077950462					
		Final	55 to 90	Mean	10.68011111	0.493355556	0.010753289	0.330174167	0.416397222	9.444722222	0.441138889	0.013055806	0.441138889	0.480694444
				Median	11.125	0.5283	0.008198	0.3466	0.4111	9.77	0.429	0.01385	0.429	0.466
				Std Dev	2.773371798	0.287946637	0.010840423	0.143237119	0.106635045	2.323737736	0.1417878	0.01510582	0.1417878	0.148926409
517	2	Complete	All	Mean	13.17619124	0.795367711	0.00248355	0.528548928	0.589911753	1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
				Median	12.86	0.71005	0	0.47265	0.5335	1.755	0.1835	-0.00002415	0.1835	0.2165
				St Dev	7.900874391	0.530329346	0.011383402	0.354917922	0.373026445	0.599023401	0.086877668	0.010680146	0.086877668	0.055414196
		Systematic 1	8 to 43	Mean	13.51088889	0.944655556	0.004310383	0.671380556	0.765191667					
				Median	13.84	0.7566	0.0041285	0.5733	0.6431					
				St Dev	2.551120838	0.668385796	0.010320138	0.434768916	0.432966776					
		Systematic 2	72 to 107	Mean	16.92733333	0.899296833	-0.000484341	0.603491667	0.675962222					
				Median	15.825	0.9365	0	0.6573	0.7456					
				St Dev	7.614985924	0.4771655	0.007251223	0.295380036	0.296029064					
		Final	123 to 158	Mean	1.722169444	0.269878889	0.000792768	0.123669222	0.155880833	1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
				Median	1.65	0.24775	0	0.10835	0.175	1.755	0.1835	-0.00002415	0.1835	0.2165
				St Dev	0.535136812	0.179550587	0.005301076	0.064529456	0.059808911	0.599023401	0.086877668	0.010680146	0.086877668	0.055414196
		Re-Sample	159 to 194	Mean	15.16527778	0.899355556	0.004106869	0.573577778	0.622864722					
				Median	14.775	0.9075	0.0029095	0.54765	0.61495					
				St Dev	5.131540852	0.33000226	0.009821969	0.182264282	0.220439492					
707	3, 9, 16, 17, 22 & 23	Complete	All	Mean	9.917060235	0.420103201	0.071225819	0.326519576	0.340693748	4.95204	0.25607735	-0.002100692	0.25607735	0.2986835
				Median	10.28	0.3903	0.001496	0.2936	0.3209	4.115	0.2305	0	0.2305	0.2845
				St Dev	7.0392389	0.343818321	0.706283537	0.259790831	0.242107678	4.073409389	0.200109168	0.015150163	0.200109168	0.201847031
	3	Systematic 1	1 to 20	Mean	14.40704	0.568364	0.069449945	0.519629	0.4737175					
				Median	14.1315	0.5538	0.0669285	0.536935	0.486285					
				St Dev	2.805919125	0.276582125	0.049181746	0.095507452	0.0887167					
	3	Final	37 to 56	Mean	3.557435	0.14545	-0.000482466	0.1162504	0.162627	3.101	0.18709	-0.005641005	0.18709	0.26892
				Median	3.0195	0.14165	0	0.09564	0.15725	2.605	0.1535	-0.0026325	0.1535	0.26
				St Dev	2.175527811	0.235232117	0.004671429	0.06602057	0.098493481	1.735614255	0.170000941	0.012743543	0.170000941	0.166640131
	9	Systematic 1	1 to 20	Mean	15.01239	0.4954676	0.047459605	0.5980035	0.5560145					

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
				Median	15	0.53643	0.02443	0.63671	0.516465					
				St Dev	4.511639684	0.397558208	0.059939792	0.179112329	0.183841768					
	9	Systematic 2	35 to 54	Mean	10.4735	0.55018	0.004387815	0.357355	0.399475	9.41	0.4935	-0.0015218	0.4935	0.55315
				Median	10.525	0.59675	0.0007595	0.3603	0.3979	9.42	0.499	-0.000253	0.499	0.5495
				St Dev	0.842408358	0.243276184	0.007372801	0.068699318	0.061780817	1.076514845	0.082457325	0.016073802	0.082457325	0.093446452
	9	Final	59 to 78	Mean	0.80598	0.0821818	0.002953173	0.0103724	0.01332565	0.8422	0.0312185	0.004558085	0.0312185	0.07594
				Median	0.7873	0.07004	0.00031775	0.000159	0.0095755	0.8195	0.0284	0.0005998	0.0284	0.0601
				St Dev	0.370837433	0.12690064	0.005311997	0.025365832	0.024290664	0.381097667	0.04244255	0.008670193	0.04244255	0.070134483
	16	Systematic 1	1 to 20	Mean	16.53146	0.4312124	0.11944257	0.5599355	0.5771585					
				Median	17.7565	0.407135	0.0561225	0.585795	0.6163					
				St Dev	4.937521896	0.348833698	0.125423115	0.15631116	0.172124674					
	16	Systematic 2	45 to 64	Mean	6.1335	0.29803085	-0.001129609	0.199165	0.241125	5.445	0.30034	-0.00908415	0.30034	0.33565
				Median	6.224	0.2762	-0.0001685	0.18325	0.23555	5.32	0.332	-0.004775	0.332	0.34
				St Dev	0.822958559	0.199463576	0.004818448	0.094391911	0.067840679	1.439672843	0.127956836	0.018025837	0.127956836	0.054134603
	16	Final	67 to 86	Mean	2.67289	0.239761	-0.001695986	0.0709005	0.10363939	2.5165	0.186695	-0.000203	0.186695	0.227785
				Median	2.312	0.2077	-0.00015125	0.059805	0.085545	2.325	0.175	0.0000835	0.175	0.214
				St Dev	1.845684479	0.199687099	0.003635007	0.077647226	0.086212283	1.207501052	0.125009484	0.014080454	0.125009484	0.162522178
	17	Systematic 1	1 to 20	Mean	17.577175	0.6082214	0.04481731	0.678111	0.633214					
				Median	16.6795	0.66646	0.0228405	0.694535	0.63188					
				St Dev	3.991650744	0.383009878	0.092839642	0.140039871	0.151929846					
	17	Systematic 2	42 to 61	Mean	10.8236	0.5840755	0.001566781	0.4116445	0.40788	10.158	0.5246	-0.0036223	0.5246	0.5607
				Median	11.555	0.5763	-0.000035095	0.44895	0.4183	10.35	0.5185	-0.000123	0.5185	0.5675
				St Dev	1.837615486	0.249125984	0.010096762	0.102429562	0.084663182	1.591227927	0.106308588	0.016346124	0.106308588	0.102179975
	17	Final	64 to 83	Mean	5.4452	0.426523	-0.002282165	0.1902325	0.201465	5.0495	0.33565	-0.0026422	0.33565	0.32665
				Median	5.662	0.4495	0	0.18225	0.1895	5.135	0.328	0	0.328	0.363
				St Dev	0.681996188	0.199430312	0.003943233	0.067966393	0.052572139	1.055992798	0.05715839	0.01242772	0.05715839	0.087722214
	22	Systematic 1	12 to 31	Mean	11.32665	0.3207665	0.002395868	0.22566	0.2696915	11.109	0.359075	0.005568	0.359075	0.428135
				Median	12.145	0.3039	0.0013769	0.20705	0.26675	11.6	0.3525	0.00549	0.3525	0.3805
				St Dev	3.81930118	0.337238273	0.005674834	0.118721525	0.128643382	3.275831594	0.18548828	0.010877014	0.18548828	0.178968613
	22	Systematic 2	44 to 63	Mean	13.58942	0.492767	0.048736795	0.28277	0.32243					
				Median	13.8	0.52605	0.0076575	0.3155	0.3408					
				St Dev	4.512351224	0.325582053	0.08533449	0.123132753	0.144389405					
	22	Final	81 to 100	Mean	0.72487	0.1317289	-0.000109735	0.03271915	0.06452715	0.6553	0.062253	-0.0026707	0.062253	0.07712
				Median	0.6407	0.1092	0	0.03361	0.0547	0.6695	0.0525	-0.000555	0.0525	0.0708
				St Dev	0.277554964	0.156532532	0.00411817	0.027989508	0.047841254	0.4363766	0.07258278	0.012910224	0.07258278	0.038658105
	23	Final	5 to 24	Mean	1.198355	0.11314844	0.000850075	0.05109795	0.08229095	1.2339	0.080352	-0.00574785	0.080352	0.132785
				Median	1.1985	0.14105	0	0.05451	0.061315	1.15	0.0836	-0.00195	0.0836	0.1455
				St Dev	0.429891765	0.119948732	0.004007958	0.03319066	0.062561069	0.370434581	0.071982784	0.021997823	0.071982784	0.069812895

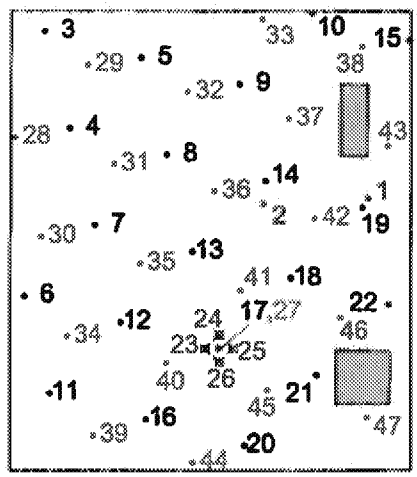
Area	Unit	Data Set	Sample Range	Statistic	K-40	Cs-137	Bi-214	Pb-214	K-40	Cs-137	Bi-214	Pb-214
7980	2	Complete	All	Mean	4.832349375	0.284894188	0.036972417	0.15204949	0.191149063	1.99791	0.164315	0.009205	0.164315	0.177375
				Median	1.759	0.1518	0.014825	0.06285	0.092485	0.5455	0.1155	0.006995	0.1155	0.1545
				St Dev	6.470395115	0.354335897	0.058046458	0.178157354	0.220255234	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923
		Final	3 to 6, 8 to 22, 28	Mean	2.2353375	0.14748225	0.006272035	0.085874275	0.0871569	1.99791	0.164315	0.009205	0.164315	0.177375
				Median	0.6083	0.08749	0.00155675	0.044975	0.046845	0.5455	0.1155	0.006995	0.1155	0.1545
				St Dev	5.170182115	0.270457092	0.01218073	0.143044955	0.146200278	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923
		Re-Sample	29 to 48	Mean	8.3348	0.491335	0.073295	0.24809745	0.346294					
				Median	6.6205	0.3887	0.047095	0.2131	0.3778					
				St Dev	5.95749911	0.346753637	0.066398078	0.178480113	0.196450403					
NPR	1,7,8,10, 11	Complete	All	Mean	8.893148387	0.47411751	0.009063723	0.277411966	0.333935663	3.190442623	0.22128041	0.006707113	0.22128041	0.262368852
				Median	8.129	0.4327	0.0008782	0.2328	0.2898	1.265	0.174	0.0007595	0.174	0.223
				St Dev	7.287537043	0.354480482	0.026223499	0.215415134	0.233266162	5.088031729	0.192796459	0.024562022	0.192796459	0.180645603
	i	Systematic 1	3 to 22	Mean	17.0906	0.85831	0.00756183	0.641415	0.70298					
				Median	16.57	0.90495	0.0063085	0.6356	0.65775					
				St Dev	4.369138039	0.354320258	0.009852577	0.17340317	0.187682068					
	1	Final	28 to 47	Mean	0.85799	0.12554275	-0.001074045	0.04713675	0.0780465	0.80125	0.19355	-0.001177295	0.19355	0.224975
				Median	0.83125	0.1296	0	0.053185	0.07633	0.6945	0.186	0	0.186	0.225
				St Dev	0.313446045	0.162197413	0.004430395	0.038646799	0.036326346	0.413031651	0.12775026	0.009401146	0.12775026	0.104094218
	7	Systematic 1	3 to 22	Mean	13.3008	0.59536	0.017158965	0.36853	0.40228					
				Median	12.53	0.61885	0.0033885	0.3574	0.37925					
				St Dev	5.429274595	0.253239869	0.055899494	0.142301363	0.134485071					
	7	Final	30 to 49	Mean	1.55229	0.2316825	-0.000954859	0.08981005	0.1449855	1.3079	0.1428375	0.0025354	0.1428375	0.18336
				Median	1.594	0.22905	0	0.095455	0.15245	1.29	0.1425	0	0.1425	0.1905
				St Dev	0.396872439	0.117115601	0.00519961	0.05286266	0.054596236	0.654080705	0.074360107	0.012927058	0.074360107	0.077879478
	8	Systematic 1	3 to 22	Mean	12.4212	0.690445	0.01473632	0.35388	0.423435					
				Median	10.255	0.6288	0.004496	0.3518	0.3931					
				St Dev	5.562581553	0.30770083	0.024439136	0.166494013	0.155004143					
	8	Final	32 to 51	Mean	1.256515	0.181917	0.000195555	0.094562275	0.1363755	1.28345	0.185493	-0.00046025	0.185493	0.22657
				Median	1.2105	0.2159	0	0.08632	0.1266	1.315	0.1945	0.0003315	0.1945	0.24
				St Dev	0.35970205	0.180818237	0.005601427	0.053432509	0.061597534	0.341740972	0.099646868	0.009738174	0.099646868	0.059652795
	10	Systematic 1	3 to 22	Mean	13.19005	0.5334918	0.012328835	0.343065	0.3960175					
				Median	11.005	0.6374	0.004808	0.3225	0.4038					
				St Dev	6.549418909	0.322351298	0.030365556	0.147309368	0.180605378					
	10	Final	27 to 46	Mean	0.89772	0.17755712	-0.001345335	0.0756	0.099193	0.69825	0.11966	0.006579	0.11966	0.165935
				Median	0.8814	0.1572	0	0.076115	0.08133	0.639	0.09635	0.00578	0.09635	0.179
				St Dev	0.268089835	0.146443925	0.004198854	0.035706923	0.052523436	0.472509746	0.113456513	0.012045636	0.113456513	0.065036389
	10	Re-Sample	47 to 66	Mean	9.49525	0.552443	0.004254845	0.248538	0.296093					

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
				Median	7.935	0.56805	0.0001571	0.20295	0.26675					
				St Dev	3.848433624	0.269549217	0.007289299	0.180587115	0.164539314					
	11	Systematic 1	3 to 22	Mean	14.8632	0.714425	0.00863232	0.443785	0.536735					
				Median	13.805	0.7658	0.006891	0.4393	0.54035					
				St Dev	6.156507525	0.405537893	0.014944824	0.183401576	0.199241124					
	11	Final	27 to 46	Mean	1.270505	0.1801841	0.003229867	0.0763634	0.1118205	1.27285	0.13367	-7.8965E-05	0.13367	0.18146
				Median	1.171	0.16805	0.0022585	0.07029	0.094115	1.275	0.1065	-0.00018	0.1065	0.186
				St Dev	0.432154281	0.164396121	0.004786649	0.051002067	0.063558188	0.226200022	0.08604735	0.008966016	0.08604735	0.062496386
	11	Re-Sample	47 to 66	Mean	9.5119	0.556221	0.002026605	0.27739595	0.331596					
				Median	8.2845	0.6568	0.001346	0.2906	0.3591					
				St Dev	3.112835632	0.285573093	0.006180683	0.132274691	0.13562092					
PCT	238, 242, 302	Complete	All	Mean	3.459828283	0.366421687	0.001730108	0.222309455	0.263823141	1.590833333	0.133612778	0.001480389	0.133612778	0.166498148
				Median	1.938	0.2186	0.00006497	0.08348	0.1399	1.31	0.117	0	0.117	0.1605
				Std Dev	3.881205814	0.442967201	0.006487747	0.298279301	0.329325746	2.307362259	0.104705267	0.012691031	0.104705267	0.093391288
	238	Final	18 to 35	Mean	1.656866667	0.124800389	0.000601176	0.087622778	0.091095111	1.398333333	0.095282778	9.74444E-05	0.095282778	0.169894444
				Median	1.0895	0.07737	0	0.062975	0.07641	1.265	0.06205	0	0.06205	0.173
				Std Dev	1.267960694	0.175890168	0.004857032	0.084866456	0.072426088	0.872057203	0.078996017	0.012881196	0.078996017	0.099076681
	242	Systematic 1	1 to 18	Mean	4.607388889	0.584277778	9.89722E-05	0.345758333	0.43609					
				Median	4.059	0.4747	0	0.23895	0.2699					
				Std Dev	3.033270112	0.515503994	0.00765547	0.353343342	0.393992175					
	242	Final	25 to 42	Mean	2.947811111	0.279011111	0.001770693	0.10079	0.137298611	2.394722222	0.183822222	0.000225	0.183822222	0.178655556
				Median	2.054	0.2103	0.000107735	0.080685	0.11086	1.445	0.186	-0.000905	0.186	0.163
				Std Dev	4.518513828	0.236820781	0.004293728	0.109627057	0.124389674	3.75491986	0.125274032	0.013894564	0.125274032	0.107817341
	302	Final	5 to 22	Mean	1.303322222	0.091635	0.002380146	0.038648667	0.079100611	0.979444444	0.121733333	0.004118722	0.121733333	0.150944444
				Median	1.093	0.03334	0	0.044285	0.067425	0.93	0.0991	0	0.0991	0.147
				Std Dev	0.6547399	0.192329797	0.007056113	0.039964363	0.051338048	0.786718966	0.0887192	0.011492919	0.0887192	0.072981377

Area	Unit	Data Set	Sample Range	Statistic	Cs-137	Bi-214	Pb-214	Cs-137	Bi-214	Pb-214
517	2	Complete	All	Mean	12.72298165	0.771674278	0.002113679	0.51828919	0.582403481	1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
				Median	12.73	0.6547	0	0.44545	0.49415	1.755	0.1835	-0.00002415	0.1835	0.2165
				St Dev	8.351843243	0.564285036	0.011706693	0.383241661	0.399895927	0.599023401	0.086877668	0.010680146	0.086877668	0.055414196
		Systematic 1	8 to 43	Mean	13.51088889	0.944655556	0.004310383	0.671380556	0.765191667					
				Median	13.84	0.7566	0.0041285	0.5733	0.6431					
				St Dev	2.551120838	0.668385796	0.010320138	0.434768916	0.432966776					
		Systematic 2	72 to 107	Mean	16.92733333	0.899296833	-0.000484341	0.603491667	0.675962222					
				Median	15.825	0.9365	0	0.6573	0.7456					
				St Dev	7.614985924	0.4771655	0.007251223	0.295380036	0.296029064					
		Final	123 to 158	Mean	1.722169444	0.269878889	0.000792768	0.123669222	0.155880833	1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
				Median	1.65	0.24775	0	0.10835	0.175	1.755	0.1835	-0.00002415	0.1835	0.2165
				St Dev	0.535136812	0.179550587	0.005301076	0.064529456	0.059808911	0.599023401	0.086877668	0.010680146	0.086877668	0.055414196
707	3, 9, 16, 17, 22 & 23	Complete	All	Mean	9.917060235	0.420103201	0.071225819	0.326519576	0.340693748	4.95204	0.25607735	-0.002100692	0.25607735	0.2986835
				Median	10.28	0.3903	0.001496	0.2936	0.3209	4.115	0.2305	0	0.2305	0.2845
				St Dev	7.0392389	0.343818321	0.706283537	0.259790831	0.242107678	4.073409389	0.200109168	0.015150163	0.200109168	0.201847031
	3	Systematic 1	1 to 20	Mean	14.40704	0.568364	0.069449945	0.519629	0.4737175					
				Median	14.1315	0.5538	0.0669285	0.536935	0.486285					
				St Dev	2.805919125	0.276582125	0.049181746	0.095507452	0.0887167					
	3	Final	37 to 56	Mean	3.557435	0.14545	-0.000482466	0.1162504	0.162627	3.101	0.18709	-0.005641005	0.18709	0.26892
				Median	3.0195	0.14165	0	0.09564	0.15725	2.605	0.1535	-0.0026325	0.1535	0.26
				St Dev	2.175527811	0.235232117	0.004671429	0.06602057	0.098493481	1.735614255	0.170000941	0.012743543	0.170000941	0.166640131
	9	Systematic 1	1 to 20	Mean	15.01239	0.4954676	0.047459605	0.5980035	0.5560145					
				Median	15	0.53643	0.02443	0.63671	0.516465					
				St Dev	4.511639684	0.397558208	0.059939792	0.179112329	0.183841768					
		Systematic 2	35 to 54	Mean	10.4735	0.55018	0.004387815	0.357355	0.399475	9.41	0.4935	-0.0015218	0.4935	0.55315
				Median	10.525	0.59675	0.0007595	0.3603	0.3979	9.42	0.499	-0.000253	0.499	0.5495
				St Dev	0.842408358	0.243276184	0.007372801	0.068699318	0.061780817	1.076514845	0.082457325	0.016073802	0.082457325	0.093446452
	9	Final	59 to 78	Mean	0.80598	0.0821818	0.002953173	0.0103724	0.01332565	0.8422	0.0312185	0.004558085	0.0312185	0.07594
				Median	0.7873	0.07004	0.00031775	0.000159	0.0095755	0.8195	0.0284	0.0005998	0.0284	0.0601
				St Dev	0.370837433	0.12690064	0.005311997	0.025365832	0.024290664	0.381097667	0.04244255	0.008670193	0.04244255	0.070134483
	16	Systematic 1	1 to 20	Mean	16.53146	0.4312124	0.11944257	0.5599355	0.5771585					
				Median	17.7565	0.407135	0.0561225	0.585795	0.6163					
				St Dev	4.937521896	0.348833698	0.125423115	0.15631116	0.172124674					
	16	Systematic 2	45 to 64	Mean	6.1335	0.29803085	-0.001129609	0.199165	0.241125	5.445	0.30034	-0.00908415	0.30034	0.33565
				Median	6.224	0.2762	-0.0001685	0.18325	0.23555	5.32	0.332	-0.004775	0.332	0.34
				St Dev	0.822958559	0.199463576	0.004818448	0.094391911	0.067840679	1.439672843	0.127956836	0.018025837	0.127956836	0.054134603
	16	Final	67 to 86	Mean	2.67289	0.239761	-0.001695986	0.0709005	0.10363939	2.5165	0.186695	-0.000203	0.186695	0.227785
				Median	2.312	0.2077	-0.00015125	0.059805	0.085545	2.325	0.175	0.0000835	0.175	0.214

Area	Unit	Data Set	Sample Range	Statistic	K-40	K-40	Cs-137	Bi-214	Pb-214	K-40	K-40	Cs-137	Bi-214	Pb-214
				St Dev	1.845684479	0.199687099	0.003635007	0.077647226	0.086212283	1.207501052	0.125009484	0.014080454	0.125009484	0.162522178
	17	Systematic 1	1 to 20	Mean	17.577175	0.6082214	0.04481731	0.678111	0.633214					
				Median	16.6795	0.66646	0.0228405	0.694535	0.63188					
				St Dev	3.991650744	0.383009878	0.092839642	0.140039871	0.151929846					
	17	Systematic 2	42 to 61	Mean	10.8236	0.5840755	0.001566781	0.4116445	0.40788	10.158	0.5246	-0.0036223	0.5246	0.5607
				Median	11.555	0.5763	-0.000035095	0.44895	0.4183	10.35	0.5185	-0.000123	0.5185	0.5675
				St Dev	1.837615486	0.249125984	0.010096762	0.102429562	0.084663182	1.591227927	0.106308588	0.016346124	0.106308588	0.102179975
	17	Final	64 to 83	Mean	5.4452	0.426523	-0.002282165	0.1902325	0.201465	5.0495	0.33565	-0.0026422	0.33565	0.32665
				Median	5.662	0.4495	0	0.18225	0.1895	5.135	0.328	0	0.328	0.363
				St Dev	0.681996188	0.199430312	0.003943233	0.067966393	0.052572139	1.055992798	0.05715839	0.01242772	0.05715839	0.087722214
	22	Systematic 1	12 to 31	Mean	11.32665	0.3207665	0.002395868	0.22566	0.2696915	11.109	0.359075	0.005568	0.359075	0.428135
				Median	12.145	0.3039	0.0013769	0.20705	0.26675	11.6	0.3525	0.00549	0.3525	0.3805
				St Dev	3.81930118	0.337238273	0.005674834	0.118721525	0.128643382	3.275831594	0.18548828	0.010877014	0.18548828	0.178968613
	22	Systematic 2	44 to 63	Mean	13.58942	0.492767	0.048736795	0.28277	0.32243					
				Median	13.8	0.52605	0.0076575	0.3155	0.3408					
				St Dev	4.512351224	0.325582053	0.08533449	0.123132753	0.144389405					
	22	Final	81 to 100	Mean	0.72487	0.1317289	-0.000109735	0.03271915	0.06452715	0.6553	0.062253	-0.0026707	0.062253	0.07712
				Median	0.6407	0.1092	0	0.03361	0.0547	0.6695	0.0525	-0.000555	0.0525	0.0708
				St Dev	0.277554964	0.156532532	0.00411817	0.027989508	0.047841254	0.4363766	0.07258278	0.012910224	0.07258278	0.038658105
	23	Final	5 to 24	Mean	1.198355	0.11314844	0.000850075	0.05109795	0.08229095	1.2339	0.080352	-0.00574785	0.080352	0.132785
				Median	1.1985	0.14105	0	0.05451	0.061315	1.15	0.0836	-0.00195	0.0836	0.1455
				St Dev	0.429891765	0.119948732	0.004007958	0.03319066	0.062561069	0.370434581	0.071982784	0.021997823	0.071982784	0.069812895
7980	2	Complete	All	Mean	2.330598929	0.137436464	0.011027714	0.083443804	0.08033125	1.99791	0.164315	0.009205	0.164315	0.177375
				Median	0.3767	0.046955	0.00084835	0.03339	0.028625	0.5455	0.1155	0.006995	0.1155	0.1545
				St Dev	5.685492048	0.282536723	0.032976886	0.145327371	0.163476508	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923
		Final	3 to 6, 8 to 22, 28	Mean	2.2353375	0.14748225	0.006272035	0.085874275	0.0871569	1.99791	0.164315	0.009205	0.164315	0.177375
				Median	0.6083	0.08749	0.00155675	0.044975	0.046845	0.5455	0.1155	0.006995	0.1155	0.1545
				St Dev	5.170182115	0.270457092	0.01218073	0.143044955	0.146200278	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923
NPR	1,7,8,10, 11	Complete	All	Mean	8.790984937	0.460692491	0.01005502	0.279829538	0.337298201	3.190442623	0.22128041	0.006707113	0.22128041	0.262368852
				Median	8.211	0.4059	0.0008793	0.2472	0.2896	1.265	0.174	0.0007595	0.174	0.223
				St Dev	7.746284782	0.364967613	0.028086724	0.223889363	0.244532921	5.088031729	0.192796459	0.024562022	0.192796459	0.180645603
	1	Systematic 1	3 to 22	Mean	17.0906	0.85831	0.00756183	0.641415	0.70298					
				Median	16.57	0.90495	0.0063085	0.6356	0.65775					
				St Dev	4.369138039	0.354320258	0.009852577	0.17340317	0.187682068					
	1	Final	28 to 47	Mean	0.85799	0.12554275	-0.001074045	0.04713675	0.0780465	0.80125	0.19355	-0.001177295	0.19355	0.224975
				Median	0.83125	0.1296	0	0.053185	0.07633	0.6945	0.186	0	0.186	0.225
				St Dev	0.313446045	0.162197413	0.004430395	0.038646799	0.036326346	0.413031651	0.12775026	0.009401146	0.12775026	0.104094218

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
	7	Systematic 1	3 to 22	Mean	13.3008	0.59536	0.017158965	0.36853	0.40228					
				Median	12.53	0.61885	0.0033885	0.3574	0.37925					
				St Dev	5.429274595	0.253239869	0.055899494	0.142301363	0.134485071					
	7	Final	30 to 49	Mean	1.55229	0.2316825	-0.000954859	0.08981005	0.1449855	1.3079	0.1428375	0.0025354	0.1428375	0.18336
				Median	1.594	0.22905	0	0.095455	0.15245	1.29	0.1425	0	0.1425	0.1905
				St Dev	0.396872439	0.117115601	0.00519961	0.05286266	0.054596236	0.654080705	0.074360107	0.012927058	0.074360107	0.077879478
	8	Systematic 1	3 to 22	Mean	12.4212	0.690445	0.01473632	0.35388	0.423435					
				Median	10.255	0.6288	0.004496	0.3518	0.3931					
				St Dev	5.562581553	0.30770083	0.024439136	0.166494013	0.155004143					
	8	Final	32 to 51	Mean	1.256515	0.181917	0.000195555	0.094562275	0.1363755	1.28345	0.185493	-0.00046025	0.185493	0.22657
				Median	1.2105	0.2159	0	0.08632	0.1266	1.315	0.1945	0.0003315	0.1945	0.24
				St Dev	0.35970205	0.180818237	0.005601427	0.053432509	0.061597534	0.341740972	0.099646868	0.009738174	0.099646868	0.059652795
	10	Systematic 1	3 to 22	Mean	13.19005	0.5334918	0.012328835	0.343065	0.3960175					
				Median	11.005	0.6374	0.004808	0.3225	0.4038					
				St Dev	6.549418909	0.322351298	0.030365556	0.147309368	0.180605378					
	10	Final	27 to 46	Mean	0.89772	0.17755712	-0.001345335	0.0756	0.099193	0.69825	0.11966	0.006579	0.11966	0.165935
				Median	0.8814	0.1572	0	0.076115	0.08133	0.639	0.09635	0.00578	0.09635	0.179
				St Dev	0.268089835	0.146443925	0.004198854	0.035706923	0.052523436	0.472509746	0.113456513	0.012045636	0.113456513	0.065036389
	11	Systematic 1	3 to 22	Mean	14.8632	0.714425	0.00863232	0.443785	0.536735					
				Median	13.805	0.7658	0.006891	0.4393	0.54035					
				St Dev	6.156507525	0.405537893	0.014944824	0.183401576	0.199241124					
	11	Final	27 to 46	Mean	1.270505	0.1801841	0.003229867	0.0763634	0.1118205	1.27285	0.13367	-7.8965E-05	0.13367	0.18146
				Median	1.171	0.16805	0.0022585	0.07029	0.094115	1.275	0.1065	-0.00018	0.1065	0.186
				St Dev	0.432154281	0.164396121	0.004786649	0.051002067	0.063558188	0.226200022	0.08604735	0.008966016	0.08604735	0.062496386



LEGEND:

- 1 BIASED 1–2
- 3 SYSTEMATIC 1 3–22
- 23 CHARACTERIZATION 23–26
- 27 POST–REMEDIATION 27
- 28 SYSTEMATIC 2 28–47
- CONCRETE
- AREAS PREVIOUSLY REMEDIATED

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

SU-01
CLASS 1
803.22 m^2 (8645.87 ft^2)

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 14:55:17

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 01

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR **Survey Unit:** 1 **Class:** 1 **Area:** 803.22 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/12/2012 9:48	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
2	3/12/2012 9:50	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
3	3/12/2012 9:51	5200	6386	-1186	600-BKGDS1B	6765	
4	3/12/2012 9:53	5643	6386	-743	600-BKGDS1B	6765	
5	3/12/2012 9:54	5791	6386	-595	600-BKGDS1B	6765	
6	3/12/2012 9:56	6150	6386	-236	600-BKGDS1B	6765	
7	3/12/2012 9:57	6468	6386	82	600-BKGDS1B	6765	
8	3/12/2012 9:58	6168	6386	-218	600-BKGDS1B	6765	
9	3/12/2012 10:00	6440	6386	54	600-BKGDS1B	6765	
10	3/12/2012 10:01	5154	6386	-1232	600-BKGDS1B	6765	
11	3/12/2012 10:02	6487	6386	101	600-BKGDS1B	6765	
12	3/12/2012 10:04	6224	6386	-162	600-BKGDS1B	6765	
13	3/12/2012 10:05	5744	6386	-642	600-BKGDS1B	6765	
14	3/12/2012 10:06	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
15	3/12/2012 10:07	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
16	3/12/2012 10:09	4843	6386	-1543	600-BKGDS1B	6765	
17	3/12/2012 10:10	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
18	3/12/2012 10:11	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
19	3/12/2012 10:12	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
20	3/12/2012 10:14	4194	6386	-2192	600-BKGDS1B	6765	
21	3/12/2012 10:15	5443	6386	-943	600-BKGDS1B	6765	
22	3/12/2012 10:17	5629	6386	-757	600-BKGDS1B	6765	
23	4/20/2012 14:01	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
24	4/20/2012 14:03	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
25	4/20/2012 14:04	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
26	4/20/2012 14:05	6346	6386	-40	600-BKGDS1B	6765	
27	5/1/2012 15:26	4909	6386	-1477	600-BKGDS1B	6765	
28	5/31/2012 14:52	4428	6808	-2380	630-BKGDS1B	8141	
29	5/31/2012 14:54	4992	6808	-1816	630-BKGDS1B	8141	
30	5/31/2012 14:55	6096	6808	-712	630-BKGDS1B	8141	
31	5/31/2012 14:56	5708	6808	-1100	630-BKGDS1B	8141	
32	5/31/2012 14:57	5835	6808	-973	630-BKGDS1B	8141	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 1 Class: 1 Area: 803.22 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/31/2012 14:58	4732	6808	-2076	630-BKGDS1B	8141	
34	5/31/2012 14:59	5221	6808	-1587	630-BKGDS1B	8141	
35	5/31/2012 15:01	4957	6808	-1851	630-BKGDS1B	8141	
36	5/31/2012 15:02	5430	6808	-1378	630-BKGDS1B	8141	
37	5/31/2012 15:03	4940	6808	-1868	630-BKGDS1B	8141	
38	5/31/2012 15:04	5218	6808	-1590	630-BKGDS1B	8141	
39	5/31/2012 15:05	4364	6808	-2444	630-BKGDS1B	8141	
40	5/31/2012 15:06	4760	6808	-2048	630-BKGDS1B	8141	
41	5/31/2012 15:07	4832	6808	-1976	630-BKGDS1B	8141	
42	5/31/2012 15:08	6228	6808	-580	630-BKGDS1B	8141	
43	5/31/2012 15:10	5888	6808	-920	630-BKGDS1B	8141	
44	5/31/2012 15:11	4719	6808	-2089	630-BKGDS1B	8141	
45	5/31/2012 15:12	5024	6808	-1784	630-BKGDS1B	8141	
46	5/31/2012 15:13	5375	6808	-1433	630-BKGDS1B	8141	
47	5/31/2012 15:14	4200	6808	-2608	630-BKGDS1B	8141	

Net Gamma cpm Summary

Min: -2608
Avg: -762
Max: 1454
St Dev: 1130

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02300

Project Name: Radiological Site Survey	PO Number: N/A										LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section	
Project Location: HUNTERS POINT	Project Number: 4044-0002												
Sampler Name: RAY ROBERSON	Airbill Number: N/A										LABORATORY ID:		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592												

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F001-01	3/12/2012	0800	1		S1		☑	☐	☐			
02NPR-S0001-F002-01	3/12/2012	0805	1		S1		☑	☐	☐			
02NPR-S0001-F003-01	3/12/2012	0810	1		S1		☑	☐	☐			
02NPR-S0001-F004-01	3/12/2012	0815	1		S1		☑	☐	☐			
02NPR-S0001-F005-01	3/12/2012	0820	1		S1		☑	☐	☐			
02NPR-S0001-F006-01	3/12/2012	0825	1		S1		☑	☐	☐			
02NPR-S0001-F007-01	3/12/2012	0830	1		S1		☑	☐	☐	DUP		
02NPR-S0001-F008-01	3/12/2012	0835	1		S1		☑	☐	☐			
02NPR-S0001-F009-01	3/12/2012	0840	1		S1		☑	☐	☐			
02NPR-S0001-F010-01	3/12/2012	0845	1		S1		☑	☐	☐			
02NPR-S0001-F011-01	3/12/2012	0850	1		S1		☑	☐	☐			
02NPR-S0001-F012-01	3/12/2012	0855	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 3-12-12	*Received by: (signature)*	LABORATORY INSTRUCTIONS/COMMENTS:	SAMPLING COMMENTS: NORTH PIER HSS SOIL BIASED - 2 SAMPLE AMT < 5 22
Company RSRS	*Time* 1455	*Company*		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION:	
Company	*Time*	*Company*		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	*Time*	*Company*		

ED_004747_00010903-00019

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02301

Project Name: Radiological Site Survey	PO Number: N/A	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	**Project Information Section**
Project Location: HUNTERS POINT	Project Number: 4044-0002	LABORATORY ID:	
Sampler Name: RAY ROBERSON	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F013-01	3/12/2012	0900	1		S1		☑	☐	☐			
02NPR-S0001-F014-01	3/12/2012	0915	1		S1		☑	☐	☐			
02NPR-S0001-F015-01	3/12/2012	0920	1		S1		☑	☐	☐			
02NPR-S0001-F016-01	3/12/2012	0925	1		S1		☑	☐	☐			
02NPR-S0001-F017-01	3/12/2012	0930	1		S1		☑	☐	☐			
02NPR-S0001-F018-01	3/12/2012	0935	1		S1		☑	☐	☐			
02NPR-S0001-F019-01	3/12/2012	0940	1		S1		☑	☐	☐			
02NPR-S0001-F020-01	3/12/2012	0945	1		S1		☑	☐	☐			
02NPR-S0001-F021-01	3/12/2012	0950	1		S1		☑	☐	☐			
02NPR-S0001-F022-01	3/12/2012	0955	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	*Date* 3.12.12	*Received by: (signature)* [signature]	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company RSRS	*Time* 1455	*Company* [signature]		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE/DESCRIPTION	
Company	*Time*	*Company*		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE SAMPLE CONDITION COOLER SEAL	
Company	*Time*	*Company*		

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02384

Project Name: Radiological Site Survey	PO Number: N/A		
Project Location: HUNTERS POINT	Project Number: 4044-0002		
Sampler Name: JOE CUNNINGHAM	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F023-01	4/20/2012	1040	1		S1		☑	☐	☐			
02NPR-S0001-F024-01	4/20/2012	1045	1		S1		☑	☐	☐			
02NPR-S0001-F025-01	4/20/2012	1050	1		S1		☑	☐	☐			
02NPR-S0001-F026-01	4/20/2012	1055	1		S1		☑	☐	☐			
02NPR-S0007-F023-01	4/20/2012	1110	1		S1		☑	☐	☐			
02NPR-S0007-F024-01	4/20/2012	1115	1		S1		☑	☐	☐			
02NPR-S0010-F023-01	4/20/2012	1125	1		S1		☑	☐	☐			
02NPR-S0010-F024-01	4/20/2012	1130	1		S1		☑	☐	☐			
02NPR-S0010-F025-01	4/20/2012	1135	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 4.10.12	*Received by: (signature)*
Company TtEC	*Time* 1418	*Company* CT
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*

LABORATORY INSTRUCTIONS/COMMENTS:

COMPOSITE DESCRIPTION:

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS:
NORTHPOINT PSS
SD-1 CHARACTERIZATION 25-Cu
SD-7 CHARACTERIZATION 15-24
SD-10 CHARACTERIZATION 25-35

ED_004747_00010903-00021

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02397

Project Name: Radiological Site Survey	PO Number: N/A	GAMMASPEC	SR90	ALPHA	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.
Project Location: HUNTERS POINT	Project Number: 4044-0002				LABORATORY ID: [redacted]
Sampler Name: Ray Roberson	Airbill Number: N/A				**Project Information Section**
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592				

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F027-01	5/1/2012	1530	1		S1		☑	☐	☐			[redacted]
02NPR-S0008-F030-01	5/1/2012	1520	1		S1		☑	☐	☐			[redacted]
02NPR-S0008-F031-01	5/1/2012	1525	1		S1		☑	☐	☐			[redacted]
02NPR-S0010-F026-01	5/1/2012	1515	1		S1		☑	☐	☐			[redacted]

Relinquished by: (signature)	Date: 05-01-12	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS:
Company: RSRS	Time: 1610	Company: CT	SAMPLING COMMENTS:
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION:
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT AT LABORATORY: TEMPERATURE: SAMPLE CONDITION: GOOD/BEAT
Company	Time	Company	

ED_004747_00010903-00022

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02447

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: R. Roberson	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F028-01	5/31/2012	0800	1		S1		☑	☐	☐			
02NPR-S0001-F029-01	5/31/2012	0805	1		S1		☑	☐	☐			
02NPR-S0001-F030-01	5/31/2012	0810	1		S1		☑	☐	☐			
02NPR-S0001-F031-01	5/31/2012	0815	1		S1		☑	☐	☐			
02NPR-S0001-F032-01	5/31/2012	0820	1		S1		☑	☐	☐			
02NPR-S0001-F033-01	5/31/2012	0825	1		S1		☑	☐	☐	DUP		
02NPR-S0001-F034-01	5/31/2012	0830	1		S1		☑	☐	☐			
02NPR-S0001-F035-01	5/31/2012	0835	1		S1		☑	☐	☐			
02NPR-S0001-F036-01	5/31/2012	0840	1		S1		☑	☐	☐			
02NPR-S0001-F037-01	5/31/2012	0845	1		S1		☑	☐	☐			
02NPR-S0001-F038-01	5/31/2012	0850	1		S1		☑	☐	☐			
02NPR-S0001-F039-01	5/31/2012	0855	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	Date 5-31-12	Received by: (signature) [signature]
Company RSRS	Time 16:25	Company C&T
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
NORTHPIER FSS
SU-1
SYSTEMATIC 28-47

ED_004747_00010903-00023

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02448

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: R. Roberson	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F040-01	5/31/2012	0920	1		S1		☑	☐	☐			
02NPR-S0001-F041-01	5/31/2012	0925	1		S1		☑	☐	☐			
02NPR-S0001-F042-01	5/31/2012	0930	1		S1		☑	☐	☐			
02NPR-S0001-F043-01	5/31/2012	0935	1		S1		☑	☐	☐			
02NPR-S0001-F044-01	5/31/2012	0940	1		S1		☑	☐	☐			
02NPR-S0001-F045-01	5/31/2012	0945	1		S1		☑	☐	☐			
02NPR-S0001-F046-01	5/31/2012	0950	1		S1		☑	☐	☐			
02NPR-S0001-F047-01	5/31/2012	0955	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	Date 5-31-12	Received by: (signature) [signature]
Company RSRS	Time 16:25	Company C&T
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

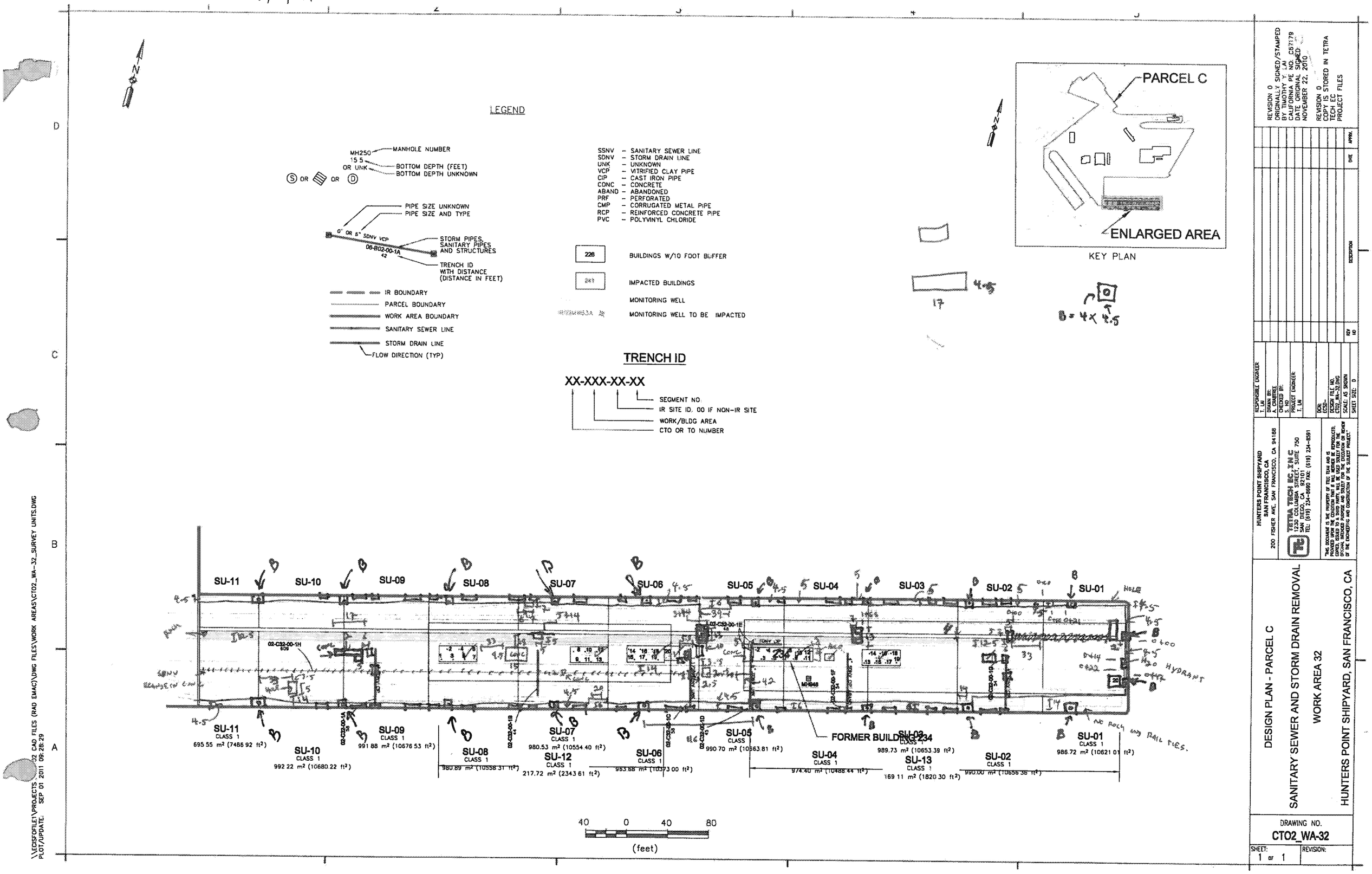
LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS

1, 7, 8, 10



REVISION 0
ORIGINALLY SIGNED/STAMPED BY TIMOTHY Y. LAI
CALIFORNIA PE NO. C57179
DATE ORIGINAL SIGNED NOVEMBER 22, 2010

REVISION 0
COPY IS STORED IN TETRA TECH EC PROJECT FILES

REV NO	DESCRIPTION	DATE	APPRV.

RESPONSIBLE ENGINEER: T. LAI
DRAWN BY: A. CRABTREE
CHECKED BY: S. HO
PROJECT ENGINEER: T. LAI
DCN: ECSD-
DESIGN FILE NO. CTO2_WA-32.DWG
SCALE: AS SHOWN
SHEET SIZE: D

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
200 FISHER AVE, SAN FRANCISCO, CA 94188

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

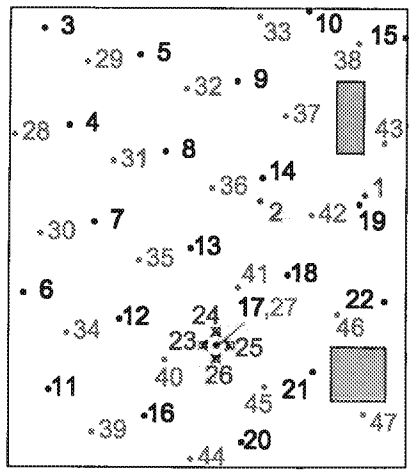
THIS DOCUMENT IS THE PROPERTY OF TETRA TECH AND IS PROVIDED UPON THE CONDITION THAT IT WILL NOT BE REPRODUCED, COPIED, ISSUED TO A THIRD PARTY, WILL BE USED SOLELY FOR THE ORIGINAL INTENDED PURPOSE AND SUBJECT TO THE EXCLUSIVE OWNERSHIP AND CONSTRUCTION OF THE SUBJECT PROJECT.

DESIGN PLAN - PARCEL C
SANITARY SEWER AND STORM DRAIN REMOVAL
WORK AREA 32
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA

DRAWING NO.
CTO2_WA-32

SHEET: 1 of 1
REVISION:

\\ECISFOFILE1\PROJECTS\...02 CAD FILES (RAD EMAC)\DWG FILES\WORK AREAS\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: SEP 01 2011 09:28:29



LEGEND:

- 1 BIASED 1–2
- 3 SYSTEMATIC 1 3–22
- 23 CHARACTERIZATION 23–26
- 27 POST–REMEDIATION 27
- 28 SYSTEMATIC 2 28–47
- CONCRETE
- AREAS PREVIOUSLY REMEDIATED

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

SU-01

CLASS 1

803.22 m^2 (8645.87 ft^2)

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 14:55:17

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 01

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Monday, July 16, 2012 10:25 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 01
Attachments: 02NPR-S0001 028 to 047 Off-Site Gamma.pdf; 02NPR-S0001 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 01.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, June 06, 2012 11:42 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 01. Samples 29, 33, and 33DUP were recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Friday, May 11, 2012 9:23 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 01.

We will proceed with the systematic sampling of this survey unit.

George Chiu | **Health Physicist**
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, April 26, 2012 12:41 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 01.

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Sunday, March 18, 2012 12:18 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 01. Samples 01, 08, 11, and 17 were recounted for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample point 17 (1.733 pCi/g) due to radium-226 activity.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 12, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- Survey activities were performed by the HPNS Team on wooden railroad ties (Survey No. HPS-A-NPR-028); a total of 36 swipe samples were collected and submitted to the on-site laboratory for analysis.
- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 7,456 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 2 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 7,396 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1 and 2.
- The RSOR provided the HPNS Team with survey results for the wooden railroad ties detailed in Survey No. HPS-A-NPR-027. Because no activity above the release criteria was identified, the 36 items were released for transfer to the recycling stockpiles.
- Surveyed and released metal rail track and wooden railroad ties (Survey Nos. HPS-A-NPR-026 and HPS-A-NPR-027) were transferred to the recycling bins and stockpiles near Building 411.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Unit 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated completed in Trench Unit No. 194 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 12, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
  - One truckload of material was received for processing.
  - ES Units 0643 and 0646 were staged in the stockpile area pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 58
  - Swipe samples received for Protean counts: 108
  - Air samples received: 7
  - Samples analyzed by gamma spectroscopy: 48
  - Gamma spectroscopy samples recounted: 43
  - Protean swipe samples counted: 36
  - Protean air samples counted: 6
- A total of 267 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
  - A total of five empty trucks entered HPNS through the portal monitor with no alarms.
  - A total of seven truckloads of material exited HPNS through the portal monitor with no alarms.
- A total of nine incoming materials and equipment surveys were performed by the HPNS Team.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 12, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Buildings 506 and 518 Sites, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team provided the RASO with on-site analytical and survey results for the systematic samples collected from Class 1 Survey Unit 5. Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.

Building 518 Site

- The HPNS Team performed survey activities for the former Building 518 foundation (located in the 500 Series Area Survey Unit 13). A total of 14 investigative gamma static measurements were logged with a maximum measurement of 6,882 cpm. In addition, 14 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Shacks 79 and 80

- The HPNS Team provided the RASO with analytical results for the characterization samples collected from Class 1 Survey Unit 1. Because no activity above the release criteria was identified, remediation and post-remediation sample collection will be performed.

500 Series Area

- The HPNS Team transferred approximately 12 cubic yards of excavated sand/soil material from Survey Unit 13 to RSY4 pending survey activities.
- Survey activities were performed by the HPNS Team on concrete debris generated during sand/soil removal in Survey Unit 13 (Survey Nos. HPS-A-500SA-040 and HPS-A-500SA-041); a total of 72 swipe samples were collected and submitted to the on-site laboratory for analysis.

- The RSOR provided the HPNS Team with survey results for the concrete debris generated during sand/soil removal in Survey Unit 13 and detailed in Survey No. HPS-A-500SA-039. Because no activity above the release criteria was identified, the 36 items were released for transfer to the recycling stockpiles near Building 411.
- The HPNS Team provided the RASO with on-site analytical and survey results for the biased and systematic samples collected from Class 1 Survey Unit 3. Characterization and remediation will be performed due to the presence of ^{226}Ra contamination as follows:
  - Sample Point 2 (07500SA-S0003-F002-01) with ^{226}Ra at 1.774 pCi/g
  - Sample Point 3 (07500SA-S0003-F003-01) with ^{226}Ra at 2.263 pCi/g
  - Sample Point 4 (07500SA-S0003-F004-01) with ^{226}Ra at 1.846 pCi/g
  - Sample Point 6 (07500SA-S0003-F006-01) with ^{226}Ra at 2.015 pCi/g
  - Sample Point 9 (07500SA-S0003-F009-01) with ^{226}Ra at 1.664 pCi/g
  - Sample Point 11 (07500SA-S0003-F011-01) with ^{226}Ra at 1.815 pCi/g
  - Sample Point 18 (07500SA-S0003-F018-01) with ^{226}Ra at 1.806 pCi/g
  - Sample Point 24 (07500SA-S0003-F024-01) with ^{226}Ra at 1.667 pCi/g
  - Sample Point 25 (07500SA-S0003-F025-01) with ^{226}Ra at 2.01 pCi/g
  - Sample Point 27 (07500SA-S0003-F027-01) with ^{226}Ra at 1.876 pCi/g
  - Sample Point 37 (07500SA-S0003-F037-01) with ^{226}Ra at 1.849 pCi/g
- The HPNS Team provided the RASO with analytical results for the characterization samples collected from Class 1 Survey Unit 15. Because no activity above the release criteria was identified, remediation and post-remediation sample collection will be performed.
- A truckload of brush and vegetation were manually scanned followed by screening through the HPNS portal monitor with no alarms; the debris was staged near Building 411 pending off-site disposal or recycling.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team provided the RASO with analytical results for the sediment sample collected from a pipe excavated from trench segment 07-E36-00-4M (07-PEPI-0027-01); no activity above the release criteria was identified.
- The HPNS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPRs for Trench Unit Nos. 225 and 228.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 7 – A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 8 – A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 10 – A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 02-C32-00-1D 45 linear feet completed
  - 02-C32-00-1E 6 linear feet completed
  - 02-C32-00-1F 44 linear feet completed
  - 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
- 02-C32-00-8D 62 linear feet completed
- 02-C32-00-8H 50 linear feet completed

- A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.
- Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.
- The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.
- A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.
- Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of 13 truckloads of material were received for processing.
  - Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.
  - ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.
  - Began transfer of ES Unit 0675 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 36
  - Swipe samples received for Protean counts: 128
  - Air samples received: 10
  - Samples analyzed by gamma spectroscopy: 25
  - Gamma spectroscopy samples recounted: 5
  - Protean swipe samples counted: 40
  - Protean air samples counted: 10
- A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.
- Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 8 – A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 10 – A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 11 – A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.
- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.
- Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of six truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of 11 truckloads of material were received for processing.
  - Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.
  - A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with the following:
  - On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.
  - On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 30
  - Swipe samples received for Protean counts: 152
  - Air samples received: 13
  - Samples analyzed by gamma spectroscopy: 87
  - Gamma spectroscopy samples recounted: 8
  - Protean swipe samples counted: 23
  - Protean air samples counted: 13
- A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 119 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
  - Asphalt Grid A7 – A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm^2.
  - Survey Unit 22 – A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.
- The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.
- The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class l Survey Unit 14. Characterization and remediation will be continued due to the presence of ^{137}Cs contamination as follows:
  - Sample Point 7 (07500SA-S0014-F007-01) with ^{137}Cs at 0.1183 pCi/g
  - Sample Point 17 (07500SA-S0014-F017-01) with ^{137}Cs at 0.2425 pCi/g
  - Sample Point 37 (07500SA-S0014-F037-01) with ^{137}Cs at 0.3768 pCi/g

- The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 07-E36-00-7F 133 linear feet completed
  - 07-E36-00-7G 10 linear feet completed
  - 07-E36-00-7H 12 linear feet completed
  - 07-E36-00-7I 6 linear feet completed
  - 07-E36-00-8Y 25 linear feet completed
- A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.
- Excavated Manhole MH1244 was placed on plastic pending further activities.
- The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ^{137}Cs contamination as follows:
  - Manhole MH1302 (07-PEMH1302-013-01) with ^{137}Cs at 0.2161 pCi/g
  - Manhole MH1303 (07-PEMH1303-014-01) with ^{137}Cs at 0.1319 pCi/g
- The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 17 (0.2726 pCi/g).
- The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 8 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 10 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 11 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.
- The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.
- The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.
- Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of 13 truckloads of material were received for processing.
  - Began transfer of ES Unit 0700 to the stockpile area.
- The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- After evaluating the data, the RASO concurred with the following:
  - Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.
  - Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

- One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 140
  - Swipe samples received for Protean counts: 151
  - Air samples received: 13

- Samples analyzed by gamma spectroscopy: 76
- Gamma spectroscopy samples recounted: 13
- Protean swipe samples counted: 20
- Protean air samples counted: 16

- A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 71 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class l Survey Unit 4. Characterization and remediation will be performed due to the presence of ^{90}Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.
- The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with total strontium analytical results for the ^{137}Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 07-E36-00-4D 10 linear feet completed
  - 07-E36-00-4E 51 linear feet completed
  - 07-E36-00-4F 5 linear feet completed
  - 07-E36-00-4G 27 linear feet completed
  - 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
- 07-E36-38-1W 38 linear feet completed
- 07-E36-38-2B 17 linear feet completed
- 07-E36-38-4A 9 linear feet completed
- 07-E36-38-5A 10 linear feet completed

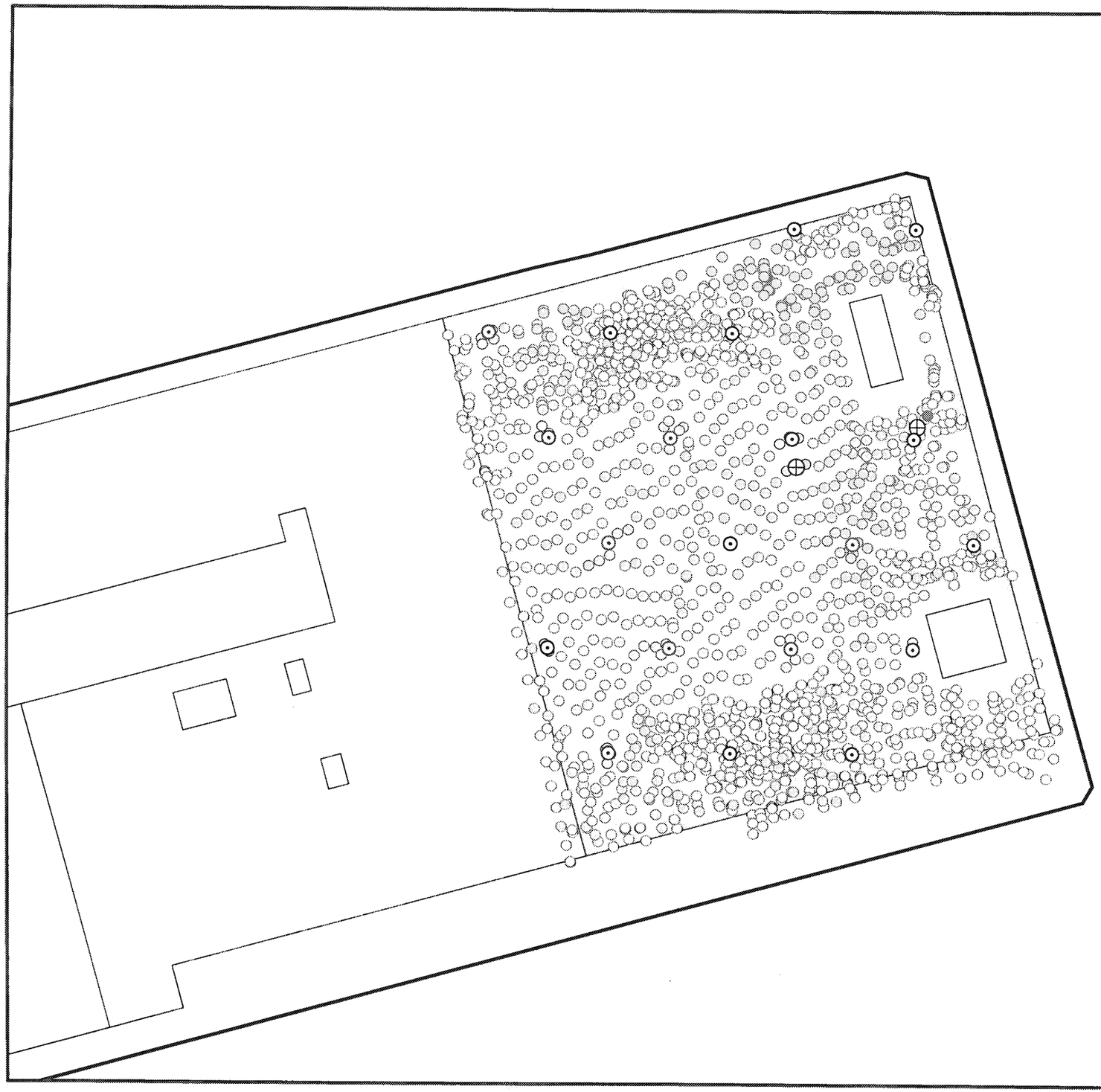
- A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.
- Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.
- The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.
- A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.
- Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.
- The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

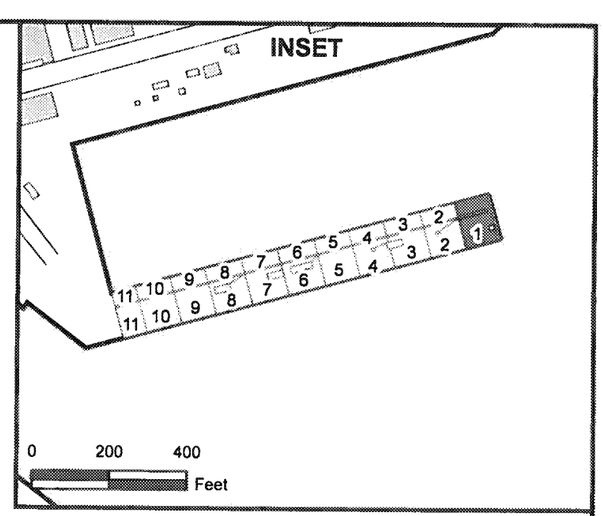
Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician	On-Site Laboratory (pCi/g)					Off-Site Laboratory (pCi/g)				
							K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
NPR	1	1	Biased	02NPR-S0001-F001-01	12-Mar-12	Ray Roberson	19.96	0.7947	0.002155	0.7368	0.9664	0.978	0.0445	0.00297	0.0445	0.148
NPR	1	2	Biased	02NPR-S0001-F002-01	12-Mar-12	Ray Roberson	24.59	0.7248	0.001884	0.6621	0.7068	0.648	0.17	0.00328	0.17	0.119
NPR	1	3	Systematic	02NPR-S0001-F003-01	12-Mar-12	Ray Roberson	16.11	0.4684	0.01759	0.5191	0.5651	0.294	0.11	-0.0125	0.11	0.146
NPR	1	4	Systematic	02NPR-S0001-F004-01	12-Mar-12	Ray Roberson	17.03	0.6062	-0.003201	0.2581	0.5437	0.523	0.0165	0	0.0165	0.187
NPR	1	5	Systematic	02NPR-S0001-F005-01	12-Mar-12	Ray Roberson	24.05	0.9352	0.01714	0.5566	0.6519	1.08	0.202	0.0000361	0.202	0.264
NPR	1	6	Systematic	02NPR-S0001-F006-01	12-Mar-12	Ray Roberson	12.95	0.4327	0	0.6043	0.5663	0.834	0.02	0	0.02	0.0788
NPR	1	7	Systematic	02NPR-S0001-F007-01	12-Mar-12	Ray Roberson	17.52	0.8395	0.02346	0.6461	0.6105	0.619	0.163	0	0.163	0.156
NPR	1	8	Systematic	02NPR-S0001-F008-01	12-Mar-12	Ray Roberson	19.97	1.076	0.005379	0.9277	1.029	0.301	0.084	0.0218	0.084	0.234
NPR	1	9	Systematic	02NPR-S0001-F009-01	12-Mar-12	Ray Roberson	20.39	0.8747	0	0.5708	0.6631	0.553	0.214	-0.0167	0.214	0.293
NPR	1	10	Systematic	02NPR-S0001-F010-01	12-Mar-12	Ray Roberson	21.94	0.6621	0.01632	0.6301	0.6339	0.892	0.478	0.00229	0.478	0.513
NPR	1	11	Systematic	02NPR-S0001-F011-01	12-Mar-12	Ray Roberson	13.45	1.015	0.002805	0.6732	0.7337	0.989	0.123	-0.00477	0.123	0.227
NPR	1	12	Systematic	02NPR-S0001-F012-01	12-Mar-12	Ray Roberson	12.68	0.8268	0.0005424	0.7971	0.7826	0.372	0.296	-0.000656	0.296	0.128
NPR	1	13	Systematic	02NPR-S0001-F013-01	12-Mar-12	Ray Roberson	15.3	1.037	0.01031	0.7513	0.7032	0.534	0.274	-0.0224	0.274	0.28
NPR	1	14	Systematic	02NPR-S0001-F014-01	12-Mar-12	Ray Roberson	24.65	1.195	-0.006789	0.5994	0.6146	0.219	0.11	0.000384	0.11	0.0947
NPR	1	15	Systematic	02NPR-S0001-F015-01	12-Mar-12	Ray Roberson	22.08	1.261	0.01603	0.596	0.7978	0.687	0.131	-0.0109	0.131	0.318
NPR	1	16	Systematic	02NPR-S0001-F016-01	12-Mar-12	Ray Roberson	18.09	0.5341	0.007238	0.6411	0.6978	0.702	0.218	0	0.218	0.34
NPR	1	17	Systematic	02NPR-S0001-F017-01	12-Mar-12	Ray Roberson	21.58		-0.002161	1.035	1.284	1.54	0.207	0	0.207	0.164
NPR	1	18	Systematic	02NPR-S0001-F018-01	12-Mar-12	Ray Roberson	13.13	0.9494	0	0.7172	0.7386	1.53	0.287	0.011	0.287	0.266
NPR	1	19	Systematic	02NPR-S0001-F019-01	12-Mar-12	Ray Roberson	14.23	0.9426	0.0001202	0.7795	0.7926	1.2	0.475	0	0.475	0.223
NPR	1	20	Systematic	02NPR-S0001-F020-01	12-Mar-12	Ray Roberson	8.662	0.5098	0.008013	0.3953	0.3855	1.53	0.248	0.00262	0.248	0.32
NPR	1	21	Systematic	02NPR-S0001-F021-01	12-Mar-12	Ray Roberson	14.28	0.1567	0.00801	0.4635	0.6133					
NPR	1	22	Systematic	02NPR-S0001-F022-01	12-Mar-12	Ray Roberson	13.72	1.111	0.03043	0.6669	0.6524					
NPR	1	23	Characterization	02NPR-S0001-F023-01	20-Apr-12	Joe Cunningham	11.34	0.5413	0.01377	0.3548	0.5122					
NPR	1	24	Characterization	02NPR-S0001-F024-01	20-Apr-12	Joe Cunningham	14.11	0.6765	-0.001807	0.6377	0.7881					
NPR	1	25	Characterization	02NPR-S0001-F025-01	20-Apr-12	Joe Cunningham	14.4	1.067	-0.0138	0.6211	0.7014					
NPR	1	26	Characterization	02NPR-S0001-F026-01	20-Apr-12	Joe Cunningham	12.12	0.9123	-0.005844	0.4609	0.6027					
NPR	1	27	Post-Remediation	02NPR-S0001-F027-01	01-May-12	Ray Roberson	10.01	0.5203	0	0.4381	0.4978					
NPR	1	28	Systematic	02NPR-S0001-F028-01	31-May-12	Ray Roberson	0.5955	0.2128	0	0	0.08584					
NPR	1	29	Systematic	02NPR-S0001-F029-01	31-May-12	Ray Roberson	0.7668	0.2668	0	0	0.05145					
NPR	1	30	Systematic	02NPR-S0001-F030-01	31-May-12	Ray Roberson	0.9455	-0.008865	0	0.07812	-0.0127					
NPR	1	31	Systematic	02NPR-S0001-F031-01	31-May-12	Ray Roberson	0.4548	-0.02182	-0.0008709	0.02045	0.08867					
NPR	1	32	Systematic	02NPR-S0001-F032-01	31-May-12	Ray Roberson	0.6058	0.1511	-0.01155	0.04581	0.05904					
NPR	1	33	Systematic	02NPR-S0001-F033-01	31-May-12	Ray Roberson	0.8327	0.3042	0.0007696	0.07488	0.05932					
NPR	1	34	Systematic	02NPR-S0001-F034-01	31-May-12	Ray Roberson	1.434	0.5699	-0.0006029	0.0416	0.06921					
NPR	1	35	Systematic	02NPR-S0001-F035-01	31-May-12	Ray Roberson	0.6848	0.09719	0	-0.03271	0.02707					
NPR	1	36	Systematic	02NPR-S0001-F036-01	31-May-12	Ray Roberson	1.228	0.1553	0.01029	0.06768	0.07872					
NPR	1	37	Systematic	02NPR-S0001-F037-01	31-May-12	Ray Roberson	0.3449	-0.05534	0.0000226	0	0.09024					
NPR	1	38	Systematic	02NPR-S0001-F038-01	31-May-12	Ray Roberson	1.02	0.1019	-0.008089	0.04228	0.0759					
NPR	1	39	Systematic	02NPR-S0001-F039-01	31-May-12	Ray Roberson	1.16	0.1347	-0.003694	0.06066	0.05237					
NPR	1	40	Systematic	02NPR-S0001-F040-01	31-May-12	Ray Roberson	0.8298	0	0.001043	0.03774	0.06048					
NPR	1	41	Systematic	02NPR-S0001-F041-01	31-May-12	Ray Roberson	0.6604	0.1806	0	0.06056	0.07676					
NPR	1	42	Systematic	02NPR-S0001-F042-01	31-May-12	Ray Roberson	0.5083	-0.1306	-0.007731	0.07382	0.07326					
NPR	1	43	Systematic	02NPR-S0001-F043-01	31-May-12	Ray Roberson	0.5767	0.1846	-0.003175	0.09672	0.1287					
NPR	1	44	Systematic	02NPR-S0001-F044-01	31-May-12	Ray Roberson	1.296	0.1245	0.0004911	0.07711	0.1323					
NPR	1	45	Systematic	02NPR-S0001-F045-01	31-May-12	Ray Roberson	1.331	-0.02846	-0.0005054	0.004655	0.1333					
NPR	1	46	Systematic	02NPR-S0001-F046-01	31-May-12	Ray Roberson	0.9901	-0.03055	0.002121	0.07236	0.1103					
NPR	1	47	Systematic	02NPR-S0001-F047-01	31-May-12	Ray Roberson	0.8947	0.3029	0	0.121	0.1207					

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)





LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER

10 0 10 20 Feet

Scale: 1" = 20'

N

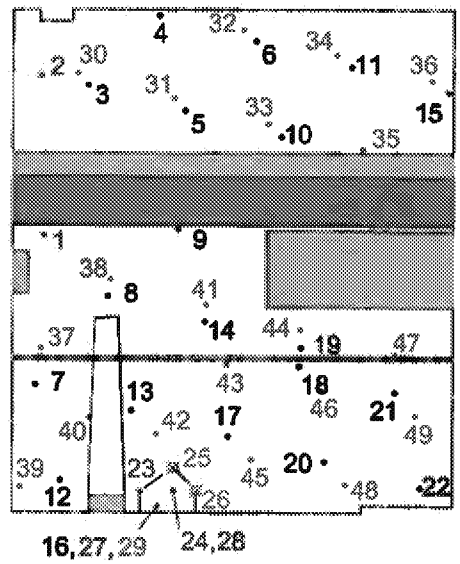
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

SU-01
North Pier
02/22/2012

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NorthPier-SU01.mxd

TETRA TECH EC, INC.



SU-07

CLASS 1

771.47 m^2 (8304.08 ft^2)

LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 1 3-22
- 23 CHARACTERIZATION 23-24
- 25 CHARACTERIZATION 2 25-26
- 27 POST-REMEDIATION 27-28
- 29 POST-REMEDIATION 2 29
- 30 SYSTEMATIC 2 30-49

PREVIOUSLY REMEDIATED AREA

ROCK

CONCRETE

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: JUN 04 2012 10:36:42

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 07

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR **Survey Unit:** 7 **Class:** 1 **Area:** 771.47 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/19/2012 10:06	5024	6386	-1362	600-BKGDS1B	6765	
2	3/19/2012 10:08	5287	6386	-1099	600-BKGDS1B	6765	
3	3/19/2012 10:09	5256	6386	-1130	600-BKGDS1B	6765	
4	3/19/2012 10:10	5382	6386	-1004	600-BKGDS1B	6765	
5	3/19/2012 10:11	5465	6386	-921	600-BKGDS1B	6765	
6	3/19/2012 10:12	4579	6386	-1807	600-BKGDS1B	6765	
7	3/19/2012 10:14	3561	6386	-2825	600-BKGDS1B	6765	
8	3/19/2012 10:15	5025	6386	-1361	600-BKGDS1B	6765	
9	3/19/2012 10:16	3488	6386	-2898	600-BKGDS1B	6765	
10	3/19/2012 10:18	4380	6386	-2006	600-BKGDS1B	6765	
11	3/19/2012 10:19	5129	6386	-1257	600-BKGDS1B	6765	
12	3/19/2012 10:20	5147	6386	-1239	600-BKGDS1B	6765	
13	3/19/2012 10:21	3374	6386	-3012	600-BKGDS1B	6765	
14	3/19/2012 10:23	5262	6386	-1124	600-BKGDS1B	6765	
15	3/19/2012 10:24	5221	6386	-1165	600-BKGDS1B	6765	
16	3/19/2012 10:27	5423	6386	-963	600-BKGDS1B	6765	
17	3/19/2012 10:28	3520	6386	-2866	600-BKGDS1B	6765	
18	3/19/2012 10:29	3776	6386	-2610	600-BKGDS1B	6765	
19	3/19/2012 10:30	4087	6386	-2299	600-BKGDS1B	6765	
20	3/19/2012 11:37	3788	6386	-2598	600-BKGDS1B	6765	
21	3/19/2012 11:38	3931	6386	-2455	600-BKGDS1B	6765	
22	3/19/2012 11:39	5080	6386	-1306	600-BKGDS1B	6765	
23	4/20/2012 13:54	6085	6386	-301	600-BKGDS1B	6765	
24	4/20/2012 13:55	6087	6386	-299	600-BKGDS1B	6765	
25	4/27/2012 10:03	6022	6386	-364	600-BKGDS1B	6765	
26	4/27/2012 10:05	5432	6386	-954	600-BKGDS1B	6765	
27	5/7/2012 10:51	7807	6386	1421	600-BKGDS1B	6765	
28	5/7/2012 11:14	7800	6386	1414	600-BKGDS1B	6765	
29	5/24/2012 15:40	4072	6066	-1994	630-BKGDS1A	7326	
30	6/4/2012 13:28	3781	6808	-3027	630-BKGDS1B	8141	
31	6/4/2012 13:29	4457	6808	-2351	630-BKGDS1B	8141	
32	6/4/2012 13:31	4667	6808	-2141	630-BKGDS1B	8141	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	6/4/2012 13:32	4752	6808	-2056	630-BKGDS1B	8141	
34	6/4/2012 13:33	4577	6808	-2231	630-BKGDS1B	8141	
35	6/4/2012 13:34	5732	6808	-1076	630-BKGDS1B	8141	
36	6/4/2012 13:35	5203	6808	-1605	630-BKGDS1B	8141	
37	6/4/2012 13:37	3775	6808	-3033	630-BKGDS1B	8141	
38	6/4/2012 13:38	3916	6808	-2892	630-BKGDS1B	8141	
39	6/4/2012 13:46	4470	6808	-2338	630-BKGDS1B	8141	
40	6/4/2012 13:48	3403	6808	-3405	630-BKGDS1B	8141	
41	6/4/2012 13:49	4934	6808	-1874	630-BKGDS1B	8141	
42	6/4/2012 13:50	3099	6808	-3709	630-BKGDS1B	8141	
43	6/4/2012 13:51	2893	6808	-3915	630-BKGDS1B	8141	
44	6/4/2012 13:53	4517	6808	-2291	630-BKGDS1B	8141	
45	6/4/2012 13:56	3350	6808	-3458	630-BKGDS1B	8141	
46	6/4/2012 13:57	3067	6808	-3741	630-BKGDS1B	8141	
47	6/4/2012 13:58	3471	6808	-3337	630-BKGDS1B	8141	
48	6/4/2012 14:00	5006	6808	-1802	630-BKGDS1B	8141	
49	6/4/2012 14:01	2877	6808	-3931	630-BKGDS1B	8141	

Net Gamma cpm Summary
Min: -3931
Avg: -1930
Max: 1421
St Dev: 1202

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR **Survey Unit:** 7 **Class:** 1 **Area:** 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360 Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm):	6386
Standard Deviation:	127
Gamma 3σ Investigation Level (cpm):	6765

TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR **Survey Unit:** 7 **Class:** 1 **Area:** 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588 Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/07/2012 13:53	5960
2	05/07/2012 13:54	6454
3	05/07/2012 13:55	6379
4	05/07/2012 13:56	6341
5	05/07/2012 13:58	6462
6	05/07/2012 13:59	5562
7	05/07/2012 14:00	6147
8	05/07/2012 14:01	6082
9	05/07/2012 14:02	6563
10	05/07/2012 14:04	6738
11	05/07/2012 14:06	5328
12	05/07/2012 14:07	5349
13	05/07/2012 14:09	5317
14	05/07/2012 14:10	6023
15	05/07/2012 14:11	6016
16	05/07/2012 14:12	6229
17	05/07/2012 14:13	6439
18	05/07/2012 14:15	6218
19	05/07/2012 14:18	5862
20	05/07/2012 14:19	5857

Gamma Mean Background (cpm):	6066
Standard Deviation:	420
Gamma 3σ Investigation Level (cpm):	7326

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588 Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm):	6808
Standard Deviation:	444
Gamma 3σ Investigation Level (cpm):	8141

TETRA TECH E.C. INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Site Area: NPR **Survey Unit:** 7 **Class:** 1 **Area:** 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870		
Instrument Calibration Due Date:	10/10/2012	Reference Area Background Location:	Parcel D-1 Reference
		Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	3/19/2012	6	
2	3/19/2012	6	
3	3/19/2012	5	
4	3/19/2012	5	
5	3/19/2012	6	
6	3/19/2012	5	
7	3/19/2012	5	
8	3/19/2012	5	
9	3/19/2012	6	
10	3/19/2012	5	
11	3/19/2012	5	
12	3/19/2012	5	
13	3/19/2012	4	
14	3/19/2012	5	
15	3/19/2012	5	
16	3/19/2012	5	
17	3/19/2012	4	
18	3/19/2012	5	
19	3/19/2012	5	
20	3/19/2012	5	
21	3/19/2012	4	
22	3/19/2012	4	
23	4/20/2012	5	
24	4/20/2012	6	
25	4/27/2012	6	
26	4/27/2012	6	
29	5/24/2012	5	

TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Rdg #	Date	Exposure Rate (µR/hr)	Comments
30	6/4/2012	6	
31	6/4/2012	6	
32	6/4/2012	6	
33	6/4/2012	6	
34	6/4/2012	5	
35	6/4/2012	5	
36	6/4/2012	6	
37	6/4/2012	5	
38	6/4/2012	5	
39	6/4/2012	5	
40	6/4/2012	5	
41	6/4/2012	4	
42	6/4/2012	4	
43	6/4/2012	5	
44	6/4/2012	5	
45	6/4/2012	4	
46	6/4/2012	4	
47	6/4/2012	5	
48	6/4/2012	5	
49	6/4/2012	4	

Exposure Rate Summary (µR/hr)

Min: **4.00**
Avg: **5.06**
Max: **6.00**
St Dev: **0.67**

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02314

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: RAY ROBERSON	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.
LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F001-01	3/19/2012	0950	1		S1		☑	☐	☐			
02NPR-S0007-F002-01	3/19/2012	0955	1		S1		☑	☐	☐			
02NPR-S0007-F003-01	3/19/2012	0958	1		S1		☑	☐	☐			
02NPR-S0007-F004-01	3/19/2012	1000	1		S1		☑	☐	☐			
02NPR-S0007-F005-01	3/19/2012	1005	1		S1		☑	☐	☐			
02NPR-S0007-F006-01	3/19/2012	1010	1		S1		☑	☐	☐			
02NPR-S0007-F007-01	3/19/2012	1015	1		S1		☑	☐	☐			
02NPR-S0007-F008-01	3/19/2012	1020	1		S1		☑	☐	☐			
02NPR-S0007-F009-01	3/19/2012	1025	1		S1		☑	☐	☐			
02NPR-S0007-F010-01	3/19/2012	1030	1		S1		☑	☐	☐			
02NPR-S0007-F011-01	3/19/2012	1035	1		S1		☑	☐	☐			
02NPR-S0007-F012-01	3/19/2012	1040	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 3.19.12	*Received by: (signature)*
Company RSRS	*Time* 15:45	*Company* CET
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*

LABORATORY INSTRUCTIONS/COMMENTS:

COMPOSITE DESCRIPTION:

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS:
Worth Ridge
SC-4
Biased 1-2
Systematic 3-22

ED_004747_00010903-00058

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02315

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: KAY ROBERSON	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F013-01	3/19/2012	1045	1		S1		☑	☐	☐			
02NPR-S0007-F014-01	3/19/2012	1050	1		S1		☑	☐	☐			
02NPR-S0007-F015-01	3/19/2012	1055	1		S1		☑	☐	☐			
02NPR-S0007-F016-01	3/19/2012	1100	1		S1		☑	☐	☐			
02NPR-S0007-F017-01	3/19/2012	1105	1		S1		☑	☐	☐			
02NPR-S0007-F018-01	3/19/2012	1110	1		S1		☑	☐	☐			
02NPR-S0007-F019-01	3/19/2012	1115	1		S1		☑	☐	☐	DUP		
02NPR-S0007-F020-01	3/19/2012	1120	1		S1		☑	☐	☐			
02NPR-S0007-F021-01	3/19/2012	1125	1		S1		☑	☐	☐			
02NPR-S0007-F022-01	3/19/2012	1130	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 3-19-12	*Received by: (signature)*
Company NSRS	*Time* 15:45	*Company* CET
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*

LABORATORY INSTRUCTIONS/COMMENTS

SAMPLING COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

ED_004747_00010903-00059

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02384

Project Name: Radiological Site Survey	PO Number: N/A	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	**Project Information Section**
Project Location: HUNTERS POINT	Project Number: 4044-0002	LABORATORY ID:	
Sampler Name: JOE CUNNINGHAM	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F023-01	4/20/2012	1040	1		S1		☑	☐	☐			
02NPR-S0001-F024-01	4/20/2012	1045	1		S1		☑	☐	☐			
02NPR-S0001-F025-01	4/20/2012	1050	1		S1		☑	☐	☐			
02NPR-S0001-F026-01	4/20/2012	1055	1		S1		☑	☐	☐			
02NPR-S0007-F023-01	4/20/2012	1110	1		S1		☑	☐	☐			
02NPR-S0007-F024-01	4/20/2012	1115	1		S1		☑	☐	☐			
02NPR-S0010-F023-01	4/20/2012	1125	1		S1		☑	☐	☐			
02NPR-S0010-F024-01	4/20/2012	1130	1		S1		☑	☐	☐			
02NPR-S0010-F025-01	4/20/2012	1135	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 9-10-12	*Received by: (signature)*	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS: NORTH PIER FSS
Company	*Time* 1418	*Company* CT		SU-1 CHARACTERIZATION 23-26
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION	SU-7 CHARACTERIZATION 23-24
Company	*Time*	*Company*		SU-10 CHARACTERIZATION 23-25
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	*Time*	*Company*	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02393

Project Name: Radiological Site Survey		PO Number: N/A					G A M M A S P E C	S R 9 0	A L P H A		LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section	
Project Location: HUNTERS POINT		Project Number: 4044-0002									LABORATORY ID:		
Sampler Name: Joe Cunningham		Airbill Number: N/A											
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID	
02NPR-S0007-F025-01	4/27/2012	1040	1		S1		☑	☐	☐				
02NPR-S0007-F026-01	4/27/2012	1045	1		S1		☑	☐	☐				

Relinquished by: (signature)	*Date* 04.27.12	*Received by: (signature)*	LABORATORY INSTRUCTIONS/COMMENTS:	SAMPLING COMMENTS:
Company RSAS	*Time* 1107	*Company* CET		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION:	
Company	*Time*	*Company*		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	*Time*	*Company*	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	

ED_004747_00010903-00061

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02410

Project Name: Radiological Site Survey	PO Number: N/A	GAMMASPEC	SR90	ALPHA
Project Location: HUNTERS POINT	Project Number: 4044-0002			
Sampler Name: Justin Hubbard	Airbill Number: N/A			
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592			

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F027-01	5/7/2012	1020	1		S1		☑	☐	☐			
02NPR-S0007-F028-01	5/7/2012	1025	1		S1		☑	☐	☐			

Relinquished by: (signature) Justin Hubbard	Date 5-7-12	Received by: (signature) [signature]
Company TTECI	Time 1150	Company [illegible]
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE SAMPLE CONDITION COOLER SEAL

SAMPLING COMMENTS
North Pier, FSS
SU-7
Post-Remediation
[illegible]

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02441

Project Name: Radiological Site Survey		PO Number: N/A					GAMMASPEC	SR90	ALPHA		LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section	
Project Location: HUNTERS POINT		Project Number: 4044-0002									LABORATORY ID:		
Sampler Name: Joe Cunningham		Airbill Number: N/A											
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID	
02NPR-S0007-F029-01	5/24/2012	1300	1		S1		☑	☐	☐				

Relinquished by: (signature)	Date: 05-24-12	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company: RSES	Time: 14:07	Company: C.T.		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	

ED_004747_00010903-00063

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02456

Project Name: Radiological Site Survey	PO Number: N/A	GAMMASPEC	SR90	ALPHA	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.
Project Location: HUNTERS POINT	Project Number: 4044-0002				LABORATORY ID:
Sampler Name: Justin Hubbard	Airbill Number: N/A				**Project Information Section**
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592				

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F030-01	6/4/2012	1300	1		S1		☑	☐	☐			
02NPR-S0007-F031-01	6/4/2012	1305	1		S1		☑	☐	☐			
02NPR-S0007-F032-01	6/4/2012	1310	1		S1		☑	☐	☐			
02NPR-S0007-F033-01	6/4/2012	1315	1		S1		☑	☐	☐			
02NPR-S0007-F034-01	6/4/2012	1320	1		S1		☑	☐	☐			
02NPR-S0007-F035-01	6/4/2012	1325	1		S1		☑	☐	☐			
02NPR-S0007-F036-01	6/4/2012	1330	1		S1		☑	☐	☐			
02NPR-S0007-F037-01	6/4/2012	1335	1		S1		☑	☐	☐			
02NPR-S0007-F038-01	6/4/2012	1340	1		S1		☑	☐	☐			
02NPR-S0007-F039-01	6/4/2012	1345	1		S1		☑	☐	☐			
02NPR-S0007-F040-01	6/4/2012	1350	1		S1		☑	☐	☐	Dup		
02NPR-S0007-F041-01	6/4/2012	1355	1		S1		☑	☐	☐			

Relinquished by: (signature) Justin Hubbard	*Date* 6-4-12	*Received by: (signature)*	LABORATORY INSTRUCTIONS/COMMENTS
Company TTEC	*Time* 14:00	*Company* C&T	
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE/DESCRIPTION
Company	*Time*	*Company*	
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	*Time*	*Company*	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
NPR-S0007
Systematic

ED_004747_00010903-00064

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02457

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: Justin Hubbard	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

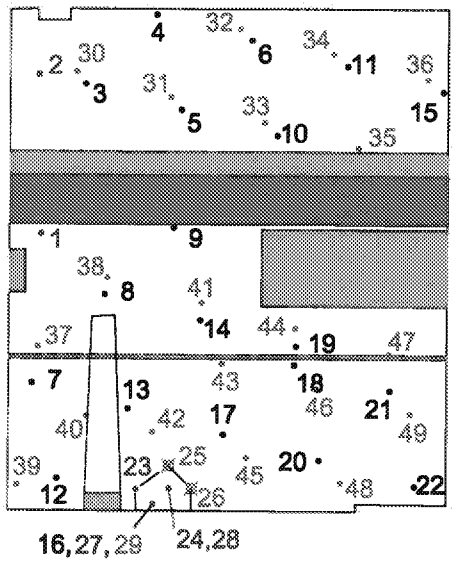
LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC	SR90	ALPHA	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F042-01	6/4/2012	1400	1		S1		☑	☐	☐			
02NPR-S0007-F043-01	6/4/2012	1405	1		S1		☑	☐	☐			
02NPR-S0007-F044-01	6/4/2012	1410	1		S1		☑	☐	☐			
02NPR-S0007-F045-01	6/4/2012	1415	1		S1		☑	☐	☐			
02NPR-S0007-F046-01	6/4/2012	1420	1		S1		☑	☐	☐			
02NPR-S0007-F047-01	6/4/2012	1425	1		S1		☑	☐	☐			
02NPR-S0007-F048-01	6/4/2012	1430	1		S1		☑	☐	☐			
02NPR-S0007-F049-01	6/4/2012	1435	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 6-4-12	*Received by: (signature)*	LABORATORY INSTRUCTIONS/COMMENTS
Company TTECI	*Time* 1400	*Company* C.C.T	SAMPLING COMMENTS: NPR-S0007 Systematic
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION
Company	*Time*	*Company*	
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	*Time*	*Company*	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

ED_004747_00010903-00065



SU-07

CLASS 1

771.47 m^2 (8304.08 ft^2)

LEGEND:

- 1 BIASED 1–2
- 3 SYSTEMATIC 1 3–22
- 23 CHARACTERIZATION 23–24
- 25 CHARACTERIZATION 2 25–26
- 27 POST–REMEDIATION 27–28
- 29 POST–REMEDIATION 2 29
- 30 SYSTEMATIC 2 30–49

PREVIOUSLY REMEDIATED AREA

ROCK

CONCRETE

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: JUN 04 2012 10:36:42

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 07

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Wednesday, July 11, 2012 4:22 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07
Attachments: 02NPR-S0007 030 to 049 Off-Site Gamma.pdf; 02NPR-S0007 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 07.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Sunday, June 10, 2012 4:54 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 07. Sample 35 was recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Monday, June 04, 2012 10:13 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 07.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Tuesday, May 29, 2012 8:52 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for sample 24, which identified cesium-137 activity above the release criterion, from North Pier Survey Unit 07.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, May 10, 2012 3:55 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 07.

We will proceed with additional remediation followed by post-remediation sampling.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Tuesday, May 01, 2012 1:50 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 07

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, April 26, 2012 12:42 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 07. Samples 23 and 24 were recounted for a longer duration at the direction of the laboratory manager.

We will proceed with characterization/remediation around sample point 24 (0.1590 pCi/g) due to cesium-137 activity.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, April 25, 2012 10:05 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for the sample with cesium-137 activity above the release criterion from North Pier Survey Unit 07.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Monday, March 26, 2012 9:53 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 07. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample point 16 (0.2500 pCi/g) due to cesium-137 activity.

George Chiu | Health Physicist
Office. 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 19, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, and #33. Details of the work activities performed are provided in the sections below.

North Pier

- Survey activities were performed by the HPNS Team on wooden railroad ties (Survey Nos. HPS-A-NPR-029 and HPS-A-NPR-030); a total of 72 swipe samples were collected and submitted to the on-site laboratory for analysis.
- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 6 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,392 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 7 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 5,465 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 6 and 7.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 1.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were completed in Trench Unit Nos. 192 and 194 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 19, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
  - One truckload of material was received for processing.
  - Remediated approximately 2.5 cubic yards of soil from ES Unit 0618 and placed the material in LLRW bins pending off-site disposal by the DON radiological waste contractor.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 55
  - Swipe samples received for Protean counts: 175
  - Air samples received: 6
  - Samples analyzed by gamma spectroscopy: 82
  - Gamma spectroscopy samples recounted: 3
  - Protean swipe samples counted: 8
  - Protean air samples counted: 6
- A total of 291 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
  - A total of two empty trucks entered HPNS through the portal monitor with no alarms.
  - A total of nine truckloads of material exited HPNS through the portal monitor with no alarms.
- Radiological support was provided to Shaw Group by the HPNS Team during groundwater monitoring activities in Buildings 211/253.
- Radiological support was provided during the Parcel C multi-contractor bid walkthrough.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 19, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Buildings 506 and 507 Sites, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- Approximately 28 cubic yards of excavated soil generated during the former underground radiological waste storage tank exploratory excavation was placed in LLRW bins AWIU000126, AWIU000175, and ESUU10078 for off-site disposal.

Building 507 Site

- The HPNS Team performed soil grading and debris removal in preparation for upcoming towed array surveys.

Shacks 79 and 80

- Approximately 7 cubic yards of soil was remediated from Class 1 Survey Unit 1 by the HPNS Team and placed in LLRW bin AWIU000126 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of five post-remediation gamma static measurements were logged with a maximum measurement of 6,725 cpm. In addition, five soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team transferred approximately 12 cubic yards of excavated sand/soil material from Survey Unit 13 to RSY4 pending survey activities.
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 7; no activity above the release criteria was identified.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 16 and for systematic sample collection in Class 1 Survey Units 20 and 21.

- Surveyed and released concrete debris generated during sand/soil removal in Survey Unit 13 (Survey Nos. HPS-A-500SA-040 and HPS-A-500SA-041) was transferred to the recycling bins and stockpiles near Building 411.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 7 – A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 8 – A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 10 – A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 02-C32-00-1D 45 linear feet completed
  - 02-C32-00-1E 6 linear feet completed
  - 02-C32-00-1F 44 linear feet completed
  - 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
- 02-C32-00-8D 62 linear feet completed
- 02-C32-00-8H 50 linear feet completed

- A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.
- Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.
- The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.
- A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.
- Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of 13 truckloads of material were received for processing.
  - Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.
  - ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.
  - Began transfer of ES Unit 0675 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 36
  - Swipe samples received for Protean counts: 128
  - Air samples received: 10
  - Samples analyzed by gamma spectroscopy: 25
  - Gamma spectroscopy samples recounted: 5
  - Protean swipe samples counted: 40
  - Protean air samples counted: 10
- A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.
- Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 27, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Area #32. Details of the work activities performed are provided in the sections below.

North Pier

- Approximately 96 cubic yards of asphalt removed from Survey Unit 9 was transferred by the HPNS Team to the Building 411 recycling stockpiles
- A total of 12 cubic yards of soil were remediated from Class 1 Survey Units 1, 8, and 10 by the HPNS Team and placed in LLRW bin ESUU100006 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A total of two characterization gamma static measurements were logged with a maximum measurement of 6,021 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class1 Survey Unit 11. Characterization and remediation will be performed due to the presence of ^{137}Cs activity above the release limit at Sample Point 24 (0.118 pCi/g).

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Manhole MH946 was placed in LLRW bin ESSU100006 for off-site disposal by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 27, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
  - Towed array survey activities were performed for ES Unit 0695.
  - Two biased and 18 systematic soil samples were collected from ES Unit 0691 and submitted to the on-site laboratory for analysis.
  - ES Units 0658, 0676, and 0680 were staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 71
  - Swipe samples received for Protean counts: 6
  - Air samples received: 7
  - Samples analyzed by gamma spectroscopy: 62
  - Gamma spectroscopy samples recounted: 12
  - Protean swipe samples counted: 6
  - Protean air samples counted: 8
- A total of 387 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 27, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- Approximately 3 cubic yards of soil was remediated from Class 1 Survey Unit 5 by the HPNS Team and placed in LLRW bin AWIU000263 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 5. A total of two replacement systematic gamma static measurements were logged with a maximum measurement of 5,596 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Building 707 Triangle

- Towed array gamma scan surveys were performed over J Street in Work Area #21.
- Backfill activities were completed for Class 1 Survey Unit 19 by the HPNS Team.
- The HPNS Team issued drawings to identify remediation locations in Class 1 Survey Units 16, 20, 21, and 22.

500 Series Area

- The HPNS Team resumed soil grading and debris removal in preparation for upcoming towed array surveys in Class 2 Survey Unit 23.
- Towed array gamma scan surveys were performed over Class 2 Survey Unit 22.
- The HPNS Team performed Class 1 survey activities for Survey Unit 19. A total of five characterization gamma static measurements were logged with a maximum measurement of 5,643 cpm. In addition, five soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 19.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 7, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued a record drawing to identify the post-remediation sample collection location in Class 1 Survey Unit 7.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated for Trench Unit No. 243 by the HPNS Team.
- The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 244 along with a request for concurrence to backfill.
- The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan.
- Perimeter fencing was reconfigured in Work Area #34 to facilitate trench backfill activities.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 7, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 14 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of eight truckloads of material were received for processing.
  - Issued drawings to identify remediation locations in ES Unit 0640 and biased and systematic sample collection locations for ES Unit 0682.
  - Soil samples were collected by the HPNS Team and submitted to the on-site laboratory for analysis as follows:
    - 2 biased soil samples from ES Unit 0626
    - 3 biased soil samples from ES Unit 0645
    - 2 biased and 18 systematic soil samples from ES Unit 0682
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with off-site laboratory analytical results for ES Unit 0653 and a request for concurrence to use the materials as trench backfill.

Basewide Support

- Five outgoing materials and equipment surveys were performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 27
  - Swipe samples received for Protean counts: 88
  - Air samples received: 13
  - Samples analyzed by gamma spectroscopy: 77
  - Gamma spectroscopy samples recounted: 6
  - Protean swipe samples counted: 97
  - Protean air samples counted: 12
- A total of 195 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 7, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- Asphalt covering J Street and Class 1 Survey Units 22 and 23 was removed, scanned, and staged within the Building 707 Triangle boundaries; no elevated readings were identified during the scanning activities.
- Approximately 18 cubic yards of soil was remediated from Class 1 Survey Unit 21 by the HPNS Team and placed in LLRW bin BFLU000349T17 for off-site disposal.

500 Series Area

- The HPNS Team resumed exposing asphalt and soil grading activities in preparation for towed array surveys in Class 2 Survey Unit 23.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Unit 13.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 264 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 07-E36-00-9G 29 linear feet completed
  - 07-E36-38-4E 93 linear feet completed
  - 07-E36-38-4F 103 linear feet completed
  - 07-E36-38-4G 39 linear feet completed
  - 07-E36-38-4H 79 linear feet completed
- A total of 343 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings were completed by the HPNS Team.
- Manholes MH1243 and MH1341 along with pipe excavated from trench segments 07-E36-00-9G; 07-E36-38-4E, -4F, -4G, and -4H were placed on plastic pending further activities.

- The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 24, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A post-remediation gamma static measurement was logged at 4,071 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Radiologically surveyed and released excavated manholes and pipe sections (Survey Nos. HPS-PCPIPE-121311-041, HPS-PCPIPE-043012-054 and HPS-PCPIPE-043012-055) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.
- The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) along with a request for backfill concurrence.
- The HPNS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 242.
- Site restoration activities including curbing installation were continued by the HPNS Team over backfilled trench units in Work Area #33.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 24, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
  - Towed array survey activities were performed for ES Units 0696, 0699, and 0707.
  - ES Unit 0694 was staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 95
  - Swipe samples received for Protean counts: 34
  - Air samples received: 5
  - Samples analyzed by gamma spectroscopy: 149
  - Gamma spectroscopy samples recounted: 11
  - Protean swipe samples counted: 34
  - Protean air samples counted: 5
- A total of 253 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during maintenance activities at Parcel E-2.
- One outgoing materials and equipment survey was performed by the HPNS Team.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 24, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the 500 Series Area and Work Area #36. Details of the activities performed are provided in the sections below.

500 Series Area

- Approximately 5 cubic yards of soil was remediated from Class 1 Survey Unit 15 by the HPNS Team and placed in LLRW bin GFLU001181T4 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 15. A total of three post-remediation gamma static measurements were logged with a maximum measurement of 6,668 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Building 500 Series Area metal wire rope and debris (Survey No. HPS-A-500SA-035) continued to be placed in LLRW bins BKRU025441T7, GFLU001070, GFLU001119, and GFLU002111 for off-site disposal.
- Approximately 2 cubic yards of soil was remediated from Trench Unit No. 300 (trench segment 07-E36-00-7I) by the HPNS Team and placed in LLRW bin GFLU001042 for off-site disposal.
- A total of three post-remediation samples were collected from Trench Unit No. 300 by the HPNS Team and submitted to the on-site laboratory for analysis.
- The HPNS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 248 (associated with the Building 506 Site).
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: June 4, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A total of 20 systematic gamma static measurements were logged with a maximum measurement of 5,732 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with on-site analytical results for the post-remediation sample collected from Class 1 Survey Unit 7. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- The HPNS Team issued drawings to identify systematic sample collection locations in Class 1 Survey Unit 7 and record drawings to identify post-remediation sample collection locations in Class 1 Survey Unit 7.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated for Trench Unit No. 242 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: June 4, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
  - A total of 19 truckloads of material were received for processing.
  - ES Unit 0698 was staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs.
- On-site analytical data for ES Units 0697 and 0707 were submitted to the RASO for review with a request for concurrence to stage the materials pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 27
  - Swipe samples received for Protean counts: 98
  - Air samples received: 3
  - Samples analyzed by gamma spectroscopy: 74
  - Gamma spectroscopy samples recounted: 8
  - Protean swipe samples counted: 137
  - Protean air samples counted: 4
- A total of 123 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
  - A total of 46 empty trucks entered HPNS through the portal monitor with no alarms.
  - A total of 46 truckloads of material exited HPNS through the portal monitor with no alarms.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: June 4, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, Shacks 79 and 80, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 707 Triangle

- The HPNS Team provided the RASO with on-site analytical results for the investigative soil samples collected from the 25 pothole excavations around the previously remediated strontium spill area associated with Class 1 Survey Units 16, 21, 22, and 23. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination as follows:
  - Pothole 16 Wall Sample (03AB707-200) with ^{137}Cs at 0.2159 pCi/g
  - Pothole 24 Wall Sample (03AB707-216) with ^{137}Cs at 0.2096 pCi/g

Shacks 79 and 80

- The HPNS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Class 1 Survey Unit 3. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- The HPNS Team issued record drawings to identify post-remediation sample collection locations in Class 1 Survey Unit 3.

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.
- The HPNS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Class 1 Survey Unit 15. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.

- Approximately 576 cubic yards of staged asphalt removed from radiologically cleared Class 1 Survey Units 10 and 11 was transferred by the HPNS Team from the Salvage Yard to the Building 411 recycling stockpiles.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

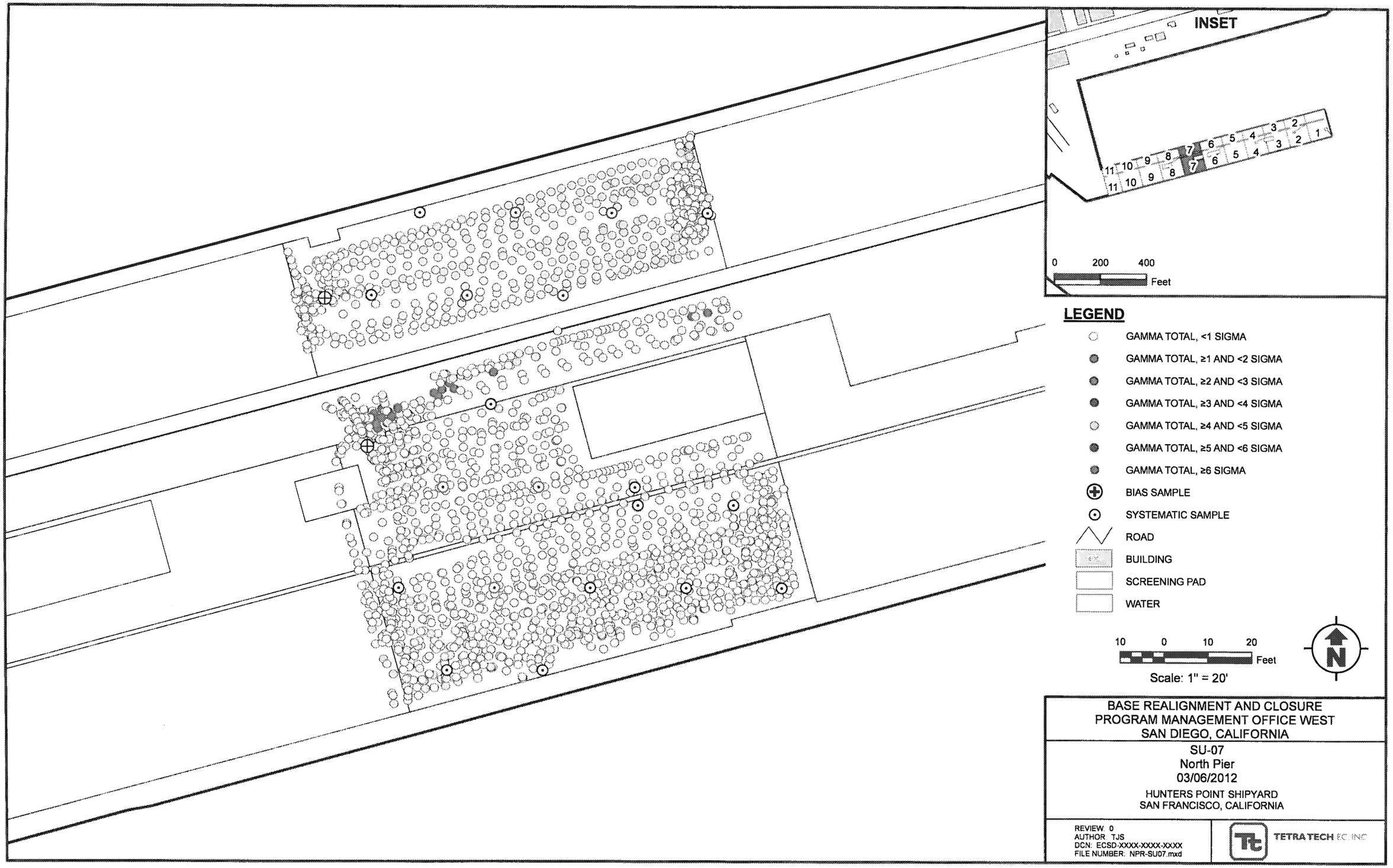
- The HPNS Team excavated approximately 228 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 07-E36-38-1I 48 linear feet completed
  - 07-E36-38-1J 15 linear feet completed
  - 07-E36-38-1K 31 linear feet completed
  - 07-E36-38-1M 3 linear feet completed
  - 07-E36-38-1N 3 linear feet completed
  - 07-E36-38-8E 10 linear feet completed
  - 07-E36-38-8F 10 linear feet completed
- A total of 100 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 20 linear feet not identified on the design drawings were completed by the HPNS Team.
- Excavated Manholes MH1254, MH1255, MH1258, MH1259, and MH1260 were placed on plastic pending further activities.
- A total of five sediment samples were collected from excavated Manholes MH1255, MH1258, MH1259, MH1260, and MH1262 (MH0020 through MH0024) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The HPNS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Trench Unit No. 300. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- Work area perimeter fencing was reconfigured by the HPNS Team along H Street.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician	On-Site Laboratory (pCi/g)					Off-Site Laboratory (pCi/g)				
							K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
NPR	7	1	Biased	02NPR-S0007-F001-01	19-Mar-12	Ray Roberson	15.63	1.168	-0.0009669	0.5291	0.7158					
NPR	7	2	Biased	02NPR-S0007-F002-01	19-Mar-12	Ray Roberson	16.91	0.5637	-0.0002979	0.4358	0.4979					
NPR	7	3	Systematic	02NPR-S0007-F003-01	19-Mar-12	Ray Roberson	19.13	1.028	0.0277	0.4626	0.4865					
NPR	7	4	Systematic	02NPR-S0007-F004-01	19-Mar-12	Ray Roberson	20.3	0.621	-0.001593	0.5052	0.5157					
NPR	7	5	Systematic	02NPR-S0007-F005-01	19-Mar-12	Ray Roberson	15.48	0.819	0.01101	0.4683	0.5568					
NPR	7	6	Systematic	02NPR-S0007-F006-01	19-Mar-12	Ray Roberson	20.89	0.7795	0.009819	0.7346	0.7098					
NPR	7	7	Systematic	02NPR-S0007-F007-01	19-Mar-12	Ray Roberson	11.26	0.2066	0.0008793	0.2546	0.191					
NPR	7	8	Systematic	02NPR-S0007-F008-01	19-Mar-12	Ray Roberson	16.59	0.9166	0.01388	0.3516	0.5534					
NPR	7	9	Systematic	02NPR-S0007-F009-01	19-Mar-12	Ray Roberson	8.158	0.8269	0.002505	0.4968	0.3786					
NPR	7	10	Systematic	02NPR-S0007-F010-01	19-Mar-12	Ray Roberson	12.7	0.2669	0.001545	0.2512	0.4162					
NPR	7	11	Systematic	02NPR-S0007-F011-01	19-Mar-12	Ray Roberson	22.16	0.9708	0.004272	0.556	0.5297					
NPR	7	12	Systematic	02NPR-S0007-F012-01	19-Mar-12	Ray Roberson	12.36	0.2818	0.02673	0.3632	0.2874					
NPR	7	13	Systematic	02NPR-S0007-F013-01	19-Mar-12	Ray Roberson	7.311	0.2813	0.008543	0.2881	0.2898					
NPR	7	14	Systematic	02NPR-S0007-F014-01	19-Mar-12	Ray Roberson	16.23	0.6444	-0.002545	0.4844	0.4966					
NPR	7	15	Systematic	02NPR-S0007-F015-01	19-Mar-12	Ray Roberson	22.33	0.5916	-0.005973	0.4122	0.5358					
NPR	7	16	Systematic	02NPR-S0007-F016-01	19-Mar-12	Ray Roberson	14.33	0.7524	0.25	0.2828	0.347					
NPR	7	17	Systematic	02NPR-S0007-F017-01	19-Mar-12	Ray Roberson	8.851	0.7903	0.005041	0.3762	0.2729					
NPR	7	18	Systematic	02NPR-S0007-F018-01	19-Mar-12	Ray Roberson	8.837	0.3059	-0.01198	0.2328	0.3336					
NPR	7	19	Systematic	02NPR-S0007-F019-01	19-Mar-12	Ray Roberson	7.614	0.466	0.002288	0.2933	0.3799					
NPR	7	20	Systematic	02NPR-S0007-F020-01	19-Mar-12	Ray Roberson	6.105	0.5077	-0.003496	0.1316	0.2039					
NPR	7	21	Systematic	02NPR-S0007-F021-01	19-Mar-12	Ray Roberson	7.705	0.2338	0.004554	0.2875	0.3079					
NPR	7	22	Systematic	02NPR-S0007-F022-01	19-Mar-12	Ray Roberson	7.675	0.6167	0	0.1376	0.2531					
NPR	7	23	Characterization	02NPR-S0007-F023-01	20-Apr-12	Joe Cunningham	18.72	0.4651	0.09868	0.3326	0.3951					
NPR	7	24	Characterization	02NPR-S0007-F024-01	20-Apr-12	Joe Cunningham	17.07	0.4677	0.159	0.3357	0.3748					
NPR	7	25	Characterization	02NPR-S0007-F025-01	27-Apr-12	Joe Cunningham	15.18	0.3498	0	0.4151	0.5917					
NPR	7	26	Characterization	02NPR-S0007-F026-01	27-Apr-12	Joe Cunningham	20.68	1.227	0.04655	0.4405	0.7648					
NPR	7	27	Post-Remediation	02NPR-S0007-F027-01	07-May-12	Justin Hubbard	18.46	0.546	0.112	0.4669	0.5614					
NPR	7	28	Post-Remediation	02NPR-S0007-F028-01	07-May-12	Justin Hubbard	19.45	1.033	0.05426	0.4551	0.5767					
NPR	7	29	Post-Remediation	02NPR-S0007-F029-01	24-May-12	Joe Cunningham	9.287	1.121	0	0.4017	0.3918					
NPR	7	30	Systematic	02NPR-S0007-F030-01	04-Jun-12	Justin Hubbard	1.165	0.1813	-0.0003672	0.1739	0.1857	1.81	0.134	0	0.134	0.164
NPR	7	31	Systematic	02NPR-S0007-F031-01	04-Jun-12	Justin Hubbard	1.902	0.1191	0.005892	0.1098	0.1629	1.28	0.0345	-0.0114	0.0345	0.184
NPR	7	32	Systematic	02NPR-S0007-F032-01	04-Jun-12	Justin Hubbard	1.631	0.4346	0.004759	0.09655	0.02672	1.6	0.239	-0.012	0.239	0.209
NPR	7	33	Systematic	02NPR-S0007-F033-01	04-Jun-12	Justin Hubbard	1.223	0.3503	-0.00007568	0.0579	0.1899	2.25	0.173	0.0025	0.173	0.218
NPR	7	34	Systematic	02NPR-S0007-F034-01	04-Jun-12	Justin Hubbard	0.8122	0.2193	-0.008789	0.08735	0.2021	1.66	0.174	-0.00205	0.174	0.0813
NPR	7	35	Systematic	02NPR-S0007-F035-01	04-Jun-12	Justin Hubbard	1.636	0.2614	-0.004871	0.1141	0.2028	1.32	0.237	0.006	0.237	0.145
NPR	7	36	Systematic	02NPR-S0007-F036-01	04-Jun-12	Justin Hubbard	1.455	0.2686	0.006069	0.1222	0.07728	0.948	0.127	0.00585	0.127	0.219
NPR	7	37	Systematic	02NPR-S0007-F037-01	04-Jun-12	Justin Hubbard	0.8436	0.2348	-0.0121	0.05346	0.1819	1.08	0.267	0.021	0.267	0.0313
NPR	7	38	Systematic	02NPR-S0007-F038-01	04-Jun-12	Justin Hubbard	1.12	0.2095	0	0.1009	0.1006	1.54	0.0825	0.00192	0.0825	0.136
NPR	7	39	Systematic	02NPR-S0007-F039-01	04-Jun-12	Justin Hubbard	2.067	0.3081	0.0005948	0.06008	0.09565	1.3	0.176	-0.0104	0.176	0.227
NPR	7	40	Systematic	02NPR-S0007-F040-01	04-Jun-12	Justin Hubbard	1.501	0.2505	0	-0.02728	0.2198	1.69	0.093	-0.0176	0.093	0.354
NPR	7	41	Systematic	02NPR-S0007-F041-01	04-Jun-12	Justin Hubbard	1.63	0	-0.004487	-0.001929	0.1397	1.14	0.0408	0	0.0408	0.123
NPR	7	42	Systematic	02NPR-S0007-F042-01	04-Jun-12	Justin Hubbard	1.834	0.2233	0.0003867	0.2036	0.1399	2.73	0.0996	-0.000141	0.0996	0.0845
NPR	7	43	Systematic	02NPR-S0007-F043-01	04-Jun-12	Justin Hubbard	1.721	0.1298	0	0.09678	0.1991	1.08	0.139	0.0137	0.139	0.294
NPR	7	44	Systematic	02NPR-S0007-F044-01	04-Jun-12	Justin Hubbard	2.111	0.1023	0.005003	0.1499	0.1931	0.728	0.146	0.0298	0.146	0.0961
NPR	7	45	Systematic	02NPR-S0007-F045-01	04-Jun-12	Justin Hubbard	2.235	0.2233	0.0008782	0.09436	0.1061	1.44	0.0909	-0.0135	0.0909	0.197
NPR	7	46	Systematic	02NPR-S0007-F046-01	04-Jun-12	Justin Hubbard	1.429	0.4846	0	0.09921	0.1184	0.993	0.173	-0.000793	0.173	0.183
NPR	7	47	Systematic	02NPR-S0007-F047-01	04-Jun-12	Justin Hubbard	1.29	0.3147	0	0.07019	0.05316	-0.611	0.00245	-0.000378	0.00245	0.252
NPR	7	48	Systematic	02NPR-S0007-F048-01	04-Jun-12	Justin Hubbard	1.558	0.06235	-0.01199	0.05397	0.1569	0.91	0.166	0.0261	0.166	0.229
NPR	7	49	Systematic	02NPR-S0007-F049-01	04-Jun-12	Justin Hubbard	1.882	0.2558	0	0.08116	0.148	1.27	0.262	0.0121	0.262	0.24

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER

10 0 10 20 Feet

Scale: 1" = 20'

N

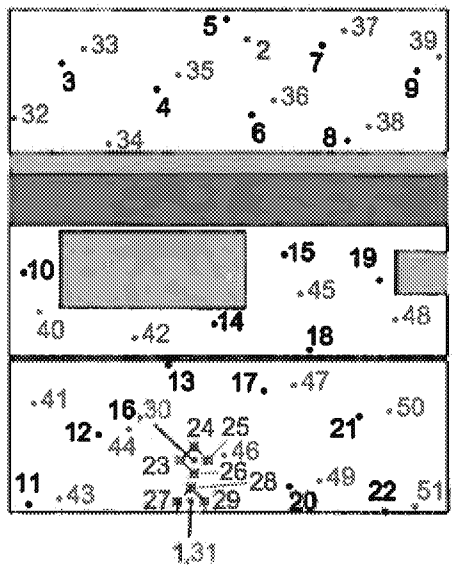
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

SU-07
North Pier
03/06/2012

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NPR-SU07.mxd

TETRA TECH EC, INC



LEGEND:

- 1 BIASED 1–2
- 3 SYSTEMATIC 1 3–22
- 23 CHARACTERIZATION 23–29
- 25 POST–REMEDIATION 30–31
- 32 SYSTEMATIC 2 32–51

AREAS PREVIOUSLY REMEDIATED

ROCK

CONCRETE

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

SU-08

CLASS 1

767.33 m^2 (8259.56 ft^2)

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:24:48

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 08

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360 Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm):	6386
Standard Deviation:	127
Gamma 3σ Investigation Level (cpm):	6765

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588 Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGD51B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm): 6808

Standard Deviation: 444

Gamma 3σ Investigation Level (cpm): 8141

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR **Survey Unit:** 8 **Class:** 1 **Area:** 767.33 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/20/2012 12:55	5974	6386	-412	600-BKGDS1B	6765	
2	3/20/2012 12:56	5322	6386	-1064	600-BKGDS1B	6765	
3	3/20/2012 12:58	5573	6386	-813	600-BKGDS1B	6765	
4	3/20/2012 12:59	5813	6386	-573	600-BKGDS1B	6765	
5	3/20/2012 13:01	6470	6386	84	600-BKGDS1B	6765	
6	3/20/2012 13:02	5169	6386	-1217	600-BKGDS1B	6765	
7	3/20/2012 13:04	5242	6386	-1144	600-BKGDS1B	6765	
8	3/20/2012 13:05	4722	6386	-1664	600-BKGDS1B	6765	
9	3/20/2012 13:07	5328	6386	-1058	600-BKGDS1B	6765	
10	3/20/2012 13:08	4335	6386	-2051	600-BKGDS1B	6765	
11	3/20/2012 13:24	5183	6386	-1203	600-BKGDS1B	6765	
12	3/20/2012 13:25	3383	6386	-3003	600-BKGDS1B	6765	
13	3/20/2012 13:27	3501	6386	-2885	600-BKGDS1B	6765	
14	3/20/2012 13:29	5260	6386	-1126	600-BKGDS1B	6765	
15	3/20/2012 13:30	4000	6386	-2386	600-BKGDS1B	6765	
16	3/20/2012 13:31	6651	6386	265	600-BKGDS1B	6765	
17	3/20/2012 13:32	3284	6386	-3102	600-BKGDS1B	6765	
18	3/20/2012 13:33	4296	6386	-2090	600-BKGDS1B	6765	
19	3/20/2012 13:35	4830	6386	-1556	600-BKGDS1B	6765	
20	3/20/2012 13:36	5290	6386	-1096	600-BKGDS1B	6765	
21	3/20/2012 13:37	3142	6386	-3244	600-BKGDS1B	6765	
22	3/20/2012 13:39	5423	6386	-963	600-BKGDS1B	6765	
23	4/20/2012 13:44	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
24	4/20/2012 13:46	5673	6386	-713	600-BKGDS1B	6765	
25	4/20/2012 13:47	5578	6386	-808	600-BKGDS1B	6765	
26	4/20/2012 13:49	6272	6386	-114	600-BKGDS1B	6765	
27	4/20/2012 13:50	6402	6386	16	600-BKGDS1B	6765	
28	4/20/2012 13:51	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
29	4/20/2012 13:52	5753	6386	-633	600-BKGDS1B	6765	
30	5/1/2012 15:31	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
31	5/1/2012 15:10	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
32	5/31/2012 15:18	4588	6808	-2220	630-BKGDS1B	8141	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR **Survey Unit:** 8 **Class:** 1 **Area:** 767.33 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/31/2012 15:19	4765	6808	-2043	630-BKGDS1B	8141	
34	5/31/2012 15:20	6104	6808	-704	630-BKGDS1B	8141	
35	5/31/2012 15:21	4869	6808	-1939	630-BKGDS1B	8141	
36	5/31/2012 15:22	5190	6808	-1618	630-BKGDS1B	8141	
37	5/31/2012 15:23	4647	6808	-2161	630-BKGDS1B	8141	
38	5/31/2012 15:24	4252	6808	-2556	630-BKGDS1B	8141	
39	5/31/2012 15:25	4421	6808	-2387	630-BKGDS1B	8141	
40	5/31/2012 15:27	4532	6808	-2276	630-BKGDS1B	8141	
41	5/31/2012 15:28	3574	6808	-3234	630-BKGDS1B	8141	
42	5/31/2012 15:29	4264	6808	-2544	630-BKGDS1B	8141	
43	5/31/2012 15:30	5725	6808	-1083	630-BKGDS1B	8141	
44	5/31/2012 15:31	2879	6808	-3929	630-BKGDS1B	8141	
45	5/31/2012 15:32	5050	6808	-1758	630-BKGDS1B	8141	
46	5/31/2012 15:34	5312	6808	-1496	630-BKGDS1B	8141	
47	5/31/2012 15:35	3551	6808	-3257	630-BKGDS1B	8141	
48	5/31/2012 15:36	5107	6808	-1701	630-BKGDS1B	8141	
49	5/31/2012 15:37	4249	6808	-2559	630-BKGDS1B	8141	
50	5/31/2012 15:38	3015	6808	-3793	630-BKGDS1B	8141	
51	5/31/2012 15:39	6079	6808	-729	630-BKGDS1B	8141	

Net Gamma cpm Summary
Min: -3929
Avg: -1495
Max: 798
St Dev: 1173

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870		
Instrument Calibration Due Date:	10/10/2012	Reference Area Background Location:	Parcel D-1 Reference
		Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	3/20/2012	6	
2	3/20/2012	5	
3	3/20/2012	5	
4	3/20/2012	5	
5	3/20/2012	6	
6	3/20/2012	5	
7	3/20/2012	5	
8	3/20/2012	5	
9	3/20/2012	5	
10	3/20/2012	5	
11	3/20/2012	5	
12	3/20/2012	4	
13	3/20/2012	4	
14	3/20/2012	5	
15	3/20/2012	5	
16	3/20/2012	6	
17	3/20/2012	4	
18	3/20/2012	4	
19	3/20/2012	5	
20	3/20/2012	6	
21	3/20/2012	4	
22	3/20/2012	5	
23	4/20/2012	6	
24	4/20/2012	6	
25	4/20/2012	6	
26	4/20/2012	5	
27	4/20/2012	6	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Rdg #	Date	Exposure Rate (µR/hr)	Comments
28	4/20/2012	6	
29	4/20/2012	5	
30	5/1/2012	7	
31	5/1/2012	6	
32	5/31/2012	4	
33	5/31/2012	4	
34	5/31/2012	6	
35	5/31/2012	4	
36	5/31/2012	5	
37	5/31/2012	4	
38	5/31/2012	4	
39	5/31/2012	4	
40	5/31/2012	4	
41	5/31/2012	4	
42	5/31/2012	4	
43	5/31/2012	5	
44	5/31/2012	4	
45	5/31/2012	5	
46	5/31/2012	5	
47	5/31/2012	5	
48	5/31/2012	4	
49	5/31/2012	5	
50	5/31/2012	4	
51	5/31/2012	6	

Exposure Rate Summary (µR/hr)

Min: **4.00**
Avg: **4.94**
Max: **7.00**
St Dev: **0.81**

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02320

Project Name: Radiological Site Survey	PO Number: N/A	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	**Project Information Section**
Project Location: HUNTERS POINT	Project Number: 4044-0002	LABORATORY ID:	
Sampler Name: Ray Robelson	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F001-01	3/20/2012	1245	1		S1		☑	☐	☐			
02NPR-S0008-F002-01	3/20/2012	1250	1		S1		☑	☐	☐			
02NPR-S0008-F003-01	3/20/2012	1255	1		S1		☑	☐	☐			
02NPR-S0008-F004-01	3/20/2012	1300	1		S1		☑	☐	☐			
02NPR-S0008-F005-01	3/20/2012	1305	1		S1		☑	☐	☐			
02NPR-S0008-F006-01	3/20/2012	1310	1		S1		☑	☐	☐			
02NPR-S0008-F007-01	3/20/2012	1315	1		S1		☑	☐	☐			
02NPR-S0008-F008-01	3/20/2012	1320	1		S1		☑	☐	☐			
02NPR-S0008-F009-01	3/20/2012	1325	1		S1		☑	☐	☐	DUP		
02NPR-S0008-F010-01	3/20/2012	1330	1		S1		☑	☐	☐			
02NPR-S0008-F011-01	3/20/2012	1335	1		S1		☑	☐	☐			
02NPR-S0008-F012-01	3/20/2012	1340	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	*Date* 032012	*Received by: (signature)* [signature]	LABORATORY INSTRUCTIONS/COMMENTS
Company RSRS	*Time* 15:20	*Company* CET	
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION
Company	*Time*	*Company*	
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	*Time*	*Company*	TEMPERATURE. SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
NORTH PIER FSS
SU-8
BIASED 1-2
SYSTEMATIC 3-22

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02321

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: Ray Anderson	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

GAMMASPEC | SR90 | ALPHA

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F013-01	3/20/2012	1345	1		S1		☑	☐	☐			
02NPR-S0008-F014-01	3/20/2012	1350	1		S1		☑	☐	☐			
02NPR-S0008-F015-01	3/20/2012	1355	1		S1		☑	☐	☐			
02NPR-S0008-F016-01	3/20/2012	1400	1		S1		☑	☐	☐			
02NPR-S0008-F017-01	3/20/2012	1405	1		S1		☑	☐	☐			
02NPR-S0008-F018-01	3/20/2012	1410	1		S1		☑	☐	☐			
02NPR-S0008-F019-01	3/20/2012	1415	1		S1		☑	☐	☐			
02NPR-S0008-F020-01	3/20/2012	1420	1		S1		☑	☐	☐			
02NPR-S0008-F021-01	3/20/2012	1425	1		S1		☑	☐	☐			
02NPR-S0008-F022-01	3/20/2012	1430	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 632012	*Received by: (signature)*
Company RSRS	*Time* 15:20	*Company* C&T
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS

ED_004747_00010903-00107

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02385

Project Name: Radiological Site Survey		PO Number: N/A					GAMMASPEC	SR90	ALPHA		LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	**Project Information Section**	
Project Location: HUNTERS POINT		Project Number: 4044-0002									LABORATORY ID:		
Sampler Name: JOE CUNNINGHAM		Airbill Number: N/A											
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID	
02NPR-S0008-F023-01	4/20/2012	1000	1		S1		☑	☐	☐				
02NPR-S0008-F024-01	4/20/2012	1005	1		S1		☑	☐	☐				
02NPR-S0008-F025-01	4/20/2012	1010	1		S1		☑	☐	☐				
02NPR-S0008-F026-01	4/20/2012	1015	1		S1		☑	☐	☐				
02NPR-S0008-F027-01	4/20/2012	1020	1		S1		☑	☐	☐				
02NPR-S0008-F028-01	4/20/2012	1025	1		S1		☑	☐	☐				
02NPR-S0008-F029-01	4/20/2012	1030	1		S1		☑	☐	☐				

Relinquished by: (signature)	*Date* 4-30-12	*Received by: (signature)*	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS: NORTH PIER FSS SD-8 CHARACTERIZATION
Company USACE	*Time* 1417	*Company* CT		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION	
Company	*Time*	*Company*		
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	*Time*	*Company*	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	

ED_004747_00010903-00108

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02397

Project Name: Radiological Site Survey	PO Number: N/A	GAMMASPEC	SR90	ALPHA
Project Location: HUNTERS POINT	Project Number: 4044-0002			
Sampler Name: Ray Roberson	Airbill Number: N/A			
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592			

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID: [redacted]

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F027-01	5/1/2012	1530	1		S1		☑	☐	☐			[redacted]
02NPR-S0008-F030-01	5/1/2012	1520	1		S1		☑	☐	☐			[redacted]
02NPR-S0008-F031-01	5/1/2012	1525	1		S1		☑	☐	☐			[redacted]
02NPR-S0010-F028-01	5/1/2012	1515	1		S1		☑	☐	☐			[redacted]

Relinquished by: (signature) [signature]	Date 05-01-12	Received by: (signature) [signature]	LABORATORY INSTRUCTIONS/COMMENTS: [redacted]
Company RSRS	Time 1610	Company CT	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION: [redacted]
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY): TEMPERATURE: SAMPLE CONDITION: COOLER SEAL: [redacted]
Company	Time	Company	

SAMPLING COMMENTS: [redacted]

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02449

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: R. Robinson	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F032-01	5/31/2012	1000	1		S1		☑	☐	☐			
02NPR-S0008-F033-01	5/31/2012	1005	1		S1		☑	☐	☐			
02NPR-S0008-F034-01	5/31/2012	1010	1		S1		☑	☐	☐			
02NPR-S0008-F035-01	5/31/2012	1015	1		S1		☑	☐	☐			
02NPR-S0008-F036-01	5/31/2012	1020	1		S1		☑	☐	☐			
02NPR-S0008-F037-01	5/31/2012	1025	1		S1		☑	☐	☐			
02NPR-S0008-F038-01	5/31/2012	1030	1		S1		☑	☐	☐	DUP		
02NPR-S0008-F039-01	5/31/2012	1035	1		S1		☑	☐	☐			
02NPR-S0008-F040-01	5/31/2012	1040	1		S1		☑	☐	☐			
02NPR-S0008-F041-01	5/31/2012	1045	1		S1		☑	☐	☐			
02NPR-S0008-F042-01	5/31/2012	1050	1		S1		☑	☐	☐			
02NPR-S0008-F043-01	5/31/2012	1055	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	Date: 5-31-12	Received by: (signature) [signature]
Company: RSRS	Time: 10:12	Company: OCT
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
NORTH PIER FSS
SU-8
SYSTEMATIC 32-51

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

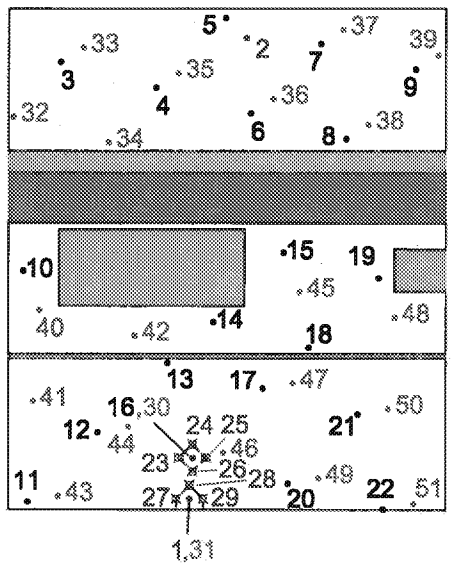
BFS 02450

Project Name: Radiological Site Survey	PO Number: N/A	GAMMASPEC	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.
Project Location: HUNTERS POINT	Project Number: 4044-0002	SR90	LABORATORY ID:
Sampler Name: R. Roberson	Airbill Number: N/A	ALPHA	**Project Information Section**
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC	SR90	ALPHA	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F044-01	5/31/2012	1100	1		S1		☑	☐	☐			
02NPR-S0008-F045-01	5/31/2012	1105	1		S1		☑	☐	☐			
02NPR-S0008-F046-01	5/31/2012	1110	1		S1		☑	☐	☐			
02NPR-S0008-F047-01	5/31/2012	1115	1		S1		☑	☐	☐			
02NPR-S0008-F048-01	5/31/2012	1120	1		S1		☑	☐	☐			
02NPR-S0008-F049-01	5/31/2012	1125	1		S1		☑	☐	☐			
02NPR-S0008-F050-01	5/31/2012	1130	1		S1		☑	☐	☐			
02NPR-S0008-F051-01	5/31/2012	1135	1		S1		☑	☐	☐			

Relinquished by: (signature)	Date: 5-31-12	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS
Company: RSKS	Time: 1612	Company: CT	SAMPLING COMMENTS
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

ED_004747_00010903-00111



LEGEND:

- 1 BIASED 1–2
- 3 SYSTEMATIC 1 3–22
- 23 CHARACTERIZATION 23–29
- 25 POST–REMEDIATION 30–31
- 32 SYSTEMATIC 2 32–51

AREAS PREVIOUSLY REMEDIATED

ROCK

CONCRETE

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

SU-08

CLASS 1

767.33 m^2 (8259.56 ft^2)

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:24:48

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 08

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Thursday, July 05, 2012 10:50 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08
Attachments: 02NPR-S0008 032 to 051 Off-Site Gamma.pdf; 02NPR-S0008 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 08.

George Chiu | **Health Physicist**
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, June 06, 2012 11:42 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 08.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | **Health Physicist**
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, May 16, 2012 6:46 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the total strontium results for the samples with cesium-137 activity above the release criterion from North Pier Survey Unit 08.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Friday, May 11, 2012 9:23 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 08.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, April 26, 2012 4:52 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the revised off-site sampling results for samples 01 and 16 from North Pier Survey Unit 08.

Sample points 01 (0.155 pCi/g) and 16 (0.135 pCi/g) have already been remediated due to cesium-137 activity.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, April 26, 2012 12:42 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 08.

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Tuesday, April 17, 2012 9:56 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the bias and systematic sampling results from North Pier Survey Unit 08. Samples 01, 05, and 16 were recounted at the on-site laboratory for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample points 01 (0.247 pCi/g) and 16 (0.154 pCi/g) due to cesium-137 activity reported at the off-site laboratory.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 20, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities in Building 241, the North Pier, and Work Areas #32, #33, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed towed array gamma scan surveys over Survey Unit 10.
- The HPNS Team performed Class 1 survey activities for Survey Unit 8. A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,650 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were completed in Trench Unit No. 227 (associated with Building 241) by the HPNS Team.
- Backfill activities were initiated in Trench Unit No. 239 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 20, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 27 truckloads of material at RSY4 for processing.
- Following data reviews, the RASO concurred with the staging of ES Unit 0618 pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 63
  - Swipe samples received for Protean counts: 120
  - Air samples received: 12
  - Samples analyzed by gamma spectroscopy: 84
  - Gamma spectroscopy samples recounted: 14
  - Protean swipe samples counted: 120
  - Protean air samples counted: 12
- A total of 277 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 93 samples were sent to TestAmerica St. Louis for analysis.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during maintenance and landscaping activities at Parcel E-2.
- Radiological support was provided to CE2/Kleinfelder for the transfer of radiologically cleared trash from Buildings 211/253.
- Two outgoing materials and equipment surveys were performed by the HPNS Team.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 20, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 507 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 507 Site

- Towed array gamma scan survey activities were performed by the HPNS Team over Class 1 Survey Unit 1.

500 Series Area

- The HPNS Team performed Class 1 survey activities for Survey Unit 21. A total of 36 systematic gamma static measurements were logged with a maximum measurement of 6,576 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 1. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 29 (0.14 pCi/g).
- The HPNS Team provided the RASO with on-site analytical and survey results for the systematic samples collected from Class 1 Survey Unit 18. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination as follows:
  - Sample Point 47 (07500SA-S0018-F017-01) with ^{137}Cs at 0.1274 pCi/g
  - Sample Point 48 (07500SA-S0018-F048-01) with ^{137}Cs at 0.134 pCi/g
  - Sample Point 75 (07500SA-S0018-F075-01) with ^{137}Cs at 0.122 pCi/g
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 19. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination as follows:
  - Sample Point 16 (07500SA-S0019-F016-01) with ^{137}Cs at 0.13 pCi/g
  - Sample Point 22 (07500SA-S0019-F022-01) with ^{137}Cs at 0.113 pCi/g
  - Sample Point 23 (07500SA-S0019-F023-01) with ^{137}Cs at 0.159 pCi/g

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 324 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 07-E36-14-1W 69 linear feet completed
  - 07-E36-14-1X 30 linear feet completed
  - 07-E36-14-1Y 74 linear feet completed
  - 07-E36-14-1Z 70 linear feet completed
  - 07-E36-14-8Q 12 linear feet completed
- A total of 243 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 12 linear feet not identified on the design drawings was completed by the HPNS Team.
- Manhole MH1307 and pipes excavated from trench segment 07-E36-14-1X were placed on plastic pending further activities.
- The HPNS Team investigated trench segment 07-E36-14-1W for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.
- A sediment sample was collected from excavated Manhole MH1307 (MH0007) by the HPNS Team and submitted to on-site laboratory for analysis.
- Control access points and perimeter fencing was reconfigured by the HPNS Team to facilitate upcoming sewer removal activities along H Street in Work Area #36.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 7 – A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 8 – A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 10 – A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 02-C32-00-1D 45 linear feet completed
  - 02-C32-00-1E 6 linear feet completed
  - 02-C32-00-1F 44 linear feet completed
  - 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
- 02-C32-00-8D 62 linear feet completed
- 02-C32-00-8H 50 linear feet completed

- A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.
- Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.
- The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.
- A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.
- Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of 13 truckloads of material were received for processing.
  - Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.
  - ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.
  - Began transfer of ES Unit 0675 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 36
  - Swipe samples received for Protean counts: 128
  - Air samples received: 10
  - Samples analyzed by gamma spectroscopy: 25
  - Gamma spectroscopy samples recounted: 5
  - Protean swipe samples counted: 40
  - Protean air samples counted: 10
- A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.
- Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 8 – A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 10 – A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 11 – A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.
- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.
- Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of six truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of 11 truckloads of material were received for processing.
  - Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.
  - A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with the following:
  - On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.
  - On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 30
  - Swipe samples received for Protean counts: 152
  - Air samples received: 13
  - Samples analyzed by gamma spectroscopy: 87
  - Gamma spectroscopy samples recounted: 8
  - Protean swipe samples counted: 23
  - Protean air samples counted: 13
- A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 119 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
  - Asphalt Grid A7 – A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm^2.
  - Survey Unit 22 – A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.
- The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.
- The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class l Survey Unit 14. Characterization and remediation will be continued due to the presence of ^{137}Cs contamination as follows:
  - Sample Point 7 (07500SA-S0014-F007-01) with ^{137}Cs at 0.1183 pCi/g
  - Sample Point 17 (07500SA-S0014-F017-01) with ^{137}Cs at 0.2425 pCi/g
  - Sample Point 37 (07500SA-S0014-F037-01) with ^{137}Cs at 0.3768 pCi/g

- The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 07-E36-00-7F 133 linear feet completed
  - 07-E36-00-7G 10 linear feet completed
  - 07-E36-00-7H 12 linear feet completed
  - 07-E36-00-7I 6 linear feet completed
  - 07-E36-00-8Y 25 linear feet completed
- A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.
- Excavated Manhole MH1244 was placed on plastic pending further activities.
- The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ^{137}Cs contamination as follows:
  - Manhole MH1302 (07-PEMH1302-013-01) with ^{137}Cs at 0.2161 pCi/g
  - Manhole MH1303 (07-PEMH1303-014-01) with ^{137}Cs at 0.1319 pCi/g
- The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 17 (0.2726 pCi/g).
- The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
  - Survey Unit 1 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 8 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 10 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
  - Survey Unit 11 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.
- The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.
- The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.
- Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
  - A total of 13 truckloads of material were received for processing.
  - Began transfer of ES Unit 0700 to the stockpile area.
- The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- After evaluating the data, the RASO concurred with the following:
  - Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.
  - Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

- One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 140
  - Swipe samples received for Protean counts: 151
  - Air samples received: 13

- Samples analyzed by gamma spectroscopy: 76
- Gamma spectroscopy samples recounted: 13
- Protean swipe samples counted: 20
- Protean air samples counted: 16

- A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 71 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class l Survey Unit 4. Characterization and remediation will be performed due to the presence of ^{90}Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.
- The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with total strontium analytical results for the ^{137}Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
  - 07-E36-00-4D 10 linear feet completed
  - 07-E36-00-4E 51 linear feet completed
  - 07-E36-00-4F 5 linear feet completed
  - 07-E36-00-4G 27 linear feet completed
  - 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
- 07-E36-38-1W 38 linear feet completed
- 07-E36-38-2B 17 linear feet completed
- 07-E36-38-4A 9 linear feet completed
- 07-E36-38-5A 10 linear feet completed

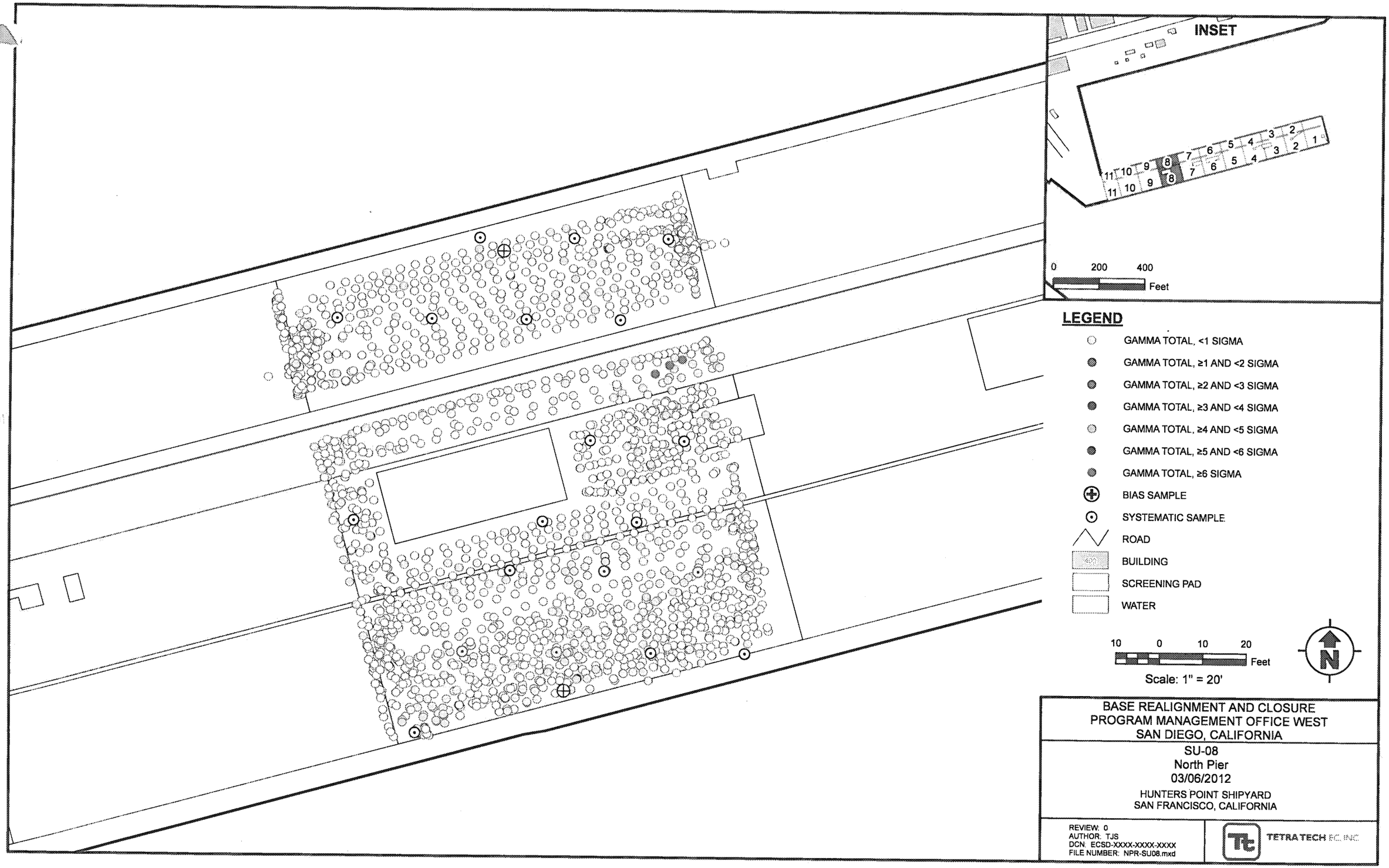
- A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.
- Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.
- The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.
- A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.
- Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.
- The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician	On-Site Laboratory (pCi/g)					Off-Site Laboratory (pCi/g)				
							K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
NPR	8	1	Biased	02NPR-S0008-F001-01	20-Mar-12	Ray Roberson	10.23	0.4935	0.09523	0.3345	0.3563	10.1	0.29	0.155	0.29	0.311
NPR	8	2	Biased	02NPR-S0008-F002-01	20-Mar-12	Ray Roberson	15.59	0.4919	0.008754	0.4062	0.3538					
NPR	8	3	Systematic	02NPR-S0008-F003-01	20-Mar-12	Ray Roberson	17.79	0.7996	0.02298	0.3357	0.5055					
NPR	8	4	Systematic	02NPR-S0008-F004-01	20-Mar-12	Ray Roberson	22.02	1.142	0.00361	0.3574	0.586					
NPR	8	5	Systematic	02NPR-S0008-F005-01	20-Mar-12	Ray Roberson	22.48	0.86	0	0.4879	0.5993					
NPR	8	6	Systematic	02NPR-S0008-F006-01	20-Mar-12	Ray Roberson	15.63	0.753	0.003367	0.3858	0.4654					
NPR	8	7	Systematic	02NPR-S0008-F007-01	20-Mar-12	Ray Roberson	20.89	1.062	0.03326	0.5734	0.7284					
NPR	8	8	Systematic	02NPR-S0008-F008-01	20-Mar-12	Ray Roberson	10.85	0.898	0	0.2166	0.3062					
NPR	8	9	Systematic	02NPR-S0008-F009-01	20-Mar-12	Ray Roberson	19.75	0.4181	0.01431	0.5938	0.6163					
NPR	8	10	Systematic	02NPR-S0008-F010-01	20-Mar-12	Ray Roberson	6.647	0.3868	0.003048	0.3405	0.2864					
NPR	8	11	Systematic	02NPR-S0008-F011-01	20-Mar-12	Ray Roberson	14.76	0.7004	0.01891	0.5639	0.5523					
NPR	8	12	Systematic	02NPR-S0008-F012-01	20-Mar-12	Ray Roberson	7.6	0.4106	0.01558	0.3676	0.3642					
NPR	8	13	Systematic	02NPR-S0008-F013-01	20-Mar-12	Ray Roberson	7.446	0.5572	0.005382	0.1316	0.1788					
NPR	8	14	Systematic	02NPR-S0008-F014-01	20-Mar-12	Ray Roberson	13.7	0.5567	0.0002504	0.461	0.3541					
NPR	8	15	Systematic	02NPR-S0008-F015-01	20-Mar-12	Ray Roberson	9.2	1.372	0	0.1433	0.3839					
NPR	8	16	Systematic	02NPR-S0008-F016-01	20-Mar-12	Ray Roberson	10.18	0.521	0.1015	0.3462	0.3982	9.48	0.448	0.135	0.448	0.452
NPR	8	17	Systematic	02NPR-S0008-F017-01	20-Mar-12	Ray Roberson	6.148	0.2883	0	0.1326	0.1466					
NPR	8	18	Systematic	02NPR-S0008-F018-01	20-Mar-12	Ray Roberson	9.668	1.051	0.01413	0.4937	0.3884					
NPR	8	19	Systematic	02NPR-S0008-F019-01	20-Mar-12	Ray Roberson	10.33	0.5413	-0.01	0.593	0.6043					
NPR	8	20	Systematic	02NPR-S0008-F020-01	20-Mar-12	Ray Roberson	10.05	0.7987	0.03273	0.1227	0.3978					
NPR	8	21	Systematic	02NPR-S0008-F021-01	20-Mar-12	Ray Roberson	6.577	0.218	0.03881	0.3036	0.324					
NPR	8	22	Systematic	02NPR-S0008-F022-01	20-Mar-12	Ray Roberson	6.708	0.4742	-0.003141	0.1273	0.2826					
NPR	8	23	Characterization	02NPR-S0008-F023-01	20-Apr-12	Joe Cunningham	8.291	0.629	0.0218	0.3592	0.4075					
NPR	8	24	Characterization	02NPR-S0008-F024-01	20-Apr-12	Joe Cunningham	9.068	0.2572	-0.003712	0.1159	0.2874					
NPR	8	25	Characterization	02NPR-S0008-F025-01	20-Apr-12	Joe Cunningham	8.288	0.257	0.00955	0.04536	0.3301					
NPR	8	26	Characterization	02NPR-S0008-F026-01	20-Apr-12	Joe Cunningham	8.834	0.2725	0.0001099	0.06355	0.2194					
NPR	8	27	Characterization	02NPR-S0008-F027-01	20-Apr-12	Joe Cunningham	9.65	0.5286	0.04645	0.3001	0.3547					
NPR	8	28	Characterization	02NPR-S0008-F028-01	20-Apr-12	Joe Cunningham	8.243	0.3939	0.05781	0.3784	0.3605					
NPR	8	29	Characterization	02NPR-S0008-F029-01	20-Apr-12	Joe Cunningham	9.473	-0.2305	0.02772	0.3565	0.3035					
NPR	8	30	Post-Remediation	02NPR-S0008-F030-01	01-May-12	Ray Roberson	12.13	0.1902	0.008937	0.3832	0.454					
NPR	8	31	Post-Remediation	02NPR-S0008-F031-01	01-May-12	Ray Roberson	10.58	0.4347	-0.007061	0.4676	0.5156					
NPR	8	32	Systematic	02NPR-S0008-F032-01	31-May-12	Ray Roberson	1.937	0.09594	-0.001212	0.04871	0.1684	0.944	0.292	0	0.292	0.284
NPR	8	33	Systematic	02NPR-S0008-F033-01	31-May-12	Ray Roberson	0.7828	-0.1865	0.01881	0.08627	0.08277	1.3	0.174	-0.000734	0.174	0.323
NPR	8	34	Systematic	02NPR-S0008-F034-01	31-May-12	Ray Roberson	1.061	0.2093	0.009134	-0.0001145	0.1194	1.38	0.179	0	0.179	0.215
NPR	8	35	Systematic	02NPR-S0008-F035-01	31-May-12	Ray Roberson	0.9234	0.2225	0	0.1188	0.08785	1.25	0.213	0	0.213	0.187
NPR	8	36	Systematic	02NPR-S0008-F036-01	31-May-12	Ray Roberson	2.004	0.4195	-0.004758	0.04809	0.0725	1.73	0.262	-0.0142	0.262	0.192
NPR	8	37	Systematic	02NPR-S0008-F037-01	31-May-12	Ray Roberson	1.132	0.2549	-0.005983	0.2273	0.1908	0.707	0.00926	0.00795	0.00926	0.174
NPR	8	38	Systematic	02NPR-S0008-F038-01	31-May-12	Ray Roberson	0.6315	0.1172	-0.0004218	0.1033	0.06921	1.51	0.188	0.000663	0.188	0.251
NPR	8	39	Systematic	02NPR-S0008-F039-01	31-May-12	Ray Roberson	1.258	0.2758	-0.0002623	0.05634	0.1785	1.57	0.0812	-0.00777	0.0812	0.232
NPR	8	40	Systematic	02NPR-S0008-F040-01	31-May-12	Ray Roberson	1.49	-0.07547	0.0003182	0.0362	0.1261	1.15	0.316	-0.0191	0.316	0.16
NPR	8	41	Systematic	02NPR-S0008-F041-01	31-May-12	Ray Roberson	0.9979	0.4165	0	0.07761	0.1752	1.61	0.276	0.00618	0.276	0.24
NPR	8	42	Systematic	02NPR-S0008-F042-01	31-May-12	Ray Roberson	0.9346	0.1941	-0.004913	0.09914	0.2	1.23	0.154	0.000856	0.154	0.241
NPR	8	43	Systematic	02NPR-S0008-F043-01	31-May-12	Ray Roberson	1.54	-0.01456	-0.00313	0.1027	0.05463	0.738	0.0457	-0.00545	0.0457	0.172
NPR	8	44	Systematic	02NPR-S0008-F044-01	31-May-12	Ray Roberson	1.542	0	0	0.06731	0.1201	1.19	0.101	0.00828	0.101	0.0914
NPR	8	45	Systematic	02NPR-S0008-F045-01	31-May-12	Ray Roberson	1.238	0.01633	0	0.08637	0.2584	1.56	0.216	0.00978	0.216	0.143
NPR	8	46	Systematic	02NPR-S0008-F046-01	31-May-12	Ray Roberson	1.464	0	0.001993	0.07479	0.1781	1.56	0.0449	0.0147	0.0449	0.265
NPR	8	47	Systematic	02NPR-S0008-F047-01	31-May-12	Ray Roberson	1.131	0.3498	0.003476	0.09405	0.03624	0.48	0.316	0.00633	0.316	0.291
NPR	8	48	Systematic	02NPR-S0008-F048-01	31-May-12	Ray Roberson	0.9271	0.3262	-0.002614	0.06878	0.1388	1.51	0.0728	0.00455	0.0728	0.24
NPR	8	49	Systematic	02NPR-S0008-F049-01	31-May-12	Ray Roberson	1.481	0.2473	0	0.1782	0.09971	1.66	0.337	-0.0244	0.337	0.26
NPR	8	50	Systematic	02NPR-S0008-F050-01	31-May-12	Ray Roberson	1.472	0.4613	-0.006526	0.1717	0.1271	1.33	0.231	0.00316	0.231	0.316
NPR	8	51	Systematic	02NPR-S0008-F051-01	31-May-12	Ray Roberson	1.183	0.3082	0	0.1457	0.2437	1.26	0.201	0	0.201	0.254

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



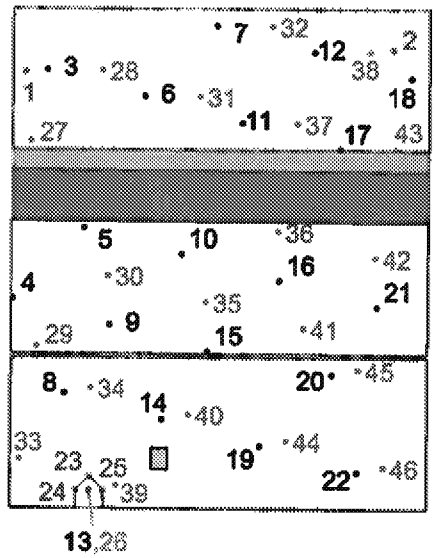
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

SU-08
North Pier
03/06/2012

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NPR-SU08.mxd

TETRA TECH EC, INC.



SU-10

CLASS 1

793.91 m^2 (8545.63 ft^2)

LEGEND:

- 1 BIASED 1–2
- 3 SYSTEMATIC 1 3–22
- 23 CHARACTERIZATION 23–25
- 26 POST–REMEDIATION 26
- 32 SYSTEMATIC 2 27–46

AREAS PREVIOUSLY REMEDIATED

ROCK

CONCRETE

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:18:47

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 10

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/22/2012 9:36	5310	6386	-1076	600-BKGDS1B	6765	
2	3/22/2012 9:37	6505	6386	119	600-BKGDS1B	6765	
3	3/22/2012 9:39	5724	6386	-662	600-BKGDS1B	6765	
4	3/22/2012 9:40	3956	6386	-2430	600-BKGDS1B	6765	
5	3/22/2012 9:42	6197	6386	-189	600-BKGDS1B	6765	
6	3/22/2012 9:43	5504	6386	-882	600-BKGDS1B	6765	
7	3/22/2012 9:45	5490	6386	-896	600-BKGDS1B	6765	
8	3/22/2012 9:46	3237	6386	-3149	600-BKGDS1B	6765	
9	3/22/2012 9:48	4927	6386	-1459	600-BKGDS1B	6765	
10	3/22/2012 9:49	3999	6386	-2387	600-BKGDS1B	6765	
11	3/22/2012 9:51	4169	6386	-2217	600-BKGDS1B	6765	
12	3/22/2012 9:52	5999	6386	-387	600-BKGDS1B	6765	
13	3/22/2012 9:54	5884	6386	-502	600-BKGDS1B	6765	
14	3/22/2012 9:55	3343	6386	-3043	600-BKGDS1B	6765	
15	3/22/2012 9:57	3716	6386	-2670	600-BKGDS1B	6765	
16	3/22/2012 9:58	3617	6386	-2769	600-BKGDS1B	6765	
17	3/22/2012 9:59	5726	6386	-660	600-BKGDS1B	6765	
18	3/22/2012 10:01	5881	6386	-505	600-BKGDS1B	6765	
19	3/22/2012 10:03	3359	6386	-3027	600-BKGDS1B	6765	
20	3/22/2012 10:04	3560	6386	-2826	600-BKGDS1B	6765	
21	3/22/2012 10:06	3779	6386	-2607	600-BKGDS1B	6765	
22	3/22/2012 10:07	5696	6386	-690	600-BKGDS1B	6765	
23	4/20/2012 13:40	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
24	4/20/2012 13:41	6435	6386	49	600-BKGDS1B	6765	
25	4/20/2012 13:42	6381	6386	-5	600-BKGDS1B	6765	
26	5/1/2012 15:07	[illegible]	6386	[illegible]	600-BKGDS1B	6765	
27	5/31/2012 15:41	4881	6808	-1927	630-BKGDS1B	8141	
28	5/31/2012 15:42	5694	6808	-1114	630-BKGDS1B	8141	
29	5/31/2012 15:43	3301	6808	-3507	630-BKGDS1B	8141	
30	5/31/2012 15:45	3533	6808	-3275	630-BKGDS1B	8141	
31	5/31/2012 15:46	4865	6808	-1943	630-BKGDS1B	8141	
32	5/31/2012 15:47	6110	6808	-698	630-BKGDS1B	8141	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR **Survey Unit:** 10 **Class:** 1 **Area:** 793.91 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/31/2012 15:48	3673	6808	-3135	630-BKGDS1B	8141	
34	5/31/2012 15:49	3438	6808	-3370	630-BKGDS1B	8141	
35	5/31/2012 15:50	3035	6808	-3773	630-BKGDS1B	8141	
36	5/31/2012 15:51	4766	6808	-2042	630-BKGDS1B	8141	
37	5/31/2012 15:52	5604	6808	-1204	630-BKGDS1B	8141	
38	5/31/2012 15:53	5462	6808	-1346	630-BKGDS1B	8141	
39	5/31/2012 15:55	5240	6808	-1568	630-BKGDS1B	8141	
40	5/31/2012 15:56	3397	6808	-3411	630-BKGDS1B	8141	
41	5/31/2012 15:57	4600	6808	-2208	630-BKGDS1B	8141	
42	5/31/2012 15:58	3771	6808	-3037	630-BKGDS1B	8141	
43	5/31/2012 15:59	3880	6808	-2928	630-BKGDS1B	8141	
44	5/31/2012 16:00	3228	6808	-3580	630-BKGDS1B	8141	
45	5/31/2012 16:02	3839	6808	-2969	630-BKGDS1B	8141	
46	5/31/2012 16:03	3103	6808	-3705	630-BKGDS1B	8141	

Net Gamma cpm Summary

Min: -3773
Avg: -1808
Max: 1859
St Dev: 1350

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to Instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360 Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm):	6386
Standard Deviation:	127
Gamma 3σ Investigation Level (cpm):	6765

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588 Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm):	6808
Standard Deviation:	444
Gamma 3σ Investigation Level (cpm):	8141

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870		
Instrument Calibration Due Date:	10/10/2012	Reference Area Background Location:	Parcel D-1 Reference
		Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	3/22/2012	6	
2	3/22/2012	7	
3	3/22/2012	6	
4	3/22/2012	4	
5	3/22/2012	5	
6	3/22/2012	7	
7	3/22/2012	6	
8	3/22/2012	4	
9	3/22/2012	5	
10	3/22/2012	5	
11	3/22/2012	6	
12	3/22/2012	6	
13	3/22/2012	6	
14	3/22/2012	4	
15	3/22/2012	5	
16	3/22/2012	5	
17	3/22/2012	6	
18	3/22/2012	6	
19	3/22/2012	4	
20	3/22/2012	4	
21	3/22/2012	5	
22	3/22/2012	5	
23	4/20/2012	7	
24	4/20/2012	6	
25	4/20/2012	6	
26	5/1/2012	7	
27	5/31/2012	4	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Rdg #	Date	Exposure Rate (µR/hr)	Comments
28	5/31/2012	5	
29	5/31/2012	4	
30	5/31/2012	4	
31	5/31/2012	4	
32	5/31/2012	4	
33	5/31/2012	6	
34	5/31/2012	4	
35	5/31/2012	4	
36	5/31/2012	4	
37	5/31/2012	4	
38	5/31/2012	5	
39	5/31/2012	5	
40	5/31/2012	5	
41	5/31/2012	4	
42	5/31/2012	4	
43	5/31/2012	4	
44	5/31/2012	4	
45	5/31/2012	4	
46	5/31/2012	4	

Exposure Rate Summary (µR/hr)

Min: 4.00
Avg: 4.98
Max: 7.00
St Dev: 1.02

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02332

Project Name: Radiological Site Survey	PO Number: N/A	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section
Project Location: HUNTERS POINT	Project Number: 4044-0002	LABORATORY ID:	
Sampler Name: RAY ROBERSON	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0010-F001-01	3/22/2012	1400	1		S1		☑	☐	☐			
02NPR-S0010-F002-01	3/22/2012	1405	1		S1		☑	☐	☐			
02NPR-S0010-F003-01	3/22/2012	1410	1		S1		☑	☐	☐			
02NPR-S0010-F004-01	3/22/2012	1415	1		S1		☑	☐	☐			
02NPR-S0010-F005-01	3/22/2012	1420	1		S1		☑	☐	☐			
02NPR-S0010-F006-01	3/22/2012	1425	1		S1		☑	☐	☐			
02NPR-S0010-F007-01	3/22/2012	1430	1		S1		☑	☐	☐			
02NPR-S0010-F008-01	3/22/2012	1435	1		S1		☑	☐	☐	DUP		
02NPR-S0010-F009-01	3/22/2012	1440	1		S1		☑	☐	☐			
02NPR-S0010-F010-01	3/22/2012	1445	1		S1		☑	☐	☐			
02NPR-S0010-F011-01	3/22/2012	1450	1		S1		☑	☐	☐			
02NPR-S0010-F012-01	3/22/2012	1455	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	Date 3-22-12	Received by: (signature) [signature]	LABORATORY INSTRUCTIONS/COMMENTS
Company RSRS	Time 15:56	Company C&T	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:
Company	Time	Company	

SAMPLING COMMENTS
NORTH PIER FSS
50-10
BIASED 1-2
SYSTEMATIC 3-22

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02333

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: RAY ROBERSON	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0010-F013-01	3/22/2012	1500	1		S1		☑	☐	☐			
02NPR-S0010-F014-01	3/22/2012	1505	1		S1		☑	☐	☐			
02NPR-S0010-F015-01	3/22/2012	1510	1		S1		☑	☐	☐			
02NPR-S0010-F016-01	3/22/2012	1515	1		S1		☑	☐	☐			
02NPR-S0010-F017-01	3/22/2012	1520	1		S1		☑	☐	☐			
02NPR-S0010-F018-01	3/22/2012	1525	1		S1		☑	☐	☐			
02NPR-S0010-F019-01	3/22/2012	1530	1		S1		☑	☐	☐			
02NPR-S0010-F020-01	3/22/2012	1535	1		S1		☑	☐	☐			
02NPR-S0010-F021-01	3/22/2012	1540	1		S1		☑	☐	☐			
02NPR-S0010-F022-01	3/22/2012	1545	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	Date 3-22-12	Received by: (signature) [signature]
Company NSRS	Time 15:56	Company C&T
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02384

Project Name: Radiological Site Survey	PO Number: N/A	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section
Project Location: HUNTERS POINT	Project Number: 4044-0002	LABORATORY ID:	
Sampler Name: JOE CUNNINGHAM	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F023-01	4/20/2012	1040	1		S1		☑	☐	☐			
02NPR-S0001-F024-01	4/20/2012	1045	1		S1		☑	☐	☐			
02NPR-S0001-F025-01	4/20/2012	1050	1		S1		☑	☐	☐			
02NPR-S0001-F026-01	4/20/2012	1055	1		S1		☑	☐	☐			
02NPR-S0007-F023-01	4/20/2012	1110	1		S1		☑	☐	☐			
02NPR-S0007-F024-01	4/20/2012	1115	1		S1		☑	☐	☐			
02NPR-S0010-F023-01	4/20/2012	1125	1		S1		☑	☐	☐			
02NPR-S0010-F024-01	4/20/2012	1130	1		S1		☑	☐	☐			
02NPR-S0010-F025-01	4/20/2012	1135	1		S1		☑	☐	☐			

Relinquished by: (signature)	Date: 9-10-12	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS: NORTHPIER BS
Company: [illegible]	Time: 1418	Company: CT		SU-1 CHARACTERIZATION 23-26
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	SU-7 CHARACTERIZATION 23-24
Company	Time	Company		SU-10 CHARACTERIZATION 23-25
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02397

Project Name: Radiological Site Survey	PO Number: N/A	GAMMASPEC	SR90	ALPHA
Project Location: HUNTERS POINT	Project Number: 4044-0002			
Sampler Name: Ray Roberson	Airbill Number: N/A			
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592			

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID: [redacted]

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F027-01	5/1/2012	1530			S1		☑	☐	☐			[redacted]
02NPR-S0008-F030-01	5/1/2012	1520			S1		☑	☐	☐			[redacted]
02NPR-S0008-F031-01	5/1/2012	1525			S1		☑	☐	☐			[redacted]
02NPR-S0010-F026-01	5/1/2012	1515			S1		☑	☐	☐			[redacted]

Relinquished by: (signature) [signature]	Date 05-01-12	Received by: (signature) [signature]	LABORATORY INSTRUCTIONS/COMMENTS: [redacted]
Company RSRS	Time 1610	Company CT	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION: [redacted]
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOPERSEAL
Company	Time	Company	

SAMPLING COMMENTS: [redacted]

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02451

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: R. Roberson	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0010-F027-01	5/31/2012	1355	1		S1		☑	☐	☐			
02NPR-S0010-F028-01.	5/31/2012	1400	1		S1		☑	☐	☐			
02NPR-S0010-F029-01	5/31/2012	1405	1		S1		☑	☐	☐			
02NPR-S0010-F030-01	5/31/2012	1410	1		S1		☑	☐	☐			
02NPR-S0010-F031-01	5/31/2012	1415	1		S1		☑	☐	☐			
02NPR-S0010-F032-01	5/31/2012	1420	1		S1		☑	☐	☐			
02NPR-S0010-F033-01	5/31/2012	1425	1		S1		☑	☐	☐	Dup		
02NPR-S0010-F034-01	5/31/2012	1430	1		S1		☑	☐	☐			
02NPR-S0010-F035-01	5/31/2012	1455	1		S1		☑	☐	☐			
02NPR-S0010-F036-01	5/31/2012	1500	1		S1		☑	☐	☐			
02NPR-S0010-F037-01	5/31/2012	1505	1		S1		☑	☐	☐			
02NPR-S0010-F038-01	5/31/2012	1510	1		S1		☑	☐	☐			

Relinquished by: (signature)	Date: 5-31-12	Received by: (signature)
Company: RSRS	Time: 11:40	Company: CET
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
NORTH PIER FS
30-10
SYSTEMATIC 11-16

ED_004747_00010903-00148

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02452

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: R. Rokeach	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0010-F039-01	5/31/2012	1515	1		S1		☑	☐	☐			
02NPR-S0010-F040-01	5/31/2012	1520	1		S1		☑	☐	☐			
02NPR-S0010-F041-01	5/31/2012	1525	1		S1		☑	☐	☐			
02NPR-S0010-F042-01	5/31/2012	1530	1		S1		☑	☐	☐			
02NPR-S0010-F043-01	5/31/2012	1535	1		S1		☑	☐	☐			
02NPR-S0010-F044-01	5/31/2012	1540	1		S1		☑	☐	☐			
02NPR-S0010-F045-01	5/31/2012	1545	1		S1		☑	☐	☐			
02NPR-S0010-F046-01	5/31/2012	1550	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 5-31-12	*Received by: (signature)*
Company RSRS	*Time* 1040	*Company* CET
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*

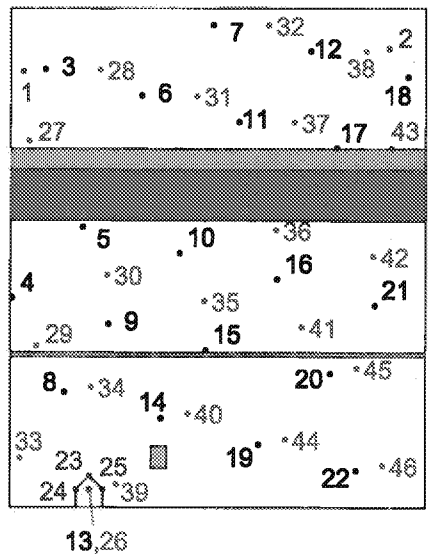
LABORATORY INSTRUCTIONS/COMMENTS:

COMPOSITE DESCRIPTION:

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS:

ED_004747_00010903-00149



SU-10

CLASS 1

793.91 m^2 (8545.63 ft^2)

LEGEND:

- * 1 BIASED 1–2
- • 3 SYSTEMATIC 1 3–22
- • 23 CHARACTERIZATION 23–25
- . 26 POST–REMEDIATION 26
- * 32 SYSTEMATIC 2 27–46

AREAS PREVIOUSLY REMEDIATED

ROCK

CONCRETE

18 — SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:18:47

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 10

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234–8690 FAX: (619) 234–8591

Chiu, George

From: Chiu, George
Sent: Wednesday, July 11, 2012 4:22 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10
Attachments: 02NPR-S0010 027 to 046 Off-Site Gamma.pdf; 02NPR-S0010 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 10.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, June 06, 2012 11:44 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 10. Samples 33, 33DUP, 36, and 39 were recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Friday, May 11, 2012 9:24 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 10. Sample 26 was recounted for a longer duration at the direction of the laboratory manager.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, April 26, 2012 4:52 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for the sample with cesium-137 activity above the release criterion from North Pier Survey Unit 10.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, April 26, 2012 12:42 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 10.

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Tuesday, April 03, 2012 12:57 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

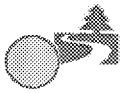
Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 10. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample point 13 (0.1385 pCi/g) due to cesium-137 activity.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.


Think Green - Not every email needs to be printed.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 22, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 10. A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,504 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The RSOR provided the HPNS Team with survey results for wooden railroad ties detailed in Survey Nos. HPS-A-NPR-029 and HPS-A-NPR-030. Because no activity above the release criteria was identified, the 72 items were released for transfer to the recycling stockpiles.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Units 9 and 10.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A total of 18 systematic samples were collected from Trench Unit No. 242 by the HPNS Team and submitted to the on-site laboratory for analysis.
- Backfill activities were initiated in Trench Unit No. 237 by the HPNS Team.
- Backfill activities were completed in Trench Unit No. 239 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 22, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
  - A total of three truckloads of material were received for processing.
  - ES Unit 0660 was staged in the stockpile area pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
  - Soil samples received for gamma spectroscopy analysis: 57
  - Swipe samples received for Protean counts: 52
  - Air samples received: 8
  - Samples analyzed by gamma spectroscopy: 64
  - Gamma spectroscopy samples recounted: 12
  - Protean swipe samples counted: 36
  - Protean air samples counted: 8
- A total of 266 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 81 samples were sent to TestAmerica St. Louis for analysis.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during maintenance and landscaping activities in Parcel E-2.
- Radiological support was provided to Shaw Group for equipment surveys.
- Four outgoing materials and equipment surveys were performed by the HPNS Team.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 22, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities the Building 508 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided below.

Building 508 Site

Towed array gamma scan surveys were completed for Class 1 Survey Unit 1.

Shacks 79 and 80

The HPNS Team issued record drawings to identify locations for the post-remediation samples collected from Class 1 Survey Unit 1.

500 Series Area

The HPNS Team performed towed array gamma scan surveys over the H Street asphalt covering Class 1 Survey Unit 11.

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A total of four characterization gamma static measurements were logged with a maximum measurement of 4,701 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 18 !A total of two characterization gamma static measurements were logged with a maximum measurement of 7,346 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 19 !A total of eleven characterization gamma static measurements were logged with a maximum measurement of 6,709 cpm. In addition, eleven soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 18, and 19.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 7 !A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 !A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 !A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:

- 02-C32-00-1D 45 linear feet completed
- 02-C32-00-1E 6 linear feet completed
- 02-C32-00-1F 44 linear feet completed
- 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
- 02-C32-00-8D 62 linear feet completed
- 02-C32-00-8H 50 linear feet completed

A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.

Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.

The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.

A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.

The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.

Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.

The HPNS Team performed the following RSY4 processing activities:

A total of 13 truckloads of material were received for processing.

Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.

ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.

Began transfer of ES Unit 0675 to the stockpile area.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 36

Swipe samples received for Protean counts: 128

Air samples received: 10

Samples analyzed by gamma spectroscopy: 25

Gamma spectroscopy samples recounted: 5

Protean swipe samples counted: 40

Protean air samples counted: 10

A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.

Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 !A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 !A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 !A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.

Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of six truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 11 truckloads of material were received for processing.

Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.

A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

The HPNS Team provided the RASO with the following:

On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.

On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 30

Swipe samples received for Protean counts: 152

Air samples received: 13

Samples analyzed by gamma spectroscopy: 87

Gamma spectroscopy samples recounted: 8

Protean swipe samples counted: 23

Protean air samples counted: 13

A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 119 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.

The HPNS Team performed Class 1 survey activities as follows:

Asphalt Grid A7 !A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm^2.

Survey Unit 22 !A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.

The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.

The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class l Survey Unit 14. Characterization and remediation will be continued due to the presence of ^{137}Cs contamination as follows:

- Sample Point 7 (07500SA-S0014-F007-01) with ^{137}Cs at 0.1183 pCi/g
- Sample Point 17 (07500SA-S0014-F017-01) with ^{137}Cs at 0.2425 pCi/g
- Sample Point 37 (07500SA-S0014-F037-01) with ^{137}Cs at 0.3768 pCi/g

The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-7F 133 linear feet completed
- 07-E36-00-7G 10 linear feet completed
- 07-E36-00-7H 12 linear feet completed
- 07-E36-00-7I 6 linear feet completed
- 07-E36-00-8Y 25 linear feet completed

A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.

Excavated Manhole MH1244 was placed on plastic pending further activities.

The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ^{137}Cs contamination as follows:

- Manhole MH1302 (07-PEMH1302-013-01) with ^{137}Cs at 0.2161 pCi/g
- Manhole MH1303 (07-PEMH1303-014-01) with ^{137}Cs at 0.1319 pCi/g

The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 17 (0.2726 pCi/g).

The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.

Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.

The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.

The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.

Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 13 truckloads of material were received for processing.

Began transfer of ES Unit 0700 to the stockpile area.

The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

After evaluating the data, the RASO concurred with the following:

Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 140

Swipe samples received for Protean counts: 151

Air samples received: 13

Samples analyzed by gamma spectroscopy: 76

Gamma spectroscopy samples recounted: 13

Protean swipe samples counted: 20

Protean air samples counted: 16

A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 71 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 4. Characterization and remediation will be performed due to the presence of ^{90}Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.

The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPNS Team provided the RASO with total strontium analytical results for the ^{137}Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-4D 10 linear feet completed
- 07-E36-00-4E 51 linear feet completed
- 07-E36-00-4F 5 linear feet completed
- 07-E36-00-4G 27 linear feet completed
- 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
- 07-E36-38-1W 38 linear feet completed
- 07-E36-38-2B 17 linear feet completed
- 07-E36-38-4A 9 linear feet completed
- 07-E36-38-5A 10 linear feet completed

A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.

Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.

The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.

A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.

The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
NPR	10	1	Biased	02NPR-S0010-F001-01	22-Mar-12	Ray Roberson
NPR	10	2	Biased	02NPR-S0010-F002-01	22-Mar-12	Ray Roberson
NPR	10	3	Systematic	02NPR-S0010-F003-01	22-Mar-12	Ray Roberson
NPR	10	4	Systematic	02NPR-S0010-F004-01	22-Mar-12	Ray Roberson
NPR	10	5	Systematic	02NPR-S0010-F005-01	22-Mar-12	Ray Roberson
NPR	10	6	Systematic	02NPR-S0010-F006-01	22-Mar-12	Ray Roberson
NPR	10	7	Systematic	02NPR-S0010-F007-01	22-Mar-12	Ray Roberson
NPR	10	8	Systematic	02NPR-S0010-F008-01	22-Mar-12	Ray Roberson
NPR	10	9	Systematic	02NPR-S0010-F009-01	22-Mar-12	Ray Roberson
NPR	10	10	Systematic	02NPR-S0010-F010-01	22-Mar-12	Ray Roberson
NPR	10	11	Systematic	02NPR-S0010-F011-01	22-Mar-12	Ray Roberson
NPR	10	12	Systematic	02NPR-S0010-F012-01	22-Mar-12	Ray Roberson
NPR	10	13	Systematic	02NPR-S0010-F013-01	22-Mar-12	Ray Roberson
NPR	10	14	Systematic	02NPR-S0010-F014-01	22-Mar-12	Ray Roberson
NPR	10	15	Systematic	02NPR-S0010-F015-01	22-Mar-12	Ray Roberson
NPR	10	16	Systematic	02NPR-S0010-F016-01	22-Mar-12	Ray Roberson
NPR	10	17	Systematic	02NPR-S0010-F017-01	22-Mar-12	Ray Roberson
NPR	10	18	Systematic	02NPR-S0010-F018-01	22-Mar-12	Ray Roberson
NPR	10	19	Systematic	02NPR-S0010-F019-01	22-Mar-12	Ray Roberson
NPR	10	20	Systematic	02NPR-S0010-F020-01	22-Mar-12	Ray Roberson
NPR	10	21	Systematic	02NPR-S0010-F021-01	22-Mar-12	Ray Roberson
NPR	10	22	Systematic	02NPR-S0010-F022-01	22-Mar-12	Ray Roberson
NPR	10	23	Characterization	02NPR-S0010-F023-01	20-Apr-12	Joe Cunningham
NPR	10	24	Characterization	02NPR-S0010-F024-01	20-Apr-12	Joe Cunningham
NPR	10	25	Characterization	02NPR-S0010-F025-01	20-Apr-12	Joe Cunningham
NPR	10	26	Post-Remediation	02NPR-S0010-F026-01	01-May-12	Ray Roberson
NPR	10	27	Systematic	02NPR-S0010-F027-01	31-May-12	Ray Roberson
NPR	10	28	Systematic	02NPR-S0010-F028-01	31-May-12	Ray Roberson
NPR	10	29	Systematic	02NPR-S0010-F029-01	31-May-12	Ray Roberson
NPR	10	30	Systematic	02NPR-S0010-F030-01	31-May-12	Ray Roberson
NPR	10	31	Systematic	02NPR-S0010-F031-01	31-May-12	Ray Roberson
NPR	10	32	Systematic	02NPR-S0010-F032-01	31-May-12	Ray Roberson
NPR	10	33	Systematic	02NPR-S0010-F033-01	31-May-12	Ray Roberson
NPR	10	34	Systematic	02NPR-S0010-F034-01	31-May-12	Ray Roberson
NPR	10	35	Systematic	02NPR-S0010-F035-01	31-May-12	Ray Roberson
NPR	10	36	Systematic	02NPR-S0010-F036-01	31-May-12	Ray Roberson
NPR	10	37	Systematic	02NPR-S0010-F037-01	31-May-12	Ray Roberson
NPR	10	38	Systematic	02NPR-S0010-F038-01	31-May-12	Ray Roberson
NPR	10	39	Systematic	02NPR-S0010-F039-01	31-May-12	Ray Roberson
NPR	10	40	Systematic	02NPR-S0010-F040-01	31-May-12	Ray Roberson
NPR	10	41	Systematic	02NPR-S0010-F041-01	31-May-12	Ray Roberson
NPR	10	42	Systematic	02NPR-S0010-F042-01	31-May-12	Ray Roberson
NPR	10	43	Systematic	02NPR-S0010-F043-01	31-May-12	Ray Roberson
NPR	10	44	Systematic	02NPR-S0010-F044-01	31-May-12	Ray Roberson
NPR	10	45	Systematic	02NPR-S0010-F045-01	31-May-12	Ray Roberson
NPR	10	46	Systematic	02NPR-S0010-F046-01	31-May-12	Ray Roberson
NPR	10	47	Systematic	02NPR-S0010-F047-01	31-Oct-12	Jane Taylor
NPR	10	48	Systematic	02NPR-S0010-F048-01	31-Oct-12	Jane Taylor
NPR	10	49	Systematic	02NPR-S0010-F049-01	31-Oct-12	Jane Taylor
NPR	10	50	Systematic	02NPR-S0010-F050-01	31-Oct-12	Jane Taylor
NPR	10	51	Systematic	02NPR-S0010-F051-01	31-Oct-12	Jane Taylor
NPR	10	52	Systematic	02NPR-S0010-F052-01	31-Oct-12	Jane Taylor

On-Site Laboratory (pCi/g)

K-40	[illegible]	Cs-137	Bi-214	Pb-214
20.29	0.6785	0.006007	0.5414	0.6019
25.15	0.9764	0.0008236	0.477	0.76
22.21	0.7281	0	0.5743	0.638
8.129	0.4927	0.002939	0.2472	0.2819
21.87	0	0	0.3676	0.6057
21.21	0.7082	0.004968	0.5793	0.6405
23.88	1.084	0.009986	0.5716	0.494
6.029	0	0.003649	0.1115	0.1074
12.51	0.6535	0.0158	0.454	0.5068
8.211	0.7645	0.002413	0.2651	0.2636
12.02	0.5267	0.01141	0.2673	0.384
20.07	0.756	0.0003937	0.3785	0.4575
12.65	0.7291	0.1385	0.4345	0.4294
9.99	0.9019	0.01055	0.3372	0.4236
6.374	0.2811	-0.008514	0.3078	0.1898
8.387	-0.008364	0.007262	0.2291	0.1766
19.23	0.7533	0.01825	0.5409	0.6524
21.55	0.7939	0.01367	0.371	0.6143
7.232	0.5372	0.003082	0.2756	0.2896
5.682	0.1672	0.00757	0.0741	0.09625
7.186	0.1795	0.004648	0.2271	0.374
9.381	0.6213	0	0.2476	0.295
12.07	0.7697	0.06063	0.375	0.4531
11.9	0.3375	0.0431	0.4349	0.474
13.28	0.291	0.08269	0.4161	0.3279
22.62	0.7754	0.07525	0.5631	0.7483
0.6833	0.1434	-0.0107	0.09833	0.06932
1.251	0.2882	0.0005249	0.09179	0.07474
0.806	0.1784	-0.00678	0.03678	0.1156
0.9158	-0.1069	-0.006464	0.1221	0.1994
1.222	-0.0001456	0	0.08415	0.03793
1.094	0.005098	0.003857	0.05481	0.05865
0.9647	0.1142	0.00404	0.1511	0.1413
0.6492	0.2877	0.005153	0.06135	0.08519
1.011	0.1667	-0.004119	0	0.07747
0.6255	0.1625	-0.002526	0.02841	0.1163
0.7935	0.1306	0.0003526	0.09417	0.1602
1.091	0.1954	0.000761	0.04725	0.05852
0.7188	0.3153	0.0003057	0.105	0.1524
0.5535	0.107	0	0.04784	0.03953
0.8721	0.1425	0	0.09018	0.04439
0.6762	0.4663	-0.008189	0.1209	0.1566
0.4261	0.1519	0.0002431	0.07846	0.0328
1.36	0.3864	0.001372	0.05841	0.1962
1.35	0.4059	-0.004177	0.07377	0.076
0.8907	0.01069	-0.000561	0.0672	0.09132
14.23	0.8226	0	0.4883	0.5446
11.57	0.7266	0.02279	0.4369	0.4187
11.74	0.8703	0	0.4374	0.3718
12.6	0.5098	0.003433	0.3722	0.5953
9.3	0.279	0.005266	0.1725	0.2999
7.858	0.5698	0.0176	0.2641	0.1399

Off-Site Laboratory (pCi/g)

K-40	[illegible]	Cs-137	Bi-214	Pb-214
1.25	0.183	0.00878	0.183	0.0618
1.41	-0.0351	0.00842	-0.0351	0.0712
1.19	0.115	-0.00304	0.115	0.124
1.02	0.145	0.00362	0.145	0.184
0.244	0.245	0.00557	0.245	0.0911
0.296	0.227	0.00727	0.227	0.309
0.326	0.44	0.0151	0.44	0.204
0.612	0.0384	0.017	0.0384	0.168
1.45	-0.0185	0.00207	-0.0185	0.0909
0.676	0.0403	0.00114	0.0403	0.23
0.709	0.0787	0.0245	0.0787	0.0787
0.161	0.114	0.0311	0.114	0.134
0.666	0.234	0.0269	0.234	0.178
1.36	0.047	-0.0143	0.047	0.166
0.309	0.207	0.00247	0.207	0.235
1.07	0.0268	0.00806	0.0268	0.202
-0.219	0.0677	-0.0102	0.0677	0.189
0.464	0.159	-0.0115	0.159	0.183
0.515	0.021	0.00263	0.021	0.18
0.456	0.0579	0.00599	0.0579	0.239

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
NPR	10	53	Systematic	02NPR-S0010-F053-01	31-Oct-12	Jane Taylor
NPR	10	54	Systematic	02NPR-S0010-F054-01	31-Oct-12	Jane Taylor
NPR	10	55	Systematic	02NPR-S0010-F055-01	31-Oct-12	Jane Taylor
NPR	10	56	Systematic	02NPR-S0010-F056-01	31-Oct-12	Jane Taylor
NPR	10	57	Systematic	02NPR-S0010-F057-01	31-Oct-12	Jane Taylor
NPR	10	58	Systematic	02NPR-S0010-F058-01	31-Oct-12	Jane Taylor
NPR	10	59	Systematic	02NPR-S0010-F059-01	31-Oct-12	Jane Taylor
NPR	10	60	Systematic	02NPR-S0010-F060-01	31-Oct-12	Jane Taylor
NPR	10	61	Systematic	02NPR-S0010-F061-01	31-Oct-12	Jane Taylor
NPR	10	62	Systematic	02NPR-S0010-F062-01	31-Oct-12	Jane Taylor
NPR	10	63	Systematic	02NPR-S0010-F063-01	31-Oct-12	Jane Taylor
NPR	10	64	Systematic	02NPR-S0010-F064-01	31-Oct-12	Jane Taylor
NPR	10	65	Systematic	02NPR-S0010-F065-01	31-Oct-12	Jane Taylor
NPR	10	66	Systematic	02NPR-S0010-F066-01	31-Oct-12	Jane Taylor

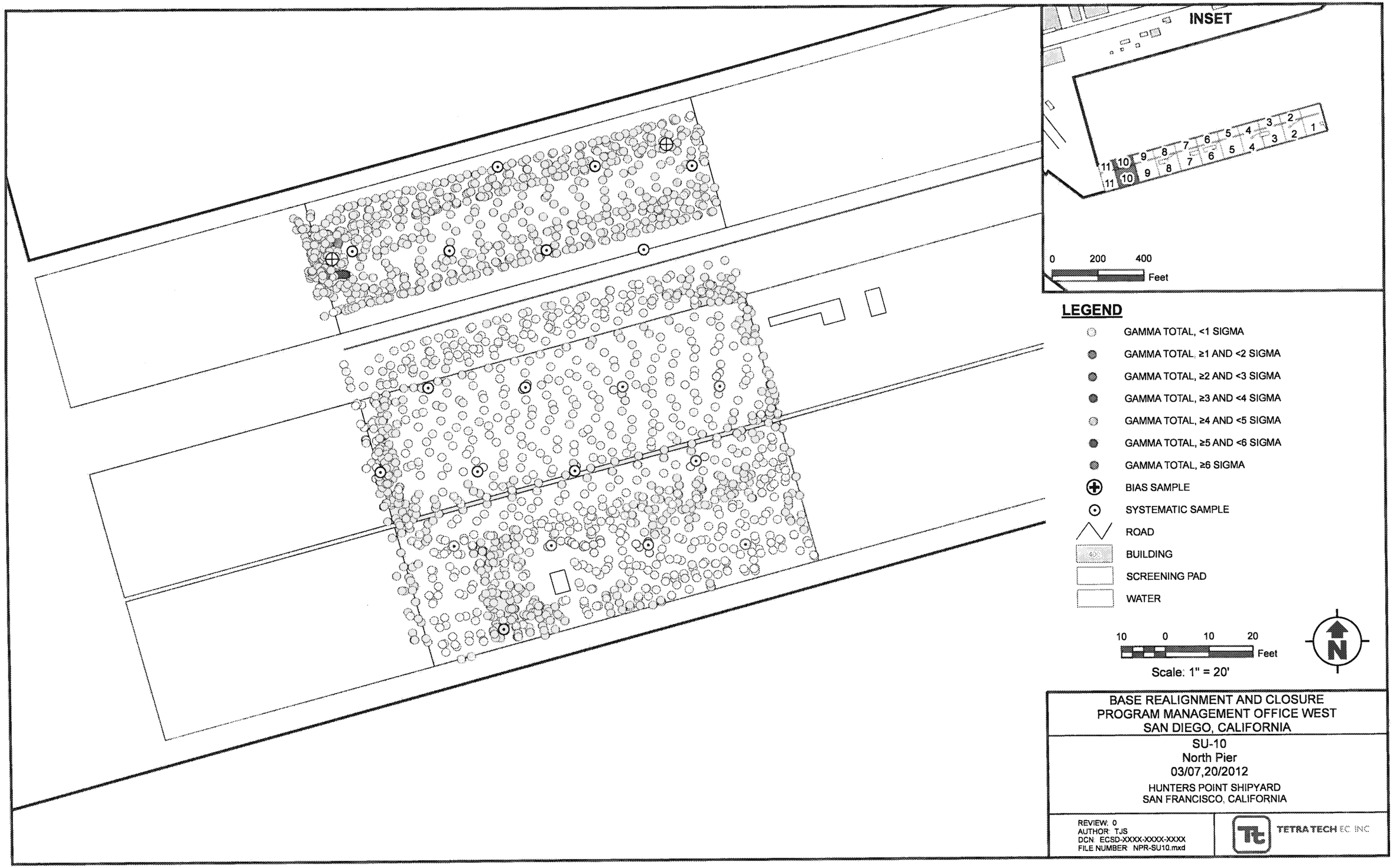
On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
7.347	0.4667	0.01041	0.1955	0.1878
7.815	0.5893	-0.005018	0.2884	0.3019
14.67	1.03	0.01024	0.2767	0.3451
6.409	0.3325	0.001845	0.07646	0.1466
7.624	0.6869	0	0.09832	0.2438
7.358	0.3283	0.009023	0.221	0.2263
8.012	0.4138	0	0.2028	0.2255
7.118	0.6714	0	0	0.217
6.339	0.07396	0	0.1617	0.2319
8.099	0.571	0	0.2031	0.2897
9.678	0.5663	0.01302	0.1993	0.2959
6.338	0.2462	-0.0007313	0.08899	0.08067
4.76	0.2164	-0.003095	0.02739	0.06509
21.04	1.078	0.0003142	0.7597	0.6944

Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



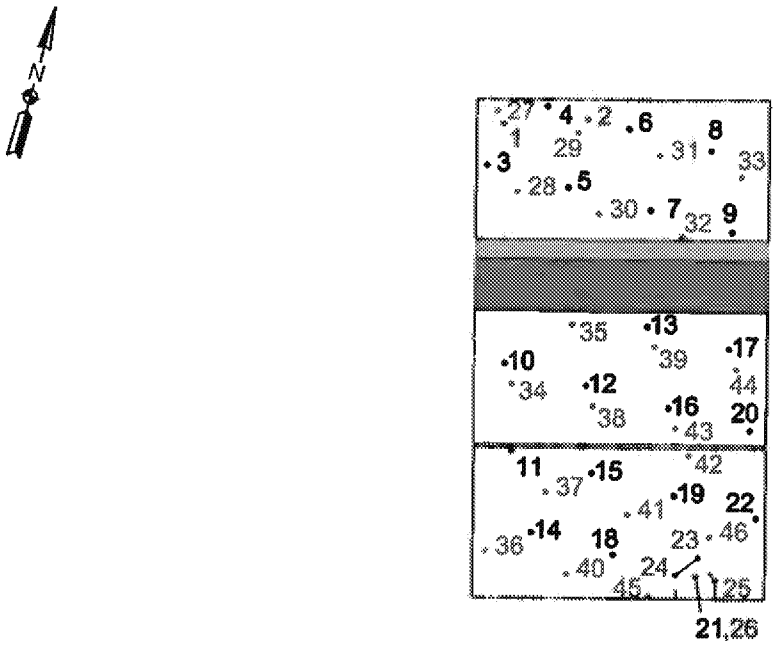
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

SU-10
North Pier
03/07,20/2012

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NPR-SU10.mxd

TETRA TECH EC INC



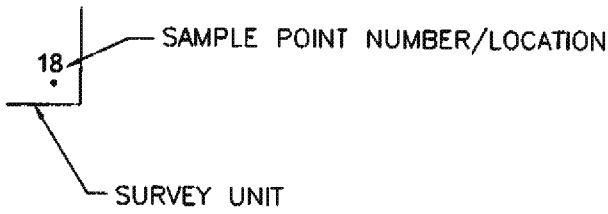
SU-11

CLASS 1

556.60 m^2 (5991.20 ft^2)

LEGEND:

- 1 BIASED 1–2
- 3 SYSTEMATIC 3–22
- 23 CHARACTERIZATION 23–25
- 26 POST–REMEDIATION 26
- 32 SYSTEMATIC 2 27–46
- AREAS PREVIOUSLY REMEDIATED
- ROCK
- CONCRETE



RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\8_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:13:48

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 11

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (com)	Comments
1	3/21/2012 10:52	5590	6386	-796	600-BKGDS1B	6765	
2	3/21/2012 10:54	6349	6386	-37	600-BKGDS1B	6765	
3	3/21/2012 10:55	5800	6386	-586	600-BKGDS1B	6765	
4	3/21/2012 10:57	5087	6386	-1299	600-BKGDS1B	6765	
5	3/21/2012 10:59	6262	6386	-124	600-BKGDS1B	6765	
6	3/21/2012 11:00	6400	6386	14	600-BKGDS1B	6765	
7	3/21/2012 11:02	4947	6386	-1439	600-BKGDS1B	6765	
8	3/21/2012 11:03	6692	6386	306	600-BKGDS1B	6765	
9	3/21/2012 11:04	5381	6386	-1005	600-BKGDS1B	6765	
10	3/21/2012 11:06	5947	6386	-439	600-BKGDS1B	6765	
11	3/21/2012 11:07	4422	6386	-1964	600-BKGDS1B	6765	
12	3/21/2012 11:09	4635	6386	-1751	600-BKGDS1B	6765	
13	3/21/2012 11:10	4344	6386	-2042	600-BKGDS1B	6765	
14	3/21/2012 11:12	5376	6386	-1010	600-BKGDS1B	6765	
15	3/21/2012 11:14	4183	6386	-2203	600-BKGDS1B	6765	
16	3/21/2012 11:16	5147	6386	-1239	600-BKGDS1B	6765	
17	3/21/2012 11:17	4440	6386	-1946	600-BKGDS1B	6765	
18	3/21/2012 11:19	5118	6386	-1268	600-BKGDS1B	6765	
19	3/21/2012 11:21	3923	6386	-2463	600-BKGDS1B	6765	
20	3/21/2012 11:22	3622	6386	-2764	600-BKGDS1B	6765	
21	3/21/2012 11:24	5907	6386	-479	600-BKGDS1B	6765	
22	3/21/2012 11:25	2912	6386	-3474	600-BKGDS1B	6765	
23	5/1/2012 15:04	4134	6386	-2252	600-BKGDS1B	6765	
24	5/1/2012 15:05	5582	6386	-804	600-BKGDS1B	6765	
25	5/1/2012 15:06	5612	6386	-774	600-BKGDS1B	6765	
26	5/9/2012 10:02	6493	6066	427	630-BKGDS1A	7326	
27	5/31/2012 16:04	5460	6808	-1348	630-BKGDS1B	8141	
28	5/31/2012 16:05	4855	6808	-1953	630-BKGDS1B	8141	
29	5/31/2012 16:06	6600	6808	-208	630-BKGDS1B	8141	
30	5/31/2012 16:07	5132	6808	-1676	630-BKGDS1B	8141	
31	5/31/2012 16:09	6063	6808	-745	630-BKGDS1B	8141	
32	5/31/2012 16:10	4672	6808	-2136	630-BKGDS1B	8141	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ investigation Level (cpm)	Comments
33	5/31/2012 16:11	5290	6808	-1518	630-BKGDS1B	8141	
34	5/31/2012 16:12	5165	6808	-1643	630-BKGDS1B	8141	
35	5/31/2012 16:13	4808	6808	-2000	630-BKGDS1B	8141	
36	5/31/2012 16:14	4846	6808	-1962	630-BKGDS1B	8141	
37	5/31/2012 16:15	4091	6808	-2717	630-BKGDS1B	8141	
38	5/31/2012 16:16	4608	6808	-2200	630-BKGDS1B	8141	
39	5/31/2012 16:17	4045	6808	-2763	630-BKGDS1B	8141	
40	5/31/2012 16:18	5118	6808	-1690	630-BKGDS1B	8141	
41	5/31/2012 16:19	3461	6808	-3347	630-BKGDS1B	8141	
42	5/31/2012 16:20	3539	6808	-3269	630-BKGDS1B	8141	
43	5/31/2012 16:21	4933	6808	-1875	630-BKGDS1B	8141	
44	5/31/2012 16:22	4146	6808	-2662	630-BKGDS1B	8141	
45	5/31/2012 16:23	5102	6808	-1706	630-BKGDS1B	8141	
46	5/31/2012 16:25	3249	6808	-3559	630-BKGDS1B	8141	

Net Gamma cpm Summary

Min: -3559
Avg: -1573
Max: 427
St Dev: 1008

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360 Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm):	6386
Standard Deviation:	127
Gamma 3σ Investigation Level (cpm):	6765

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588 Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-8KGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/07/2012 13:53	5960
2	05/07/2012 13:54	6454
3	05/07/2012 13:55	6379
4	05/07/2012 13:56	6341
5	05/07/2012 13:58	6462
6	05/07/2012 13:59	5562
7	05/07/2012 14:00	6147
8	05/07/2012 14:01	6082
9	05/07/2012 14:02	6563
10	05/07/2012 14:04	6738
11	05/07/2012 14:06	5328
12	05/07/2012 14:07	5349
13	05/07/2012 14:09	5317
14	05/07/2012 14:10	6023
15	05/07/2012 14:11	6016
16	05/07/2012 14:12	6229
17	05/07/2012 14:13	6439
18	05/07/2012 14:15	6218
19	05/07/2012 14:18	5862
20	05/07/2012 14:19	5857

Gamma Mean Background (cpm):	6066
Standard Deviation:	420
Gamma 3σ Investigation Level (cpm):	7326

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588 Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGDS18 Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm):	6808
Standard Deviation:	444
Gamma 3σ Investigation Level (cpm):	8141

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	10/10/2012	Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	3/21/2012	6	
2	3/21/2012	7	
3	3/21/2012	6	
4	3/21/2012	6	
5	3/21/2012	5	
6	3/21/2012	7	
7	3/21/2012	7	
8	3/21/2012	7	
9	3/21/2012	6	
10	3/21/2012	7	
11	3/21/2012	5	
12	3/21/2012	6	
13	3/21/2012	6	
14	3/21/2012	5	
15	3/21/2012	5	
16	3/21/2012	5	
17	3/21/2012	5	
18	3/21/2012	5	
19	3/21/2012	4	
20	3/21/2012	5	
21	3/21/2012	5	
22	3/21/2012	4	
23	5/1/2012	4	
24	5/1/2012	5	
25	5/1/2012	5	
26	5/9/2012	6	
27	5/31/2012	5	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Rdg #	Date	Exposure Rate (µR/hr)	Comments
28	5/31/2012	4	
29	5/31/2012	6	
30	5/31/2012	5	
31	5/31/2012	6	
32	5/31/2012	4	
33	5/31/2012	5	
34	5/31/2012	5	
35	5/31/2012	4	
36	5/31/2012	4	
37	5/31/2012	4	
38	5/31/2012	4	
39	5/31/2012	4	
40	5/31/2012	5	
41	5/31/2012	4	
42	5/31/2012	4	
43	5/31/2012	4	
44	5/31/2012	4	
45	5/31/2012	5	
46	5/31/2012	4	

Exposure Rate Summary (µR/hr)

Min: 4.00
Avg: 5.09
Max: 7.00
St Dev: 0.98

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02327

Project Name: Radiological Site Survey	PO Number: N/A	LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	**Project Information Section**
Project Location: HUNTERS POINT	Project Number: 4044-0002	LABORATORY ID:	
Sampler Name: RAY ROBERSON	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F001-01	3/21/2012	0830	1		S1		☑	☐	☐			
02NPR-S0011-F002-01	3/21/2012	0835	1		S1		☑	☐	☐			
02NPR-S0011-F003-01	3/21/2012	0840	1		S1		☑	☐	☐			
02NPR-S0011-F004-01	3/21/2012	0845	1		S1		☑	☐	☐			
02NPR-S0011-F005-01	3/21/2012	0850	1		S1		☑	☐	☐			
02NPR-S0011-F006-01	3/21/2012	0920	1		S1		☑	☐	☐			
02NPR-S0011-F007-01	3/21/2012	0925	1		S1		☑	☐	☐			
02NPR-S0011-F008-01	3/21/2012	0930	1		S1		☑	☐	☐			
02NPR-S0011-F009-01	3/21/2012	0935	1		S1		☑	☐	☐			
02NPR-S0011-F010-01	3/21/2012	0940	1		S1		☑	☐	☐			
02NPR-S0011-F011-01	3/21/2012	0945	1		S1		☑	☐	☐			
02NPR-S0011-F012-01	3/21/2012	0950	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	Date 3-21-12	Received by: (signature) [signature]	LABORATORY INSTRUCTIONS/COMMENTS
Company RSRS	Time 1325	Company CST	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:
Company	Time	Company	

SAMPLING COMMENTS
NORTH PIER FSS
SU-11
BIASED-1-2
SYSTEMATIC 3-22

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02328

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: RAY ROBERSON	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

GAMMASPEC | SR90 | ALPHA

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F013-01	3/21/2012	0955	1		S1		☑	☐	☐			
02NPR-S0011-F014-01	3/21/2012	1000	1		S1		☑	☐	☐			
02NPR-S0011-F015-01	3/21/2012	1005	1		S1		☑	☐	☐			
02NPR-S0011-F016-01	3/21/2012	1010	1		S1		☑	☐	☐			
02NPR-S0011-F017-01	3/21/2012	1015	1		S1		☑	☐	☐			
02NPR-S0011-F018-01	3/21/2012	1020	1		S1		☑	☐	☐			
02NPR-S0011-F019-01	3/21/2012	1025	1		S1		☑	☐	☐			
02NPR-S0011-F020-01	3/21/2012	1030	1		S1		☑	☐	☐			
02NPR-S0011-F021-01	3/21/2012	1035	1		S1		☑	☐	☐			
02NPR-S0011-F022-01	3/21/2012	1040	1		S1		☑	☐	☐			

Relinquished by: (signature)	*Date* 3-21-12	*Received by: (signature)*
Company RSRS	*Time* 1325	*Company*
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*
Relinquished by: (signature)	*Date*	*Received by: (signature)*
Company	*Time*	*Company*

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS

ED_004747_00010903-00184

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02396

Project Name: Radiological Site Survey		PO Number: N/A					G A M M A S P E C	S R 9 0	A L P H A		LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section
Project Location: HUNTERS POINT		Project Number: 4044-0002									LABORATORY ID:	
Sampler Name: Kay Roberson		Airbill Number: N/A										
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592										
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F023-01	5/1/2012	1500	1		S1		☑	☐	☐			
02NPR-S0011-F024-01	5/1/2012	1505	1		S1		☑	☐	☐			
02NPR-S0011-F025-01	5/1/2012	1510	1		S1		☑	☐	☐			

Relinquished by: (signature)	Date: 05-01-12	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS: NORTH RIDGE SOUTH RIDGE GAMMA LAB RUSH 48 HR TAT
Company: RSRC	Time: 1605	Company: CT		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		

ED_004747_00010903-00185

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02418

Project Name: Radiological Site Survey		PO Number: N/A					G A M M A S P E C	S R 9 0	A L P H A		LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section	
Project Location: HUNTERS POINT		Project Number: 4044-0002									LABORATORY ID:		
Sampler Name: Joe Cunningham		Airbill Number: N/A											
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID	
02NPR-S0011-F026-01	5/9/2012	1015	1		S1		☑	☐	☐				

Relinquished by: (signature)	Date: 050912	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS:	SAMPLE(S) COMMENTS:
Company: RSRS	Time: 14:03	Company: CT		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION:	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SHIPPING CONDITIONS UPON RECEIPT BY LABORATORY: TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		

ED_004747_00010903-00186

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02453

Project Name: Radiological Site Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 4044-0002
Sampler Name: R. Roberson	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F027-01	5/31/2012	1140	1		S1		☑	☐	☐			
02NPR-S0011-F028-01	5/31/2012	1145	1		S1		☑	☐	☐			
02NPR-S0011-F029-01	5/31/2012	1150	1		S1		☑	☐	☐			
02NPR-S0011-F030-01	5/31/2012	1155	1		S1		☑	☐	☐			
02NPR-S0011-F031-01	5/31/2012	1235	1		S1		☑	☐	☐			
02NPR-S0011-F032-01	5/31/2012	1240	1		S1		☑	☐	☐			
02NPR-S0011-F033-01	5/31/2012	1245	1		S1		☑	☐	☐			
02NPR-S0011-F034-01	5/31/2012	1250	1		S1		☑	☐	☐			
02NPR-S0011-F035-01	5/31/2012	1255	1		S1		☑	☐	☐			
02NPR-S0011-F036-01	5/31/2012	1300	1		S1		☑	☐	☐			
02NPR-S0011-F037-01	5/31/2012	1305	1		S1		☑	☐	☐	DUP		
02NPR-S0011-F038-01	5/31/2012	1310	1		S1		☑	☐	☐			

Relinquished by: (signature) [signature]	Date 5-31-12	Received by: (signature) [signature]
Company RSRS	Time 16:32	Company CET
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL

SAMPLING COMMENTS
NORTH PIER FSS
20-11
SYSTEMATIC 87-46

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

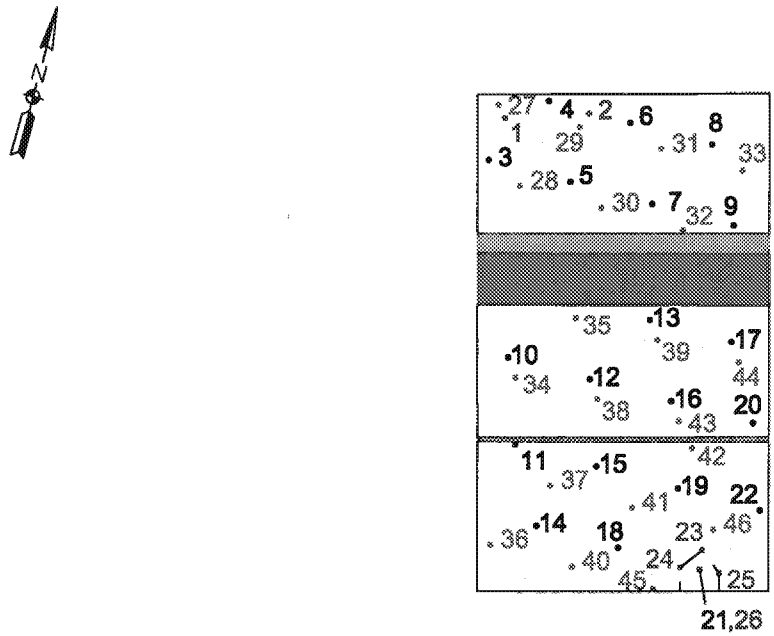
Chain-of-Custody Record

BFS 02454

Project Name: Radiological Site Survey		PO Number: N/A					GAMMASPEC	SR90	ALPHA		LABORATORY NAME: ONSITE - Curtis & Tompkins, LTD.	Project Information Section	
Project Location: HUNTERS POINT		Project Number: 4044-0002									LABORATORY ID:		
Sampler Name: R. Roberson		Airbill Number: N/A											
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	SAMPLE ID	
02NPR-S0011-F039-01	5/31/2012	1315	1		S1		☑	☐	☐				
02NPR-S0011-F040-01	5/31/2012	1320	1		S1		☑	☐	☐				
02NPR-S0011-F041-01	5/31/2012	1325	1		S1		☑	☐	☐				
02NPR-S0011-F042-01	5/31/2012	1330	1		S1		☑	☐	☐				
02NPR-S0011-F043-01	5/31/2012	1335	1		S1		☑	☐	☐				
02NPR-S0011-F044-01	5/31/2012	1340	1		S1		☑	☐	☐				
02NPR-S0011-F045-01	5/31/2012	1345	1		S1		☑	☐	☐				
02NPR-S0011-F046-01	5/31/2012	1350	1		S1		☑	☐	☐				

Relinquished by: (signature)	*Date* 5-31-12	*Received by: (signature)*	LABORATORY INSTRUCTIONS/COMMENTS
Company RSRS	*Time* 1632	*Company* CET	SAMPLING COMMENTS
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION
Company	*Time*	*Company*	
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	*Time*	*Company*	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

ED_004747_00010903-00188



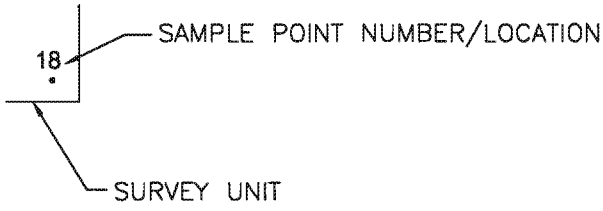
SU-11

CLASS 1

556.60 m^2 (5991.20 ft^2)

LEGEND:

- • 1 BIASED 1–2
- • 3 SYSTEMATIC 3–22
- • 23 CHARACTERIZATION 23–25
- • 26 POST–REMEDIATION 26
- • 32 SYSTEMATIC 2 27–46
- AREAS PREVIOUSLY REMEDIATED
- ROCK
- CONCRETE



RECORD COPY

SCALE 1:40

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:13:48

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 11

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Wednesday, July 11, 2012 10:18 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11
Attachments: 02NPR-S0011 027 to 046 Off-Site Gamma.pdf; 02NPR-S0011 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 11.

George Chiu | **Health Physicist**
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Sunday, June 10, 2012 4:54 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 11. Samples 29 and 30 were recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | **Health Physicist**
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

ED_004747_00010903-00190

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Thursday, May 17, 2012 12:50 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for the sample with cesium-137 activity above the release criterion from North Pier Survey Unit 11.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Tuesday, May 15, 2012 7:28 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 11.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Friday, May 11, 2012 9:24 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 11.

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Sunday, April 29, 2012 7:24 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site systematic sampling results from North Pier Survey Unit 11.

We will proceed with characterization/remediation around sample point 21 (0.118 pCi/g) due to cesium-137 activity.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Tuesday, April 03, 2012 12:58 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 11. Sample 10 was recounted for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Think Green - Not every email needs to be printed.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 21, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

Survey activities were performed by the HPNS Team on the aboveground force main concrete bedding debris (Survey No. HPS-A-NPR-031); a total of 36 swipe samples were collected and submitted to the on-site laboratory for analysis.

The HPNS Team performed Class 1 survey activities for Survey Unit 11. A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,692 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Backfill activities were continued in Trench Unit No. 239 by the HPNS Team.

The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 242.

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 21, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team performed the following RSY4 processing activities:

One truckload of material was received for processing.

Began transfer of ES Unit 0618 to the metal debris reef area.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 73

Swipe samples received for Protean counts: 41

Air samples received: 6

Samples analyzed by gamma spectroscopy: 72

Gamma spectroscopy samples recounted: 25

Protean swipe samples counted: 74

Protean air samples counted: 6

A total of 283 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

Radiological support was provided to CKY by the HPNS Team during maintenance and landscaping activities in Parcel E-2.

Radiological support was provided to Shaw Group by the HPNS Team during groundwater monitoring activities in Buildings 211/253.

One incoming materials and equipment survey was performed by the HPNS Team.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 21, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for Building 521, the Buildings 507 and 508 Sites, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 507 Site

Towed array gamma scan survey activities over Class 1 Survey Unit 1 were completed by the HPNS Team.

Building 508 Site

The HPNS Team performed soil grading and debris removal in preparation for upcoming towed array surveys.

Building 521

A total of seven drums containing bunker fuel oil and pipe chase materials were scanned and transferred to ITSI for off-site disposal.

500 Series Area

The HPNS Team performed towed array gamma scan surveys over the H Street asphalt covering Class 1 Survey Unit 10.

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 16 !A total of 14 characterization gamma static measurements were logged with a maximum measurement of 7,789 cpm. In addition, 14 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 20 !A total of 36 systematic gamma static measurements were logged with a maximum measurement of 6,672 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 16 and 20.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Units 1, 18, and 19.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

An additional control access point was installed on the southern end of H Street by the HPNS Team to facilitate upcoming sewer removal activities.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 !A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 !A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 !A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.

Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of six truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 11 truckloads of material were received for processing.

Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.

A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

The HPNS Team provided the RASO with the following:

On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.

On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 30

Swipe samples received for Protean counts: 152

Air samples received: 13

Samples analyzed by gamma spectroscopy: 87

Gamma spectroscopy samples recounted: 8

Protean swipe samples counted: 23

Protean air samples counted: 13

A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 119 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.

The HPNS Team performed Class 1 survey activities as follows:

Asphalt Grid A7 !A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm^2.

Survey Unit 22 !A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.

The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.

The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class l Survey Unit 14. Characterization and remediation will be continued due to the presence of ^{137}Cs contamination as follows:

- Sample Point 7 (07500SA-S0014-F007-01) with ^{137}Cs at 0.1183 pCi/g
- Sample Point 17 (07500SA-S0014-F017-01) with ^{137}Cs at 0.2425 pCi/g
- Sample Point 37 (07500SA-S0014-F037-01) with ^{137}Cs at 0.3768 pCi/g

The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-7F 133 linear feet completed
- 07-E36-00-7G 10 linear feet completed
- 07-E36-00-7H 12 linear feet completed
- 07-E36-00-7I 6 linear feet completed
- 07-E36-00-8Y 25 linear feet completed

A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.

Excavated Manhole MH1244 was placed on plastic pending further activities.

The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ^{137}Cs contamination as follows:

- Manhole MH1302 (07-PEMH1302-013-01) with ^{137}Cs at 0.2161 pCi/g
- Manhole MH1303 (07-PEMH1303-014-01) with ^{137}Cs at 0.1319 pCi/g

The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 17 (0.2726 pCi/g).

The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 9, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, and #34. Details of the work activities performed are provided in the sections below.

North Pier

Approximately 3 cubic yards of soil was remediated from Class 1 Survey Unit 11 by the HPNS Team and placed in LLRW bin GFLU002019 for off-site disposal.

The HPNS Team performed Class 1 survey activities for Survey Unit 11. A post-remediation gamma static measurement was logged at 6,492 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPNS Team issued record drawings to identify post-remediation sample collection locations in Class 1 Survey Unit 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A total of nine investigative soil samples were collected from Trench Unit Nos. 302 and 303 by the HPNS Team and submitted to the on-site laboratory for analysis.

Backfill activities were completed for Trench Unit No. 243 by the HPNS Team.

Site restoration activities were continued by the HPNS Team over backfilled trench units along Spear Avenue in Work Area #33.

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 9, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of 17 truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

One truckload of material was received for processing.

Issued drawing to identify biased and systematic sample collection locations for ES Unit 0698.

Remediated approximately 0.25 cubic yards of soil from ES Unit 0698 and placed the material in LLRW bins pending off-site disposal by the DON radiological waste contractor.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0660 and a request for concurrence to transfer the material to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 50

Air samples received: 10

Samples analyzed by gamma spectroscopy: 53

Gamma spectroscopy samples recounted: 9

Protean swipe samples counted: 96

Protean air samples counted: 10

A total of 211 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 9, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the work activities performed are provided in the sections below.

Building 707 Triangle

Approximately 92 cubic yards of soil was remediated from Class 1 Survey Unit 21 by the HPNS Team and placed in LLRW bins AWIU000295, GFLU002019, GFLU002035, GFLU002059, GFLU00213, and GFLU002137 for off-site disposal.

The HPNS Team performed Class 1 survey activities for Survey Unit 23. A total of 400 gamma scan readings were logged with a maximum reading of 300 cpm (FIDLER). The RSO is in the process of reviewing these data.

500 Series Area

Towed array gamma scan surveys were performed over Class 2 Survey Unit 23.

The HPNS Team performed Class 1 survey activities for Survey Unit 13. A total of 4 biased and 36 systematic gamma static measurements were logged with a maximum measurement of 7,320 cpm. In addition, 40 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 216 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-500-38-1B 10 linear feet completed
- 07-E36-38-1A 9 linear feet completed
- 07-E36-38-1B 10 linear feet completed
- 07-E36-39-1F 38 linear feet completed
- 07-E36-39-1W 30 linear feet completed
- 07-E36-39-8F 12 linear feet completed
- 07-E36-39-8G 40 linear feet completed

A total of 96 linear feet of trench (including excavated soil and pipes) identified on the design drawings and 52 linear feet not identified on the design drawings were completed by the HPNS Team.

Pipes excavated from trench segments 07-500-38-1B, 07-E36-39-8F, and 07-E36-39-8G were placed on plastic pending further activities.

Crushed pipe and debris excavated from trench segments 07-E36-00-1A and 07-E36-00-1B were placed in LLRW bin GFLU002131 for off-site disposal.

The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 241 (associated with the Building 529 Site) along with a request for concurrence to backfill.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 !A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.

Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.

The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.

The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.

Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012	RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 13 truckloads of material were received for processing.

Began transfer of ES Unit 0700 to the stockpile area.

The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

After evaluating the data, the RASO concurred with the following:

Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 140

Swipe samples received for Protean counts: 151

Air samples received: 13

Samples analyzed by gamma spectroscopy: 76

Gamma spectroscopy samples recounted: 13

Protean swipe samples counted: 20

Protean air samples counted: 16

A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 71 samples were sent to TestAmerica St. Louis for analysis.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class l Survey Unit 4. Characterization and remediation will be performed due to the presence of ^{90}Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.

The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPNS Team provided the RASO with total strontium analytical results for the ^{137}Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-4D 10 linear feet completed
- 07-E36-00-4E 51 linear feet completed
- 07-E36-00-4F 5 linear feet completed
- 07-E36-00-4G 27 linear feet completed
- 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
- 07-E36-38-1W 38 linear feet completed
- 07-E36-38-2B 17 linear feet completed
- 07-E36-38-4A 9 linear feet completed
- 07-E36-38-5A 10 linear feet completed

A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.

Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.

The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.

A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.

The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician	On-Site Laboratory (pCi/g)					Off-Site Laboratory (pCi/g)				
							K-40	Co-60	Cs-137	Bi-214	Pb-214	K-40	Co-60	Cs-137	Bi-214	Pb-214
NPR	11	1	Biased	02NPR-S0011-F001-01	21-Mar-12	Ray Roberson	20.62	0.8344	0	0.3923	0.5742					
NPR	11	2	Biased	02NPR-S0011-F002-01	21-Mar-12	Ray Roberson	21.17	0.8241	0.009509	0.492	0.6095					
NPR	11	3	Systematic	02NPR-S0011-F003-01	21-Mar-12	Ray Roberson	17.35	0.7073	0.02243	0.3705	0.5909	16.2	0.466	0.0343	0.466	0.629
NPR	11	4	Systematic	02NPR-S0011-F004-01	21-Mar-12	Ray Roberson	18.9	0.7509	0.01505	0.5162	0.5585	16.6	0.567	0.0549	0.567	0.585
NPR	11	5	Systematic	02NPR-S0011-F005-01	21-Mar-12	Ray Roberson	22.38	1.032	-0.008317	0.5256	0.6765	18.5	0.764	0.0328	0.764	0.872
NPR	11	6	Systematic	02NPR-S0011-F006-01	21-Mar-12	Ray Roberson	24.53	0.8591	-0.01114	0.733	0.7075	26.3	0.772	0	0.772	0.85
NPR	11	7	Systematic	02NPR-S0011-F007-01	21-Mar-12	Ray Roberson	9.392	0.3841	0.004186	0.2195	0.4254	8.17	0.341	0.0172	0.341	0.394
NPR	11	8	Systematic	02NPR-S0011-F008-01	21-Mar-12	Ray Roberson	25.05	1.023	0.004033	0.5411	0.7411	20.7	0.703	0.0141	0.703	0.773
NPR	11	9	Systematic	02NPR-S0011-F009-01	21-Mar-12	Ray Roberson	23.61	1.009	0	0.5528	0.7617	18.5	0.643	0	0.643	0.675
NPR	11	10	Systematic	02NPR-S0011-F010-01	21-Mar-12	Ray Roberson	18.09	1.131	-0.009382	0.7797	0.9428	16.2	1.03	0.00162	1.03	1.07
NPR	11	11	Systematic	02NPR-S0011-F011-01	21-Mar-12	Ray Roberson	11.85	0.601	0.01005	0.4899	0.5222	8.94	0.502	0.0307	0.502	0.354
NPR	11	12	Systematic	02NPR-S0011-F012-01	21-Mar-12	Ray Roberson	12.72	0.8059	-0.009666	0.3328	0.5829	11	0.58	0.0125	0.58	0.412
NPR	11	13	Systematic	02NPR-S0011-F013-01	21-Mar-12	Ray Roberson	8.351	0.4574	-0.0001693	0.2701	0.4751	8.49	0.283	0.00658	0.283	0.42
NPR	11	14	Systematic	02NPR-S0011-F014-01	21-Mar-12	Ray Roberson	20.64	1.168	0.03255	0.6401	0.5982	17.2	0.553	-0.0298	0.553	0.435
NPR	11	15	Systematic	02NPR-S0011-F015-01	21-Mar-12	Ray Roberson	11.77	1.143	0.01194	0.3707	0.4143	10.4	0.5	0.0109	0.5	0.449
NPR	11	16	Systematic	02NPR-S0011-F016-01	21-Mar-12	Ray Roberson	14.89	0.7807	0.04492	0.3756	0.4204	15.2	0.417	0.0296	0.417	0.538
NPR	11	17	Systematic	02NPR-S0011-F017-01	21-Mar-12	Ray Roberson	8.834	-0.2215	0	0.2512	0.3523	9.28	0.468	0	0.468	0.457
NPR	11	18	Systematic	02NPR-S0011-F018-01	21-Mar-12	Ray Roberson	15.5	1.038	0.0155	0.7	0.7635	12.8	0.9	0.00554	0.9	0.928
NPR	11	19	Systematic	02NPR-S0011-F019-01	21-Mar-12	Ray Roberson	9.502	0.6919	0.01187	0.4181	0.3953	7.27	0.481	0	0.481	0.507
NPR	11	20	Systematic	02NPR-S0011-F020-01	21-Mar-12	Ray Roberson	8.227	0.643	0.0008957	0.1788	0.1434	4.11	0.13	0.039	0.13	0.356
NPR	11	21	Systematic	02NPR-S0011-F021-01	21-Mar-12	Ray Roberson	10.99	0.5979	0.0283	0.4605	0.4887	9.9	0.416	0.118	0.416	0.468
NPR	11	22	Systematic	02NPR-S0011-F022-01	21-Mar-12	Ray Roberson	4.688	-0.3132	0.009596	0.1495	0.174	6.62	0.238	0.00237	0.238	0.428
NPR	11	23	Characterization	02NPR-S0011-F023-01	01-May-12	Ray Roberson	9.044	0.4833	0.0123	0.196	0.3266					
NPR	11	24	Characterization	02NPR-S0011-F024-01	01-May-12	Ray Roberson	13.03	0.8089	0.0632	0.4108	0.4596					
NPR	11	25	Characterization	02NPR-S0011-F025-01	01-May-12	Ray Roberson	12.62	0.5318	0.02155	0.4683	0.5034					
NPR	11	26	Post-Remediation	02NPR-S0011-F026-01	09-May-12	Joe Cunningham	16.94	1.12	0.08753	0.4949	0.5502					
NPR	11	27	Systematic	02NPR-S0011-F027-01	31-May-12	Ray Roberson	1.856	0.3806	0.004441	0.1239	0.1979	1.24	0.0897	0	0.0897	0.123
NPR	11	28	Systematic	02NPR-S0011-F028-01	31-May-12	Ray Roberson	1.343	0.1962	0.0007878	0.01734	0.1758	1.41	0.231	0.00922	0.231	0.23
NPR	11	29	Systematic	02NPR-S0011-F029-01	31-May-12	Ray Roberson	1.147	0.1606	0.007908	0.05789	0.1973	1.18	0.0475	0.0119	0.0475	0.15
NPR	11	30	Systematic	02NPR-S0011-F030-01	31-May-12	Ray Roberson	1.084	0.1755	0.005199	0.06314	0.07671	1.25	0.251	-0.011	0.251	0.213
NPR	11	31	Systematic	02NPR-S0011-F031-01	31-May-12	Ray Roberson	1.655	0.2181	0.01352	0.07604	0.05306	1.36	0.0176	0.000286	0.0176	0.111
NPR	11	32	Systematic	02NPR-S0011-F032-01	31-May-12	Ray Roberson	1.195	0.3406	0.002224	-0.005852	0.183	1.08	0.304	0	0.304	0.268
NPR	11	33	Systematic	02NPR-S0011-F033-01	31-May-12	Ray Roberson	1.553	0.6204	-0.00003543	0.1141	0.01256	0.714	0.225	-0.0193	0.225	0.229
NPR	11	34	Systematic	02NPR-S0011-F034-01	31-May-12	Ray Roberson	1.298	0	0.001312	0.0504	0.1889	1.17	0.0445	-0.0116	0.0445	0.0894
NPR	11	35	Systematic	02NPR-S0011-F035-01	31-May-12	Ray Roberson	1.354	0.3353	-0.007342	0.07955	0.0622	1.58	0.08	0.000263	0.08	0.237
NPR	11	36	Systematic	02NPR-S0011-F036-01	31-May-12	Ray Roberson	1.117	0.05995	-0.00221	0.054	0.1572	1.3	0.125	-0.00445	0.125	0.151
NPR	11	37	Systematic	02NPR-S0011-F037-01	31-May-12	Ray Roberson	0.6817	0.1337	0.002293	0.2482	0.09497	1.23	0.1	-0.00409	0.1	0.177
NPR	11	38	Systematic	02NPR-S0011-F038-01	31-May-12	Ray Roberson	1.06	0.1437	0	0.07294	0.07564	1.36	0.0374	-0.00241	0.0374	0.223
NPR	11	39	Systematic	02NPR-S0011-F039-01	31-May-12	Ray Roberson	0.9402	-0.03884	0	0.09427	0.07806	1.41	0.0294	0.0202	0.0294	0.0738
NPR	11	40	Systematic	02NPR-S0011-F040-01	31-May-12	Ray Roberson	0.8305	0	0.005108	0.1077	0.1186	0.953	0.0963	-0.000725	0.0963	0.123
NPR	11	41	Systematic	02NPR-S0011-F041-01	31-May-12	Ray Roberson	0.6744	-0.006658	0.006463	0.06961	-0.0219	1.42	0.106	0.0000477	0.106	0.253
NPR	11	42	Systematic	02NPR-S0011-F042-01	31-May-12	Ray Roberson	2.071	0.2002	0.01107	0.06897	0.1394	1.12	0.236	-0.000771	0.236	0.133
NPR	11	43	Systematic	02NPR-S0011-F043-01	31-May-12	Ray Roberson	0.8713	0.2076	-0.00007423	0.04136	0.09326	1.11	0.238	0	0.238	0.195
NPR	11	44	Systematic	02NPR-S0011-F044-01	31-May-12	Ray Roberson	1.102	0.3324	0.0006302	0.0374	0.1811	1.35	0.107	-0.00329	0.107	0.14
NPR	11	45	Systematic	02NPR-S0011-F045-01	31-May-12	Ray Roberson	2.274	-0.01217	0.005858	0.08534	0.0887	1.76	0.157	-0.00036	0.157	0.289
NPR	11	46	Systematic	02NPR-S0011-F046-01	31-May-12	Ray Roberson	1.303	0.1565	0.007445	0.07097	0.08395	1.46	0.151	0.0145	0.151	0.221
NPR	11	47	Systematic	02NPR-S0011-F047-01	30-Oct-12	J Taylor/M Winder	14.06	0.6371	0.005556	0.4196	0.4585					
NPR	11	48	Systematic	02NPR-S0011-F048-01	30-Oct-12	J Taylor/M Winder	12.14	0.2555	0.005146	0.4333	0.409					
NPR	11	49	Systematic	02NPR-S0011-F049-01	30-Oct-12	J Taylor/M Winder	9.099	0.25	-0.001031	0.1485	0.4051					
NPR	11	50	Systematic	02NPR-S0011-F050-01	30-Oct-12	J Taylor/M Winder	16.97	0.6765	-0.004835	0.5016	0.5628					
NPR	11	51	Systematic	02NPR-S0011-F051-01	30-Oct-12	J Taylor/M Winder	13.41	1.043	0.007397	0.4005	0.4926					
NPR	11	52	Systematic	02NPR-S0011-F052-01	30-Oct-12	J Taylor/M Winder	8.479	-0.03818	0.008437	0.3315	0.2834					

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
NPR	11	53	Systematic	02NPR-S0011-F053-01	30-Oct-12	J Taylor/M Winder
NPR	11	54	Systematic	02NPR-S0011-F054-01	30-Oct-12	J Taylor/M Winder
NPR	11	55	Systematic	02NPR-S0011-F055-01	30-Oct-12	J Taylor/M Winder
NPR	11	56	Systematic	02NPR-S0011-F056-01	30-Oct-12	J Taylor/M Winder
NPR	11	57	Systematic	02NPR-S0011-F057-01	30-Oct-12	J Taylor/M Winder
NPR	11	58	Systematic	02NPR-S0011-F058-01	30-Oct-12	J Taylor/M Winder
NPR	11	59	Systematic	02NPR-S0011-F059-01	30-Oct-12	J Taylor/M Winder
NPR	11	60	Systematic	02NPR-S0011-F060-01	30-Oct-12	J Taylor/M Winder
NPR	11	61	Systematic	02NPR-S0011-F061-01	30-Oct-12	J Taylor/M Winder
NPR	11	62	Systematic	02NPR-S0011-F062-01	30-Oct-12	J Taylor/M Winder
NPR	11	63	Systematic	02NPR-S0011-F063-01	30-Oct-12	J Taylor/M Winder
NPR	11	64	Systematic	02NPR-S0011-F064-01	30-Oct-12	J Taylor/M Winder
NPR	11	65	Systematic	02NPR-S0011-F065-01	30-Oct-12	J Taylor/M Winder
NPR	11	66	Systematic	02NPR-S0011-F066-01	30-Oct-12	J Taylor/M Winder

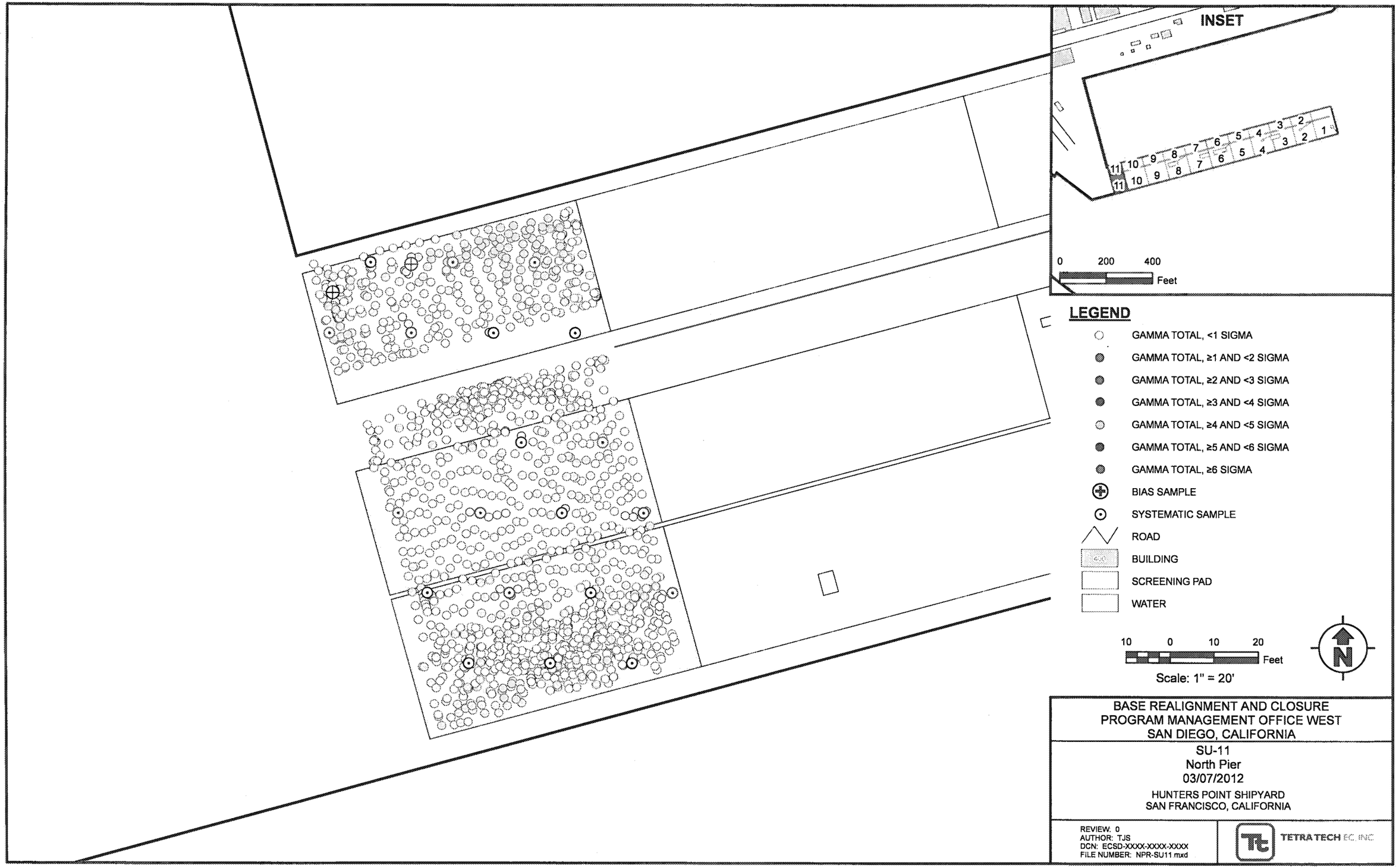
On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
7.729	0.7058	-0.001774	0.2842	0.2897
7.245	0.3539	0.005391	0.1395	0.3227
8.09	0.7814	-0.00497	0.2325	0.4314
7.659	0.4121	-0.0006429	0.1912	0.2862
7.622	0.7293	-0.008737	0.297	0.1676
13.23	0.8045	0.009238	0.4011	0.3905
10.76	0.7667	0.01065	0.1496	0.3622
5.482	0.2624	0.01339	0.101	0.2512
9.871	0.731	0.002692	0.3444	0.3717
7.096	0.4656	0.004129	0.3798	0.356
7.92	0.8474	0	0.2265	0.1184
7.835	0.3401	-0.007842	0.1825	0.1433
10.78	0.8868	0	0.379	0.4846
4.761	0.2135	-0.001662	0.004619	0.04502

Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



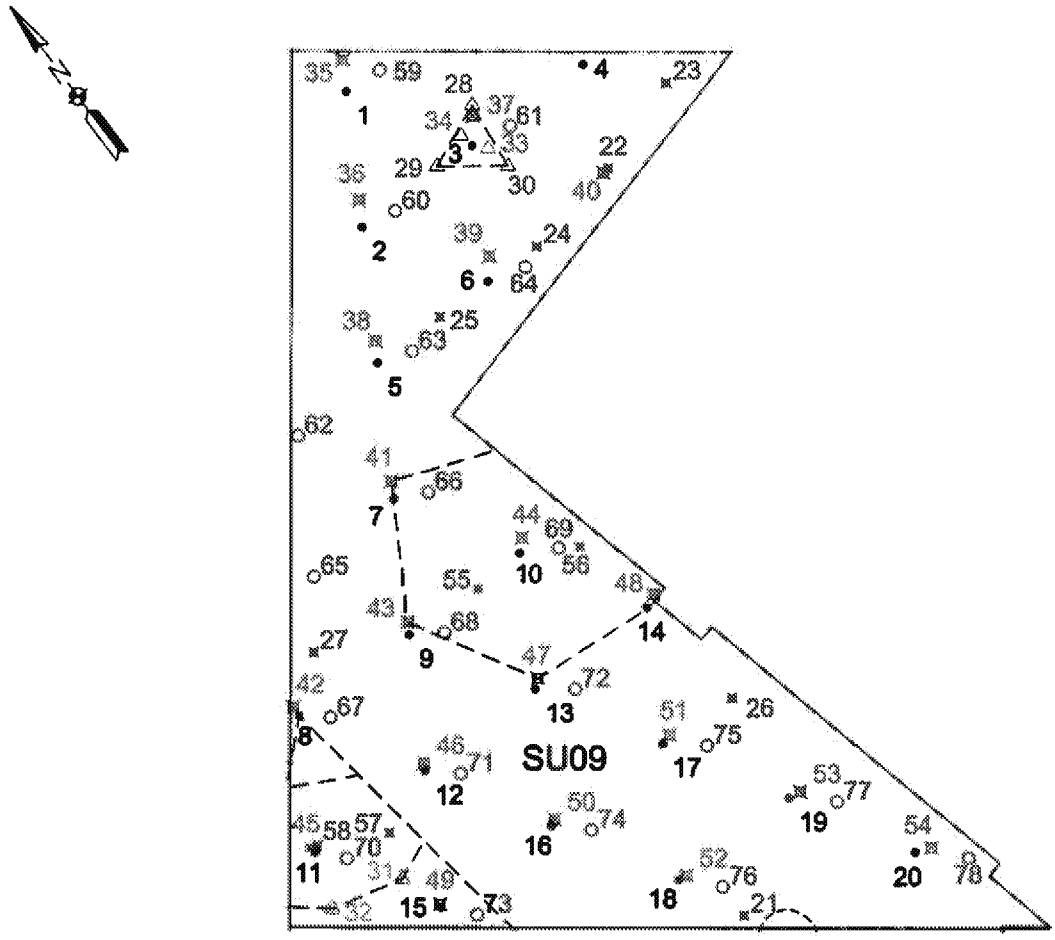
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

SU-11
North Pier
03/07/2012

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NPR-SU11.mxd

TETRA TECH EC, INC.



LEGEND:

• 1	SYSTEMATIC 1 SAMPLES 1–20
✱ 21	BIASED SAMPLES 21–27
△ 28	CHARACTERIZATION 1 SAMPLES 28–30
△ 31	POST REMEDIATION 1 SAMPLES 31–32
△ 33	POST REMEDIATION 2 SAMPLES 33–34
✱ 41	SYSTEMATIC 2 SAMPLES 35–54
✱ 33	POST REMEDIATION 3 SAMPLES 55–58
○ 59	SYSTEMATIC 3 SAMPLES 59–78
– – – –	PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
PLOT/UPDATE: OCT 18 2012 10:30:06

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 9

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 9:31	5453	5817	-364	479-BKGDS1A	7378	
2	11/22/2010 9:32	5263	5817	-554	479-BKGDS1A	7378	
3	11/22/2010 9:33	6275	5817	458	479-BKGDS1A	7378	
4	11/22/2010 9:35	7045	5817	1228	479-BKGDS1A	7378	
5	11/22/2010 9:36	5194	5817	-623	479-BKGDS1A	7378	
6	11/22/2010 9:37	6852	5817	1035	479-BKGDS1A	7378	
7	11/22/2010 9:39	5833	5817	16	479-BKGDS1A	7378	
8	11/22/2010 9:40	5751	5817	-66	479-BKGDS1A	7378	
9	11/22/2010 9:41	5912	5817	95	479-BKGDS1A	7378	
10	11/22/2010 9:43	6968	5817	1151	479-BKGDS1A	7378	
11	11/22/2010 9:44	5337	5817	-480	479-BKGDS1A	7378	
12	11/22/2010 9:45	5620	5817	-197	479-BKGDS1A	7378	
13	11/22/2010 9:47	6001	5817	184	479-BKGDS1A	7378	
14	11/22/2010 9:48	6658	5817	841	479-BKGDS1A	7378	
15	11/22/2010 9:49	5193	5817	-624	479-BKGDS1A	7378	
16	11/22/2010 9:51	6194	5817	377	479-BKGDS1A	7378	
17	11/22/2010 9:52	7668	5817	1851	479-BKGDS1A	7378	
18	11/22/2010 9:53	6888	5817	1071	479-BKGDS1A	7378	
19	11/22/2010 9:54	8428	5817	2611	479-BKGDS1A	7378	
20	11/22/2010 9:56	6951	5817	1134	479-BKGDS1A	7378	
21	11/30/2010 11:29	8746	5817	2929	479-BKGDS1A	7378	
22	11/30/2010 11:30	8502	5817	2685	479-BKGDS1A	7378	
23	11/30/2010 11:31	7648	5817	1831	479-BKGDS1A	7378	
24	11/30/2010 11:33	7635	5817	1818	479-BKGDS1A	7378	
25	11/30/2010 11:34	7154	5817	1337	479-BKGDS1A	7378	
26	11/30/2010 11:35	7957	5817	2140	479-BKGDS1A	7378	
27	11/30/2010 11:37	7263	5817	1446	479-BKGDS1A	7378	
28	1/7/2011 12:53	5603	5817	-214	479-BKGDS1A	7378	
29	1/7/2011 12:54	5590	5817	-227	479-BKGDS1A	7378	
30	1/7/2011 12:55	7871	5817	2054	479-BKGDS1A	7378	
31	1/20/2011 11:03	7668	5817	1851	479-BKGDS1A	7378	
32	1/20/2011 11:04	7199	5817	1382	479-BKGDS1A	7378	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 **Survey Unit:** 9 **Class:** 1 **Area:** 886.82 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	2/16/2011 13:47	4827	5817	-990	479-BKGDS1A	7378	
34	2/16/2011 13:48	4731	5817	-1086	479-BKGDS1A	7378	
35	3/8/2011 10:39	5390	5817	-427	479-BKGDS1A	7378	
36	3/8/2011 10:40	5370	5817	-447	479-BKGDS1A	7378	
37	3/8/2011 10:41	4790	5817	-1027	479-BKGDS1A	7378	
38	3/8/2011 10:42	6022	5817	205	479-BKGDS1A	7378	
39	3/8/2011 10:44	6885	5817	1068	479-BKGDS1A	7378	
40	3/8/2011 10:45	7765	5817	1948	479-BKGDS1A	7378	
41	3/8/2011 10:46	6097	5817	280	479-BKGDS1A	7378	
42	3/8/2011 10:48	5509	5817	-308	479-BKGDS1A	7378	
43	3/8/2011 10:49	5981	5817	164	479-BKGDS1A	7378	
44	3/8/2011 10:50	7135	5817	1318	479-BKGDS1A	7378	
45	3/8/2011 10:51	5747	5817	-70	479-BKGDS1A	7378	
46	3/8/2011 10:52	5756	5817	-61	479-BKGDS1A	7378	
47	3/8/2011 10:54	6362	5817	545	479-BKGDS1A	7378	
48	3/8/2011 10:55	6237	5817	420	479-BKGDS1A	7378	
49	3/8/2011 10:56	6315	5817	498	479-BKGDS1A	7378	
50	3/8/2011 10:57	6173	5817	356	479-BKGDS1A	7378	
51	3/8/2011 10:59	7335	5817	1518	479-BKGDS1A	7378	
52	3/8/2011 11:00	7095	5817	1278	479-BKGDS1A	7378	
53	3/8/2011 11:01	6136	5817	319	479-BKGDS1A	7378	
54	3/8/2011 11:02	7095	5817	1278	479-BKGDS1A	7378	
55	5/5/2011 15:26	5475	5817	-342	479-BKGDS1A	7378	
56	5/5/2011 15:28	5297	5817	-520	479-BKGDS1A	7378	
57	5/5/2011 15:29	6493	5817	676	479-BKGDS1A	7378	
58	5/5/2011 15:30	6694	5817	877	479-BKGDS1A	7378	
59	6/8/2011 10:19	5291	5873	-582	518-BKGDS1B	7049	
60	6/8/2011 10:20	5069	5873	-804	518-BKGDS1B	7049	
61	6/8/2011 10:22	6400	5873	527	518-BKGDS1B	7049	
62	6/8/2011 10:23	4872	5873	-1001	518-BKGDS1B	7049	
63	6/8/2011 10:25	6050	5873	177	518-BKGDS1B	7049	
64	6/8/2011 10:26	6758	5873	885	518-BKGDS1B	7049	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	6/8/2011 10:27	5791	5873	-82	518-BKGDS1B	7049	
66	6/8/2011 10:28	5066	5873	-807	518-BKGDS1B	7049	
67	6/8/2011 10:30	5597	5873	-276	518-BKGDS1B	7049	
68	6/8/2011 10:31	5283	5873	-590	518-BKGDS1B	7049	
69	6/8/2011 10:32	4648	5873	-1225	518-BKGDS1B	7049	
70	6/8/2011 10:33	4868	5873	-1005	518-BKGDS1B	7049	
71	6/8/2011 10:34	4793	5873	-1080	518-BKGDS1B	7049	
72	6/8/2011 10:36	5932	5873	59	518-BKGDS1B	7049	
73	6/8/2011 10:37	5099	5873	-774	518-BKGDS1B	7049	
74	6/8/2011 10:38	5023	5873	-850	518-BKGDS1B	7049	
75	6/8/2011 10:39	4954	5873	-919	518-BKGDS1B	7049	
76	6/8/2011 10:58	5060	5873	-813	518-BKGDS1B	7049	
77	6/8/2011 10:59	5085	5873	-788	518-BKGDS1B	7049	
78	6/8/2011 11:00	5014	5873	-859	518-BKGDS1B	7049	

Net Gamma cpm Summary

Min: -1225
Avg: 340
Max: 2929
St Dev: 1051

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 479 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430 Probe Serial #: 012176

Calibration Due Date: 5/12/2011

Reference Area Background Identification #: 479-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	07/29/2010 10:01	5432
2	07/29/2010 10:05	6064
3	07/29/2010 10:06	5667
4	07/29/2010 10:07	5647
5	07/29/2010 10:08	6956
6	07/29/2010 10:09	6120
7	07/29/2010 10:11	5199
8	07/29/2010 10:12	5083
9	07/29/2010 10:14	5880
10	07/29/2010 10:15	5567
11	07/29/2010 10:17	6268
12	07/29/2010 10:18	5786
13	07/29/2010 10:19	5405
14	07/29/2010 10:21	5984
15	07/29/2010 10:22	7018
16	07/29/2010 10:23	5521
17	07/29/2010 10:24	5872
18	07/29/2010 10:26	5464
19	07/29/2010 10:27	6157
20	07/29/2010 10:28	5241

Gamma Mean Background (cpm): 5817

Standard Deviation: 520

Gamma 3σ Investigation Level (cpm): 7378

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 518 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 126182 Probe Serial #: 230161

Calibration Due Date: 11/17/2011

Reference Area Background Identification #: 518-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	03/01/2011 10:24	5734
2	03/01/2011 10:26	6197
3	03/01/2011 10:27	5923
4	03/01/2011 10:28	5458
5	03/01/2011 10:29	6885
6	03/01/2011 10:30	5930
7	03/01/2011 10:31	5459
8	03/01/2011 10:32	5899
9	03/01/2011 10:34	5865
10	03/01/2011 10:35	5347
11	03/01/2011 10:36	5470
12	03/01/2011 10:37	5852
13	03/01/2011 10:38	6022
14	03/01/2011 10:40	6222
15	03/01/2011 10:41	5742
16	03/01/2011 10:42	5119
17	03/01/2011 10:43	5970
18	03/01/2011 10:44	5959
19	03/01/2011 10:45	6120
20	03/01/2011 10:46	6291

Gamma Mean Background (cpm):	5873
Standard Deviation:	392
Gamma 3σ Investigation Level (cpm):	7049

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 7:27	72	72	0	513-BKGDS1A	133	
2	11/22/2010 7:29	58	72	-14	513-BKGDS1A	133	
3	11/22/2010 7:30	75	72	3	513-BKGDS1A	133	
4	11/22/2010 7:31	90	72	18	513-BKGDS1A	133	
5	11/22/2010 7:33	53	72	-19	513-BKGDS1A	133	
6	11/22/2010 7:34	68	72	-4	513-BKGDS1A	133	
7	11/22/2010 7:36	67	72	-5	513-BKGDS1A	133	
8	11/22/2010 7:38	63	72	-9	513-BKGDS1A	133	
9	11/22/2010 7:40	78	72	6	513-BKGDS1A	133	
10	11/22/2010 7:42	78	72	6	513-BKGDS1A	133	
11	11/22/2010 7:43	75	72	3	513-BKGDS1A	133	
12	11/22/2010 7:44	82	72	10	513-BKGDS1A	133	
13	11/22/2010 7:46	70	72	-2	513-BKGDS1A	133	
14	11/22/2010 7:47	78	72	6	513-BKGDS1A	133	
15	11/22/2010 7:49	66	72	-6	513-BKGDS1A	133	
16	11/22/2010 7:50	80	72	8	513-BKGDS1A	133	
17	11/22/2010 7:51	72	72	0	513-BKGDS1A	133	
18	11/22/2010 7:52	59	72	-13	513-BKGDS1A	133	
19	11/22/2010 7:54	87	72	15	513-BKGDS1A	133	
20	11/22/2010 7:55	66	72	-6	513-BKGDS1A	133	
21	11/30/2010 11:10	90	72	18	513-BKGDS1A	133	
22	11/30/2010 11:12	77	72	5	513-BKGDS1A	133	
23	11/30/2010 11:13	65	72	-7	513-BKGDS1A	133	
24	11/30/2010 11:15	73	72	1	513-BKGDS1A	133	
25	11/30/2010 11:16	88	72	16	513-BKGDS1A	133	
26	11/30/2010 11:18	95	72	23	513-BKGDS1A	133	
27	11/30/2010 11:23	78	72	6	513-BKGDS1A	133	
28	1/7/2011 11:44	72	72	0	513-BKGDS1A	133	
29	1/7/2011 11:45	67	72	-5	513-BKGDS1A	133	
30	1/7/2011 11:46	65	72	-7	513-BKGDS1A	133	
31	1/20/2011 11:04	105	72	33	513-BKGDS1A	133	
32	1/20/2011 11:06	77	72	5	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	2/16/2011 13:53	49	72	-23	513-BKGDS1A	133	
34	2/16/2011 13:55	57	72	-15	513-BKGDS1A	133	
35	3/8/2011 9:24	60	72	-12	513-BKGDS1A	133	
36	3/8/2011 9:25	56	72	-16	513-BKGDS1A	133	
37	3/8/2011 9:26	60	72	-12	513-BKGDS1A	133	
38	3/8/2011 9:28	44	72	-28	513-BKGDS1A	133	
39	3/8/2011 9:29	65	72	-7	513-BKGDS1A	133	
40	3/8/2011 9:30	57	72	-15	513-BKGDS1A	133	
41	3/8/2011 9:32	65	72	-7	513-BKGDS1A	133	
42	3/8/2011 9:33	66	72	-6	513-BKGDS1A	133	
43	3/8/2011 9:34	67	72	-5	513-BKGDS1A	133	
44	3/8/2011 9:35	55	72	-17	513-BKGDS1A	133	
45	3/8/2011 9:37	56	72	-16	513-BKGDS1A	133	
46	3/8/2011 9:38	62	72	-10	513-BKGDS1A	133	
47	3/8/2011 9:39	75	72	3	513-BKGDS1A	133	
48	3/8/2011 9:40	63	72	-9	513-BKGDS1A	133	
49	3/8/2011 9:42	60	72	-12	513-BKGDS1A	133	
50	3/8/2011 9:43	62	72	-10	513-BKGDS1A	133	
51	3/8/2011 9:44	63	72	-9	513-BKGDS1A	133	
52	3/8/2011 9:45	81	72	9	513-BKGDS1A	133	
53	3/8/2011 9:46	78	72	6	513-BKGDS1A	133	
54	3/8/2011 9:48	65	72	-7	513-BKGDS1A	133	
55	5/5/2011 15:20	75	72	3	513-BKGDS1A	133	
56	5/5/2011 15:21	76	72	4	513-BKGDS1A	133	
57	5/5/2011 15:22	77	72	5	513-BKGDS1A	133	
58	5/5/2011 15:23	83	72	11	513-BKGDS1A	133	
59	6/8/2011 9:25	72	72	0	513-BKGDS1A	133	
60	6/8/2011 9:26	75	72	3	513-BKGDS1A	133	
61	6/8/2011 9:28	70	72	-2	513-BKGDS1A	133	
62	6/8/2011 9:37	73	72	1	513-BKGDS1A	133	
63	6/8/2011 9:38	59	72	-13	513-BKGDS1A	133	
64	6/8/2011 9:39	81	72	9	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	6/8/2011 9:41	84	72	12	513-BKGDS1A	133	
66	6/8/2011 9:42	78	72	6	513-BKGDS1A	133	
67	6/8/2011 9:44	67	72	-5	513-BKGDS1A	133	
68	6/8/2011 9:45	77	72	5	513-BKGDS1A	133	
69	6/8/2011 9:46	75	72	3	513-BKGDS1A	133	
70	6/8/2011 9:48	66	72	-6	513-BKGDS1A	133	
71	6/8/2011 9:49	65	72	-7	513-BKGDS1A	133	
72	6/8/2011 9:50	78	72	6	513-BKGDS1A	133	
73	6/8/2011 9:52	72	72	0	513-BKGDS1A	133	
74	6/8/2011 9:53	83	72	11	513-BKGDS1A	133	
75	6/8/2011 9:54	82	72	10	513-BKGDS1A	133	
76	6/8/2011 10:03	88	72	16	513-BKGDS1A	133	
77	6/8/2011 10:04	75	72	3	513-BKGDS1A	133	
78	6/8/2011 10:06	86	72	14	513-BKGDS1A	133	

Net Gamma cpm Summary

Min: -28
Avg: 0
Max: 33
St Dev: 11

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 9 **Class:** 1 **Area:** 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/12/2010 7:34	56	72	-16	513-BKGDS1A	133	
2	11/12/2010 7:35	55	72	-17	513-BKGDS1A	133	
3	11/12/2010 7:35	47	72	-25	513-BKGDS1A	133	
4	11/12/2010 7:35	60	72	-12	513-BKGDS1A	133	
5	11/12/2010 7:36	59	72	-13	513-BKGDS1A	133	
6	11/12/2010 7:36	72	72	0	513-BKGDS1A	133	
7	11/12/2010 7:36	79	72	7	513-BKGDS1A	133	
8	11/12/2010 7:36	60	72	-12	513-BKGDS1A	133	
9	11/12/2010 7:36	83	72	11	513-BKGDS1A	133	
10	11/12/2010 7:36	90	72	18	513-BKGDS1A	133	
11	11/12/2010 7:36	79	72	7	513-BKGDS1A	133	
12	11/12/2010 7:36	63	72	-9	513-BKGDS1A	133	
13	11/12/2010 7:36	103	72	31	513-BKGDS1A	133	
14	11/12/2010 7:37	77	72	5	513-BKGDS1A	133	
15	11/12/2010 7:37	88	72	16	513-BKGDS1A	133	
16	11/12/2010 7:37	71	72	-1	513-BKGDS1A	133	
17	11/12/2010 7:37	70	72	-2	513-BKGDS1A	133	
18	11/12/2010 7:37	83	72	11	513-BKGDS1A	133	
19	11/12/2010 7:37	78	72	6	513-BKGDS1A	133	
20	11/12/2010 7:37	86	72	14	513-BKGDS1A	133	
21	11/12/2010 7:37	54	72	-18	513-BKGDS1A	133	
22	11/12/2010 7:37	82	72	10	513-BKGDS1A	133	
23	11/12/2010 7:38	80	72	8	513-BKGDS1A	133	
24	11/12/2010 7:38	80	72	8	513-BKGDS1A	133	
25	11/12/2010 7:38	83	72	11	513-BKGDS1A	133	
26	11/12/2010 7:38	55	72	-17	513-BKGDS1A	133	
27	11/12/2010 7:38	74	72	2	513-BKGDS1A	133	
28	11/12/2010 7:38	93	72	21	513-BKGDS1A	133	
29	11/12/2010 7:38	75	72	3	513-BKGDS1A	133	
30	11/12/2010 7:38	75	72	3	513-BKGDS1A	133	
31	11/12/2010 7:39	64	72	-8	513-BKGDS1A	133	
32	11/12/2010 7:39	90	72	18	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	11/12/2010 7:39	72	72	0	513-BKGDS1A	133	
34	11/12/2010 7:39	65	72	-7	513-BKGDS1A	133	
35	11/12/2010 7:39	85	72	13	513-BKGDS1A	133	
36	11/12/2010 7:39	72	72	0	513-BKGDS1A	133	
37	11/12/2010 7:39	66	72	-6	513-BKGDS1A	133	
38	11/12/2010 7:39	65	72	-7	513-BKGDS1A	133	
39	11/12/2010 7:39	68	72	-4	513-BKGDS1A	133	
40	11/12/2010 7:40	75	72	3	513-BKGDS1A	133	
41	11/12/2010 7:40	80	72	8	513-BKGDS1A	133	
42	11/12/2010 7:40	89	72	17	513-BKGDS1A	133	
43	11/12/2010 7:40	76	72	4	513-BKGDS1A	133	
44	11/12/2010 7:40	75	72	3	513-BKGDS1A	133	
45	11/12/2010 7:41	68	72	-4	513-BKGDS1A	133	
46	11/12/2010 7:41	104	72	32	513-BKGDS1A	133	
47	11/12/2010 7:41	61	72	-11	513-BKGDS1A	133	
48	11/12/2010 7:41	86	72	14	513-BKGDS1A	133	
49	11/12/2010 7:41	83	72	11	513-BKGDS1A	133	
50	11/12/2010 7:41	95	72	23	513-BKGDS1A	133	
51	11/12/2010 7:42	69	72	-3	513-BKGDS1A	133	
52	11/12/2010 7:42	57	72	-15	513-BKGDS1A	133	
53	11/12/2010 7:42	43	72	-29	513-BKGDS1A	133	
54	11/12/2010 7:42	44	72	-28	513-BKGDS1A	133	
55	11/12/2010 7:42	44	72	-28	513-BKGDS1A	133	
56	11/12/2010 7:42	59	72	-13	513-BKGDS1A	133	
57	11/12/2010 7:42	46	72	-26	513-BKGDS1A	133	
58	11/12/2010 7:42	63	72	-9	513-BKGDS1A	133	
59	11/12/2010 7:42	60	72	-12	513-BKGDS1A	133	
60	11/12/2010 7:43	75	72	3	513-BKGDS1A	133	
61	11/12/2010 7:43	70	72	-2	513-BKGDS1A	133	
62	11/12/2010 7:43	76	72	4	513-BKGDS1A	133	
63	11/12/2010 7:43	80	72	8	513-BKGDS1A	133	
64	11/12/2010 7:43	72	72	0	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	11/12/2010 7:43	101	72	29	513-BKGDS1A	133	
66	11/12/2010 7:43	92	72	20	513-BKGDS1A	133	
67	11/12/2010 7:43	99	72	27	513-BKGDS1A	133	
68	11/12/2010 7:44	108	72	36	513-BKGDS1A	133	
69	11/12/2010 7:44	76	72	4	513-BKGDS1A	133	
70	11/12/2010 7:44	66	72	-6	513-BKGDS1A	133	
71	11/12/2010 7:44	66	72	-6	513-BKGDS1A	133	
72	11/12/2010 7:44	71	72	-1	513-BKGDS1A	133	
73	11/12/2010 7:44	83	72	11	513-BKGDS1A	133	
74	11/12/2010 7:44	92	72	20	513-BKGDS1A	133	
75	11/12/2010 7:44	78	72	6	513-BKGDS1A	133	
76	11/12/2010 7:44	77	72	5	513-BKGDS1A	133	
77	11/12/2010 7:45	71	72	-1	513-BKGDS1A	133	
78	11/12/2010 7:45	76	72	4	513-BKGDS1A	133	
79	11/12/2010 7:45	132	72	60	513-BKGDS1A	133	
80	11/12/2010 7:45	93	72	21	513-BKGDS1A	133	
81	11/12/2010 7:45	66	72	-6	513-BKGDS1A	133	
82	11/12/2010 7:45	57	72	-15	513-BKGDS1A	133	
83	11/12/2010 7:45	70	72	-2	513-BKGDS1A	133	
84	11/12/2010 7:45	63	72	-9	513-BKGDS1A	133	
85	11/12/2010 7:46	46	72	-26	513-BKGDS1A	133	
86	11/12/2010 7:46	66	72	-6	513-BKGDS1A	133	
87	11/12/2010 7:46	74	72	2	513-BKGDS1A	133	
88	11/12/2010 7:47	77	72	5	513-BKGDS1A	133	
89	11/12/2010 7:47	110	72	38	513-BKGDS1A	133	
90	11/12/2010 7:47	81	72	9	513-BKGDS1A	133	
91	11/12/2010 7:47	69	72	-3	513-BKGDS1A	133	
92	11/12/2010 7:47	60	72	-12	513-BKGDS1A	133	
93	11/12/2010 7:47	85	72	13	513-BKGDS1A	133	
94	11/12/2010 7:48	81	72	9	513-BKGDS1A	133	
95	11/12/2010 7:48	81	72	9	513-BKGDS1A	133	
96	11/12/2010 7:48	80	72	8	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	11/12/2010 7:48	118	72	46	513-BKGDS1A	133	
98	11/12/2010 7:48	114	72	42	513-BKGDS1A	133	
99	11/12/2010 7:48	86	72	14	513-BKGDS1A	133	
100	11/12/2010 7:48	120	72	48	513-BKGDS1A	133	
101	11/12/2010 7:48	96	72	24	513-BKGDS1A	133	
102	11/12/2010 7:48	96	72	24	513-BKGDS1A	133	
103	11/12/2010 7:49	121	72	49	513-BKGDS1A	133	
104	11/12/2010 7:49	81	72	9	513-BKGDS1A	133	
105	11/12/2010 7:49	103	72	31	513-BKGDS1A	133	
106	11/12/2010 7:49	86	72	14	513-BKGDS1A	133	
107	11/12/2010 7:49	96	72	24	513-BKGDS1A	133	
108	11/12/2010 7:49	82	72	10	513-BKGDS1A	133	
109	11/12/2010 7:49	66	72	-6	513-BKGDS1A	133	
110	11/12/2010 7:49	67	72	-5	513-BKGDS1A	133	
111	11/12/2010 7:50	63	72	-9	513-BKGDS1A	133	
112	11/12/2010 7:50	46	72	-26	513-BKGDS1A	133	
113	11/12/2010 7:50	71	72	-1	513-BKGDS1A	133	
114	11/12/2010 7:50	83	72	11	513-BKGDS1A	133	
115	11/12/2010 7:50	92	72	20	513-BKGDS1A	133	
116	11/12/2010 7:50	86	72	14	513-BKGDS1A	133	
117	11/12/2010 7:50	89	72	17	513-BKGDS1A	133	
118	11/12/2010 7:50	97	72	25	513-BKGDS1A	133	
119	11/12/2010 7:50	77	72	5	513-BKGDS1A	133	
120	11/12/2010 7:51	54	72	-18	513-BKGDS1A	133	
121	11/12/2010 7:51	43	72	-29	513-BKGDS1A	133	
122	11/12/2010 7:51	60	72	-12	513-BKGDS1A	133	
123	11/12/2010 7:51	65	72	-7	513-BKGDS1A	133	
124	11/12/2010 7:51	52	72	-20	513-BKGDS1A	133	
125	11/12/2010 7:51	60	72	-12	513-BKGDS1A	133	
126	11/12/2010 7:51	57	72	-15	513-BKGDS1A	133	
127	11/12/2010 7:51	58	72	-14	513-BKGDS1A	133	
128	11/12/2010 7:52	56	72	-16	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
129	11/12/2010 7:52	63	72	-9	513-BKGDS1A	133	
130	11/12/2010 7:53	43	72	-29	513-BKGDS1A	133	
131	11/12/2010 7:53	66	72	-6	513-BKGDS1A	133	
132	11/12/2010 7:53	68	72	-4	513-BKGDS1A	133	
133	11/12/2010 7:54	65	72	-7	513-BKGDS1A	133	
134	11/12/2010 7:54	86	72	14	513-BKGDS1A	133	
135	11/12/2010 7:54	70	72	-2	513-BKGDS1A	133	
136	11/12/2010 7:54	69	72	-3	513-BKGDS1A	133	
137	11/12/2010 7:54	79	72	7	513-BKGDS1A	133	
138	11/12/2010 7:54	60	72	-12	513-BKGDS1A	133	
139	11/12/2010 7:54	69	72	-3	513-BKGDS1A	133	
140	11/12/2010 7:55	57	72	-15	513-BKGDS1A	133	
141	11/12/2010 7:55	65	72	-7	513-BKGDS1A	133	
142	11/12/2010 7:55	53	72	-19	513-BKGDS1A	133	
143	11/12/2010 7:55	61	72	-11	513-BKGDS1A	133	
144	11/12/2010 7:55	56	72	-16	513-BKGDS1A	133	
145	11/12/2010 7:55	55	72	-17	513-BKGDS1A	133	
146	11/12/2010 7:55	47	72	-25	513-BKGDS1A	133	
147	11/12/2010 7:55	75	72	3	513-BKGDS1A	133	
148	11/12/2010 7:56	102	72	30	513-BKGDS1A	133	
149	11/12/2010 7:56	93	72	21	513-BKGDS1A	133	
150	11/12/2010 7:56	86	72	14	513-BKGDS1A	133	
151	11/12/2010 7:56	101	72	29	513-BKGDS1A	133	
152	11/12/2010 7:56	88	72	16	513-BKGDS1A	133	
153	11/12/2010 7:56	66	72	-6	513-BKGDS1A	133	
154	11/12/2010 7:56	72	72	0	513-BKGDS1A	133	
155	11/12/2010 7:56	91	72	19	513-BKGDS1A	133	
156	11/12/2010 7:56	86	72	14	513-BKGDS1A	133	
157	11/12/2010 7:57	65	72	-7	513-BKGDS1A	133	
158	11/12/2010 7:57	78	72	6	513-BKGDS1A	133	
159	11/12/2010 7:57	99	72	27	513-BKGDS1A	133	
160	11/12/2010 7:57	66	72	-6	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
161	11/12/2010 7:57	60	72	-12	513-BKGDS1A	133	
162	11/12/2010 7:57	73	72	1	513-BKGDS1A	133	
163	11/12/2010 7:57	88	72	16	513-BKGDS1A	133	
164	11/12/2010 7:57	79	72	7	513-BKGDS1A	133	
165	11/12/2010 7:58	68	72	-4	513-BKGDS1A	133	
166	11/12/2010 7:58	53	72	-19	513-BKGDS1A	133	
167	11/12/2010 7:58	65	72	-7	513-BKGDS1A	133	
168	11/12/2010 7:58	85	72	13	513-BKGDS1A	133	
169	11/12/2010 7:58	84	72	12	513-BKGDS1A	133	
170	11/12/2010 7:58	79	72	7	513-BKGDS1A	133	
171	11/12/2010 7:59	76	72	4	513-BKGDS1A	133	
172	11/12/2010 7:59	79	72	7	513-BKGDS1A	133	
173	11/12/2010 7:59	89	72	17	513-BKGDS1A	133	
174	11/12/2010 8:00	107	72	35	513-BKGDS1A	133	
175	11/12/2010 8:00	87	72	15	513-BKGDS1A	133	
176	11/12/2010 8:00	64	72	-8	513-BKGDS1A	133	
177	11/12/2010 8:00	55	72	-17	513-BKGDS1A	133	
178	11/12/2010 8:00	75	72	3	513-BKGDS1A	133	
179	11/12/2010 8:00	48	72	-24	513-BKGDS1A	133	
180	11/12/2010 8:00	48	72	-24	513-BKGDS1A	133	
181	11/12/2010 8:00	58	72	-14	513-BKGDS1A	133	
182	11/12/2010 8:00	58	72	-14	513-BKGDS1A	133	
183	11/12/2010 8:01	78	72	6	513-BKGDS1A	133	
184	11/12/2010 8:01	63	72	-9	513-BKGDS1A	133	
185	11/12/2010 8:01	88	72	16	513-BKGDS1A	133	
186	11/12/2010 8:01	104	72	32	513-BKGDS1A	133	
187	11/12/2010 8:01	101	72	29	513-BKGDS1A	133	
188	11/12/2010 8:01	120	72	48	513-BKGDS1A	133	
189	11/12/2010 8:01	92	72	20	513-BKGDS1A	133	
190	11/12/2010 8:01	74	72	2	513-BKGDS1A	133	
191	11/12/2010 8:02	64	72	-8	513-BKGDS1A	133	
192	11/12/2010 8:02	65	72	-7	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
193	11/12/2010 8:02	94	72	22	513-BKGDS1A	133	
194	11/12/2010 8:02	92	72	20	513-BKGDS1A	133	
195	11/12/2010 8:02	77	72	5	513-BKGDS1A	133	
196	11/12/2010 8:02	88	72	16	513-BKGDS1A	133	
197	11/12/2010 8:02	62	72	-10	513-BKGDS1A	133	
198	11/12/2010 8:02	56	72	-16	513-BKGDS1A	133	
199	11/12/2010 8:02	75	72	3	513-BKGDS1A	133	
200	11/12/2010 8:03	104	72	32	513-BKGDS1A	133	
201	11/12/2010 8:03	73	72	1	513-BKGDS1A	133	
202	11/12/2010 8:03	71	72	-1	513-BKGDS1A	133	
203	11/12/2010 8:03	75	72	3	513-BKGDS1A	133	
204	11/12/2010 8:03	75	72	3	513-BKGDS1A	133	
205	11/12/2010 8:03	67	72	-5	513-BKGDS1A	133	
206	11/12/2010 8:03	56	72	-16	513-BKGDS1A	133	
207	11/12/2010 8:03	59	72	-13	513-BKGDS1A	133	
208	11/12/2010 8:04	60	72	-12	513-BKGDS1A	133	
209	11/12/2010 8:04	83	72	11	513-BKGDS1A	133	
210	11/12/2010 8:04	71	72	-1	513-BKGDS1A	133	
211	11/12/2010 8:04	91	72	19	513-BKGDS1A	133	
212	11/12/2010 8:05	82	72	10	513-BKGDS1A	133	
213	11/12/2010 8:05	86	72	14	513-BKGDS1A	133	
214	11/12/2010 8:05	89	72	17	513-BKGDS1A	133	
215	11/12/2010 8:05	92	72	20	513-BKGDS1A	133	
216	11/12/2010 8:05	87	72	15	513-BKGDS1A	133	
217	11/12/2010 8:05	88	72	16	513-BKGDS1A	133	
218	11/12/2010 8:05	65	72	-7	513-BKGDS1A	133	
219	11/12/2010 8:06	49	72	-23	513-BKGDS1A	133	
220	11/12/2010 8:06	51	72	-21	513-BKGDS1A	133	
221	11/12/2010 8:06	46	72	-26	513-BKGDS1A	133	
222	11/12/2010 8:06	68	72	-4	513-BKGDS1A	133	
223	11/12/2010 8:06	54	72	-18	513-BKGDS1A	133	
224	11/12/2010 8:06	66	72	-6	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
225	11/12/2010 8:06	64	72	-8	513-BKGDS1A	133	
226	11/12/2010 8:06	78	72	6	513-BKGDS1A	133	
227	11/12/2010 8:07	97	72	25	513-BKGDS1A	133	
228	11/12/2010 8:07	95	72	23	513-BKGDS1A	133	
229	11/12/2010 8:07	64	72	-8	513-BKGDS1A	133	
230	11/12/2010 8:07	99	72	27	513-BKGDS1A	133	
231	11/12/2010 8:07	79	72	7	513-BKGDS1A	133	
232	11/12/2010 8:07	68	72	-4	513-BKGDS1A	133	
233	11/12/2010 8:07	60	72	-12	513-BKGDS1A	133	
234	11/12/2010 8:07	72	72	0	513-BKGDS1A	133	
235	11/12/2010 8:07	51	72	-21	513-BKGDS1A	133	
236	11/12/2010 8:08	83	72	11	513-BKGDS1A	133	
237	11/12/2010 8:08	66	72	-6	513-BKGDS1A	133	
238	11/12/2010 8:08	65	72	-7	513-BKGDS1A	133	
239	11/12/2010 8:08	79	72	7	513-BKGDS1A	133	
240	11/12/2010 8:08	108	72	36	513-BKGDS1A	133	
241	11/12/2010 8:08	126	72	54	513-BKGDS1A	133	
242	11/12/2010 8:08	[illegible]	72	[illegible]	513-BKGDS1A	133	
243	11/12/2010 8:08	114	72	42	513-BKGDS1A	133	
244	11/12/2010 8:08	132	72	60	513-BKGDS1A	133	
245	11/12/2010 8:09	98	72	26	513-BKGDS1A	133	
246	11/12/2010 8:09	94	72	22	513-BKGDS1A	133	
247	11/12/2010 8:09	124	72	52	513-BKGDS1A	133	
248	11/12/2010 8:09	108	72	36	513-BKGDS1A	133	
249	11/12/2010 8:09	91	72	19	513-BKGDS1A	133	
250	11/12/2010 8:09	90	72	18	513-BKGDS1A	133	
251	11/12/2010 8:09	77	72	5	513-BKGDS1A	133	
252	11/12/2010 8:12	52	72	-20	513-BKGDS1A	133	
253	11/12/2010 8:12	52	72	-20	513-BKGDS1A	133	
254	11/12/2010 8:12	61	72	-11	513-BKGDS1A	133	
255	11/12/2010 8:12	86	72	14	513-BKGDS1A	133	
256	11/12/2010 8:13	62	72	-10	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
257	11/12/2010 8:13	96	72	24	513-BKGDS1A	133	
258	11/12/2010 8:13	84	72	12	513-BKGDS1A	133	
259	11/12/2010 8:13	67	72	-5	513-BKGDS1A	133	
260	11/12/2010 8:13	79	72	7	513-BKGDS1A	133	
261	11/12/2010 8:13	74	72	2	513-BKGDS1A	133	
262	11/12/2010 8:13	87	72	15	513-BKGDS1A	133	
263	11/12/2010 8:13	89	72	17	513-BKGDS1A	133	
264	11/12/2010 8:14	78	72	6	513-BKGDS1A	133	
265	11/12/2010 8:14	94	72	22	513-BKGDS1A	133	
266	11/12/2010 8:14	98	72	26	513-BKGDS1A	133	
267	11/12/2010 8:14	84	72	12	513-BKGDS1A	133	
268	11/12/2010 8:14	87	72	15	513-BKGDS1A	133	
269	11/12/2010 8:14	68	72	-4	513-BKGDS1A	133	
270	11/12/2010 8:14	59	72	-13	513-BKGDS1A	133	
271	11/12/2010 8:14	64	72	-8	513-BKGDS1A	133	
272	11/12/2010 8:14	66	72	-6	513-BKGDS1A	133	
273	11/12/2010 8:15	65	72	-7	513-BKGDS1A	133	
274	11/12/2010 8:15	86	72	14	513-BKGDS1A	133	
275	11/12/2010 8:15	71	72	-1	513-BKGDS1A	133	
276	11/12/2010 8:15	53	72	-19	513-BKGDS1A	133	
277	11/12/2010 8:15	58	72	-14	513-BKGDS1A	133	
278	11/12/2010 8:15	59	72	-13	513-BKGDS1A	133	
279	11/12/2010 8:15	83	72	11	513-BKGDS1A	133	
280	11/12/2010 8:15	59	72	-13	513-BKGDS1A	133	
281	11/12/2010 8:16	62	72	-10	513-BKGDS1A	133	
282	11/12/2010 8:16	73	72	1	513-BKGDS1A	133	
283	11/12/2010 8:16	45	72	-27	513-BKGDS1A	133	
284	11/12/2010 8:16	48	72	-24	513-BKGDS1A	133	
285	11/12/2010 8:16	63	72	-9	513-BKGDS1A	133	
286	11/12/2010 8:16	76	72	4	513-BKGDS1A	133	
287	11/12/2010 8:16	60	72	-12	513-BKGDS1A	133	
288	11/12/2010 8:16	87	72	15	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
289	11/12/2010 8:16	77	72	5	513-BKGDS1A	133	
290	11/12/2010 8:17	71	72	-1	513-BKGDS1A	133	
291	11/12/2010 8:18	87	72	15	513-BKGDS1A	133	
292	11/12/2010 8:18	75	72	3	513-BKGDS1A	133	
293	11/12/2010 8:18	54	72	-18	513-BKGDS1A	133	
294	11/12/2010 8:18	50	72	-22	513-BKGDS1A	133	
295	11/12/2010 8:19	49	72	-23	513-BKGDS1A	133	
296	11/12/2010 8:19	65	72	-7	513-BKGDS1A	133	
297	11/12/2010 8:19	45	72	-27	513-BKGDS1A	133	
298	11/12/2010 8:19	50	72	-22	513-BKGDS1A	133	
299	11/12/2010 8:19	91	72	19	513-BKGDS1A	133	
300	11/12/2010 8:19	128	72	56	513-BKGDS1A	133	
301	11/12/2010 8:19	114	72	42	513-BKGDS1A	133	
302	11/12/2010 8:19	87	72	15	513-BKGDS1A	133	
303	11/12/2010 8:19	54	72	-18	513-BKGDS1A	133	
304	11/12/2010 8:20	80	72	8	513-BKGDS1A	133	
305	11/12/2010 8:20	127	72	55	513-BKGDS1A	133	
306	11/12/2010 8:20	104	72	32	513-BKGDS1A	133	
307	11/12/2010 8:20	106	72	34	513-BKGDS1A	133	
308	11/12/2010 8:20	82	72	10	513-BKGDS1A	133	
309	11/12/2010 8:20	75	72	3	513-BKGDS1A	133	
310	11/12/2010 8:20	80	72	8	513-BKGDS1A	133	
311	11/12/2010 8:20	84	72	12	513-BKGDS1A	133	
312	11/12/2010 8:20	84	72	12	513-BKGDS1A	133	
313	11/12/2010 8:21	86	72	14	513-BKGDS1A	133	
314	11/12/2010 8:21	72	72	0	513-BKGDS1A	133	
315	11/12/2010 8:21	57	72	-15	513-BKGDS1A	133	
316	11/12/2010 8:21	60	72	-12	513-BKGDS1A	133	
317	11/12/2010 8:21	70	72	-2	513-BKGDS1A	133	
318	11/12/2010 8:21	53	72	-19	513-BKGDS1A	133	
319	11/12/2010 8:21	69	72	-3	513-BKGDS1A	133	
320	11/12/2010 8:21	94	72	22	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
321	11/12/2010 8:22	93	72	21	513-BKGDS1A	133	
322	11/12/2010 8:22	103	72	31	513-BKGDS1A	133	
323	11/12/2010 8:22	131	72	59	513-BKGDS1A	133	
324	11/12/2010 8:22	123	72	51	513-BKGDS1A	133	
325	11/12/2010 8:22	66	72	-6	513-BKGDS1A	133	
326	11/12/2010 8:22	61	72	-11	513-BKGDS1A	133	
327	11/12/2010 8:22	52	72	-20	513-BKGDS1A	133	
328	11/12/2010 8:22	60	72	-12	513-BKGDS1A	133	
329	11/12/2010 8:23	83	72	11	513-BKGDS1A	133	
330	11/12/2010 8:23	82	72	10	513-BKGDS1A	133	
331	11/12/2010 8:23	80	72	8	513-BKGDS1A	133	
332	11/12/2010 8:23	67	72	-5	513-BKGDS1A	133	
333	11/12/2010 8:23	64	72	-8	513-BKGDS1A	133	
334	11/12/2010 8:23	81	72	9	513-BKGDS1A	133	
335	11/12/2010 8:24	104	72	32	513-BKGDS1A	133	
336	11/12/2010 8:24	107	72	35	513-BKGDS1A	133	
337	11/12/2010 8:24	88	72	16	513-BKGDS1A	133	
338	11/12/2010 8:24	86	72	14	513-BKGDS1A	133	
339	11/12/2010 8:24	93	72	21	513-BKGDS1A	133	
340	11/12/2010 8:24	95	72	23	513-BKGDS1A	133	
341	11/12/2010 8:24	102	72	30	513-BKGDS1A	133	
342	11/12/2010 8:24	64	72	-8	513-BKGDS1A	133	
343	11/12/2010 8:25	76	72	4	513-BKGDS1A	133	
344	11/12/2010 8:25	72	72	0	513-BKGDS1A	133	
345	11/12/2010 8:25	53	72	-19	513-BKGDS1A	133	
346	11/12/2010 8:25	62	72	-10	513-BKGDS1A	133	
347	11/12/2010 8:25	50	72	-22	513-BKGDS1A	133	
348	11/12/2010 8:25	72	72	0	513-BKGDS1A	133	
349	11/12/2010 8:25	86	72	14	513-BKGDS1A	133	
350	11/12/2010 8:25	67	72	-5	513-BKGDS1A	133	
351	11/12/2010 8:25	76	72	4	513-BKGDS1A	133	
352	11/12/2010 8:26	85	72	13	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
353	11/12/2010 8:26	72	72	0	513-BKGDS1A	133	
354	11/12/2010 8:26	72	72	0	513-BKGDS1A	133	
355	11/12/2010 8:26	74	72	2	513-BKGDS1A	133	
356	11/12/2010 8:26	71	72	-1	513-BKGDS1A	133	
357	11/12/2010 8:26	60	72	-12	513-BKGDS1A	133	
358	11/12/2010 8:26	47	72	-25	513-BKGDS1A	133	
359	11/12/2010 8:26	61	72	-11	513-BKGDS1A	133	
360	11/12/2010 8:27	66	72	-6	513-BKGDS1A	133	
361	11/12/2010 8:27	82	72	10	513-BKGDS1A	133	
362	11/12/2010 8:27	54	72	-18	513-BKGDS1A	133	
363	11/12/2010 8:27	43	72	-29	513-BKGDS1A	133	
364	11/12/2010 8:27	42	72	-30	513-BKGDS1A	133	
365	11/12/2010 8:27	61	72	-11	513-BKGDS1A	133	
366	11/12/2010 8:28	56	72	-16	513-BKGDS1A	133	
367	11/12/2010 8:28	46	72	-26	513-BKGDS1A	133	
368	11/12/2010 8:28	57	72	-15	513-BKGDS1A	133	
369	11/12/2010 8:28	77	72	5	513-BKGDS1A	133	
370	11/12/2010 8:28	60	72	-12	513-BKGDS1A	133	
371	11/12/2010 8:29	65	72	-7	513-BKGDS1A	133	
372	11/12/2010 8:29	78	72	6	513-BKGDS1A	133	
373	11/12/2010 8:29	46	72	-26	513-BKGDS1A	133	
374	11/12/2010 8:29	44	72	-28	513-BKGDS1A	133	
375	11/12/2010 8:29	63	72	-9	513-BKGDS1A	133	
376	11/12/2010 8:29	59	72	-13	513-BKGDS1A	133	
377	11/12/2010 8:29	49	72	-23	513-BKGDS1A	133	
378	11/12/2010 8:29	51	72	-21	513-BKGDS1A	133	
379	11/12/2010 8:30	67	72	-5	513-BKGDS1A	133	
380	11/12/2010 8:30	58	72	-14	513-BKGDS1A	133	
381	11/12/2010 8:30	52	72	-20	513-BKGDS1A	133	
382	11/12/2010 8:30	57	72	-15	513-BKGDS1A	133	
383	11/12/2010 8:30	51	72	-21	513-BKGDS1A	133	
384	11/12/2010 8:30	57	72	-15	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
385	11/12/2010 8:30	60	72	-12	513-BKGDS1A	133	
386	11/12/2010 8:30	58	72	-14	513-BKGDS1A	133	
387	11/12/2010 8:30	69	72	-3	513-BKGDS1A	133	
388	11/12/2010 8:31	67	72	-5	513-BKGDS1A	133	
389	11/12/2010 8:31	68	72	-4	513-BKGDS1A	133	
390	11/12/2010 8:31	103	72	31	513-BKGDS1A	133	
391	11/12/2010 8:31	86	72	14	513-BKGDS1A	133	
392	11/12/2010 8:31	81	72	9	513-BKGDS1A	133	
393	11/12/2010 8:31	73	72	1	513-BKGDS1A	133	
394	11/12/2010 8:31	44	72	-28	513-BKGDS1A	133	
395	11/12/2010 8:31	72	72	0	513-BKGDS1A	133	
396	11/12/2010 8:32	64	72	-8	513-BKGDS1A	133	
397	11/12/2010 8:32	96	72	24	513-BKGDS1A	133	
398	11/12/2010 8:32	94	72	22	513-BKGDS1A	133	
399	11/12/2010 8:32	76	72	4	513-BKGDS1A	133	
400	11/12/2010 8:32	113	72	41	513-BKGDS1A	133	
401	11/12/2010 8:32	93	72	21	513-BKGDS1A	133	
402	11/12/2010 8:32	110	72	38	513-BKGDS1A	133	
403	11/12/2010 8:32	106	72	34	513-BKGDS1A	133	
404	11/12/2010 8:32	92	72	20	513-BKGDS1A	133	
405	11/12/2010 8:33	66	72	-6	513-BKGDS1A	133	
406	11/12/2010 8:33	82	72	10	513-BKGDS1A	133	
407	11/12/2010 8:33	81	72	9	513-BKGDS1A	133	
408	11/12/2010 8:33	81	72	9	513-BKGDS1A	133	
409	11/12/2010 8:33	71	72	-1	513-BKGDS1A	133	
410	11/12/2010 8:33	59	72	-13	513-BKGDS1A	133	
411	11/12/2010 8:33	65	72	-7	513-BKGDS1A	133	
412	11/12/2010 8:34	75	72	3	513-BKGDS1A	133	
413	11/12/2010 8:34	66	72	-6	513-BKGDS1A	133	
414	11/12/2010 8:34	74	72	2	513-BKGDS1A	133	
415	11/12/2010 8:34	62	72	-10	513-BKGDS1A	133	
416	11/12/2010 8:34	70	72	-2	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 9** **Class: 1** **Area: 886.82 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
417	11/12/2010 8:34	74	72	2	513-BKGDS1A	133	
418	11/12/2010 8:34	86	72	14	513-BKGDS1A	133	
419	11/12/2010 8:34	97	72	25	513-BKGDS1A	133	
420	11/12/2010 8:35	80	72	8	513-BKGDS1A	133	
421	11/12/2010 8:35	87	72	15	513-BKGDS1A	133	
422	11/12/2010 8:35	112	72	40	513-BKGDS1A	133	
423	11/12/2010 8:35	92	72	20	513-BKGDS1A	133	
424	11/12/2010 8:35	79	72	7	513-BKGDS1A	133	
425	11/12/2010 8:35	94	72	22	513-BKGDS1A	133	
426	11/12/2010 8:35	70	72	-2	513-BKGDS1A	133	
427	11/12/2010 8:35	89	72	17	513-BKGDS1A	133	
428	11/12/2010 8:35	120	72	48	513-BKGDS1A	133	
429	11/12/2010 8:36	99	72	27	513-BKGDS1A	133	
430	11/12/2010 8:36	94	72	22	513-BKGDS1A	133	
431	11/12/2010 8:36	93	72	21	513-BKGDS1A	133	
432	11/12/2010 8:36	68	72	-4	513-BKGDS1A	133	
433	11/12/2010 8:36	53	72	-19	513-BKGDS1A	133	
434	11/12/2010 8:36	43	72	-29	513-BKGDS1A	133	
435	11/12/2010 8:36	51	72	-21	513-BKGDS1A	133	
436	11/12/2010 8:36	59	72	-13	513-BKGDS1A	133	
437	11/12/2010 8:37	58	72	-14	513-BKGDS1A	133	
438	11/12/2010 8:37	73	72	1	513-BKGDS1A	133	
439	11/12/2010 8:37	83	72	11	513-BKGDS1A	133	
440	11/12/2010 8:37	87	72	15	513-BKGDS1A	133	
441	11/12/2010 8:37	92	72	20	513-BKGDS1A	133	
442	11/12/2010 8:37	66	72	-6	513-BKGDS1A	133	
443	11/12/2010 8:37	84	72	12	513-BKGDS1A	133	
444	11/12/2010 8:37	72	72	0	513-BKGDS1A	133	
445	11/12/2010 9:19	82	72	10	513-BKGDS1A	133	
446	11/12/2010 9:19	80	72	8	513-BKGDS1A	133	
447	11/12/2010 9:19	50	72	-22	513-BKGDS1A	133	
448	11/12/2010 9:19	46	72	-26	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
449	11/12/2010 9:19	53	72	-19	513-BKGDS1A	133	
450	11/12/2010 9:19	53	72	-19	513-BKGDS1A	133	
451	11/12/2010 9:19	68	72	-4	513-BKGDS1A	133	
452	11/12/2010 9:20	47	72	-25	513-BKGDS1A	133	
453	11/12/2010 9:20	74	72	2	513-BKGDS1A	133	
454	11/12/2010 9:20	61	72	-11	513-BKGDS1A	133	
455	11/12/2010 9:20	62	72	-10	513-BKGDS1A	133	
456	11/12/2010 9:20	50	72	-22	513-BKGDS1A	133	
457	11/12/2010 9:20	80	72	8	513-BKGDS1A	133	
458	11/12/2010 9:20	59	72	-13	513-BKGDS1A	133	
459	11/12/2010 9:20	53	72	-19	513-BKGDS1A	133	
460	11/12/2010 9:20	52	72	-20	513-BKGDS1A	133	
461	11/12/2010 9:21	95	72	23	513-BKGDS1A	133	
462	11/12/2010 9:21	109	72	37	513-BKGDS1A	133	
463	11/12/2010 9:21	71	72	-1	513-BKGDS1A	133	
464	11/12/2010 9:21	68	72	-4	513-BKGDS1A	133	
465	11/12/2010 9:21	75	72	3	513-BKGDS1A	133	
466	11/12/2010 9:21	95	72	23	513-BKGDS1A	133	
467	11/12/2010 9:21	87	72	15	513-BKGDS1A	133	
468	11/12/2010 9:21	80	72	8	513-BKGDS1A	133	
469	11/12/2010 9:21	68	72	-4	513-BKGDS1A	133	
470	11/12/2010 9:22	75	72	3	513-BKGDS1A	133	
471	11/12/2010 9:22	57	72	-15	513-BKGDS1A	133	
472	11/12/2010 9:22	62	72	-10	513-BKGDS1A	133	
473	11/12/2010 9:22	56	72	-16	513-BKGDS1A	133	
474	11/12/2010 9:22	48	72	-24	513-BKGDS1A	133	
475	11/12/2010 9:22	74	72	2	513-BKGDS1A	133	
476	11/12/2010 9:22	81	72	9	513-BKGDS1A	133	
477	11/12/2010 9:22	89	72	17	513-BKGDS1A	133	
478	11/12/2010 9:23	66	72	-6	513-BKGDS1A	133	
479	11/12/2010 9:24	82	72	10	513-BKGDS1A	133	
480	11/12/2010 9:24	84	72	12	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 9** **Class: 1** **Area: 886.82 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
481	11/12/2010 9:24	87	72	15	513-BKGDS1A	133	
482	11/12/2010 9:25	70	72	-2	513-BKGDS1A	133	
483	11/12/2010 9:25	68	72	-4	513-BKGDS1A	133	
484	11/12/2010 9:25	77	72	5	513-BKGDS1A	133	
485	11/12/2010 9:25	59	72	-13	513-BKGDS1A	133	
486	11/12/2010 9:25	53	72	-19	513-BKGDS1A	133	
487	11/12/2010 9:25	111	72	39	513-BKGDS1A	133	
488	11/12/2010 9:25	84	72	12	513-BKGDS1A	133	
489	11/12/2010 9:25	74	72	2	513-BKGDS1A	133	
490	11/12/2010 9:26	83	72	11	513-BKGDS1A	133	
491	11/12/2010 9:26	72	72	0	513-BKGDS1A	133	
492	11/12/2010 9:26	68	72	-4	513-BKGDS1A	133	
493	11/12/2010 9:26	63	72	-9	513-BKGDS1A	133	
494	11/12/2010 9:26	89	72	17	513-BKGDS1A	133	
495	11/12/2010 9:26	74	72	2	513-BKGDS1A	133	
496	11/12/2010 9:26	88	72	16	513-BKGDS1A	133	
497	11/12/2010 9:26	79	72	7	513-BKGDS1A	133	
498	11/12/2010 9:26	89	72	17	513-BKGDS1A	133	
499	11/12/2010 9:27	74	72	2	513-BKGDS1A	133	
500	11/12/2010 9:27	73	72	1	513-BKGDS1A	133	
501	11/12/2010 9:27	67	72	-5	513-BKGDS1A	133	
502	11/12/2010 9:27	77	72	5	513-BKGDS1A	133	
503	11/12/2010 9:27	72	72	0	513-BKGDS1A	133	
504	11/12/2010 9:27	59	72	-13	513-BKGDS1A	133	
505	11/12/2010 9:27	43	72	-29	513-BKGDS1A	133	
506	11/12/2010 9:27	55	72	-17	513-BKGDS1A	133	
507	11/12/2010 9:27	59	72	-13	513-BKGDS1A	133	
508	11/12/2010 9:28	52	72	-20	513-BKGDS1A	133	
509	11/12/2010 9:28	66	72	-6	513-BKGDS1A	133	
510	11/12/2010 9:28	88	72	16	513-BKGDS1A	133	
511	11/12/2010 9:28	53	72	-19	513-BKGDS1A	133	
512	11/12/2010 9:28	57	72	-15	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
513	11/12/2010 9:29	79	72	7	513-BKGDS1A	133	
514	11/12/2010 9:29	65	72	-7	513-BKGDS1A	133	
515	11/12/2010 9:29	54	72	-18	513-BKGDS1A	133	
516	11/12/2010 9:29	82	72	10	513-BKGDS1A	133	
517	11/12/2010 9:29	79	72	7	513-BKGDS1A	133	
518	11/12/2010 9:29	66	72	-6	513-BKGDS1A	133	
519	11/12/2010 9:29	82	72	10	513-BKGDS1A	133	
520	11/12/2010 9:29	56	72	-16	513-BKGDS1A	133	
521	11/12/2010 9:30	76	72	4	513-BKGDS1A	133	
522	11/12/2010 9:30	64	72	-8	513-BKGDS1A	133	
523	11/12/2010 9:30	90	72	18	513-BKGDS1A	133	
524	11/12/2010 9:30	58	72	-14	513-BKGDS1A	133	
525	11/12/2010 9:30	79	72	7	513-BKGDS1A	133	
526	11/12/2010 9:30	62	72	-10	513-BKGDS1A	133	
527	11/12/2010 9:30	64	72	-8	513-BKGDS1A	133	
528	11/12/2010 9:30	87	72	15	513-BKGDS1A	133	
529	11/12/2010 9:30	56	72	-16	513-BKGDS1A	133	
530	11/12/2010 9:31	93	72	21	513-BKGDS1A	133	
531	11/12/2010 9:31	75	72	3	513-BKGDS1A	133	
532	11/12/2010 9:31	74	72	2	513-BKGDS1A	133	
533	11/12/2010 9:31	104	72	32	513-BKGDS1A	133	
534	11/12/2010 9:31	104	72	32	513-BKGDS1A	133	
535	11/12/2010 9:31	88	72	16	513-BKGDS1A	133	
536	11/12/2010 9:31	90	72	18	513-BKGDS1A	133	
537	11/12/2010 9:31	79	72	7	513-BKGDS1A	133	
538	11/12/2010 9:31	73	72	1	513-BKGDS1A	133	
539	11/12/2010 9:32	77	72	5	513-BKGDS1A	133	
540	11/12/2010 9:32	60	72	-12	513-BKGDS1A	133	
541	11/12/2010 9:32	94	72	22	513-BKGDS1A	133	
542	11/12/2010 9:32	83	72	11	513-BKGDS1A	133	
543	11/12/2010 9:32	79	72	7	513-BKGDS1A	133	
544	11/12/2010 9:32	90	72	18	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
545	11/12/2010 9:32	59	72	-13	513-BKGDS1A	133	
546	11/12/2010 9:33	90	72	18	513-BKGDS1A	133	
547	11/12/2010 9:33	101	72	29	513-BKGDS1A	133	
548	11/12/2010 9:33	126	72	54	513-BKGDS1A	133	
549	11/12/2010 9:33	116	72	44	513-BKGDS1A	133	
550	11/12/2010 9:33	107	72	35	513-BKGDS1A	133	
551	11/12/2010 9:34	86	72	14	513-BKGDS1A	133	
552	11/12/2010 9:34	91	72	19	513-BKGDS1A	133	
553	11/12/2010 9:34	66	72	-6	513-BKGDS1A	133	
554	11/12/2010 9:34	87	72	15	513-BKGDS1A	133	
555	11/12/2010 9:34	83	72	11	513-BKGDS1A	133	
556	11/12/2010 9:34	96	72	24	513-BKGDS1A	133	
557	11/12/2010 9:34	85	72	13	513-BKGDS1A	133	
558	11/12/2010 9:34	72	72	0	513-BKGDS1A	133	
559	11/12/2010 9:34	72	72	0	513-BKGDS1A	133	
560	11/12/2010 9:35	76	72	4	513-BKGDS1A	133	
561	11/12/2010 9:35	54	72	-18	513-BKGDS1A	133	
562	11/12/2010 9:35	52	72	-20	513-BKGDS1A	133	
563	11/12/2010 9:35	52	72	-20	513-BKGDS1A	133	
564	11/12/2010 9:35	69	72	-3	513-BKGDS1A	133	
565	11/12/2010 9:35	79	72	7	513-BKGDS1A	133	
566	11/12/2010 9:35	76	72	4	513-BKGDS1A	133	
567	11/12/2010 9:35	54	72	-18	513-BKGDS1A	133	
568	11/12/2010 9:35	70	72	-2	513-BKGDS1A	133	
569	11/12/2010 9:36	68	72	-4	513-BKGDS1A	133	
570	11/12/2010 9:36	46	72	-26	513-BKGDS1A	133	
571	11/12/2010 9:36	55	72	-17	513-BKGDS1A	133	
572	11/12/2010 9:36	61	72	-11	513-BKGDS1A	133	
573	11/12/2010 9:36	67	72	-5	513-BKGDS1A	133	
574	11/12/2010 9:36	62	72	-10	513-BKGDS1A	133	
575	11/12/2010 9:36	64	72	-8	513-BKGDS1A	133	
576	11/12/2010 9:36	60	72	-12	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 9** **Class: 1** **Area: 886.82 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
577	11/12/2010 9:37	72	72	0	513-BKGDS1A	133	
578	11/12/2010 9:37	65	72	-7	513-BKGDS1A	133	
579	11/12/2010 9:37	70	72	-2	513-BKGDS1A	133	
580	11/12/2010 9:37	63	72	-9	513-BKGDS1A	133	
581	11/12/2010 9:37	54	72	-18	513-BKGDS1A	133	
582	11/12/2010 9:38	64	72	-8	513-BKGDS1A	133	
583	11/12/2010 9:38	63	72	-9	513-BKGDS1A	133	
584	11/12/2010 9:38	73	72	1	513-BKGDS1A	133	
585	11/12/2010 9:38	53	72	-19	513-BKGDS1A	133	
586	11/12/2010 9:38	56	72	-16	513-BKGDS1A	133	
587	11/12/2010 9:38	61	72	-11	513-BKGDS1A	133	
588	11/12/2010 9:38	45	72	-27	513-BKGDS1A	133	
589	11/12/2010 9:38	47	72	-25	513-BKGDS1A	133	
590	11/12/2010 9:38	51	72	-21	513-BKGDS1A	133	
591	11/12/2010 9:39	78	72	6	513-BKGDS1A	133	
592	11/12/2010 9:39	79	72	7	513-BKGDS1A	133	
593	11/12/2010 9:39	86	72	14	513-BKGDS1A	133	
594	11/12/2010 9:39	53	72	-19	513-BKGDS1A	133	
595	11/12/2010 9:39	50	72	-22	513-BKGDS1A	133	
596	11/12/2010 9:39	56	72	-16	513-BKGDS1A	133	
597	11/12/2010 9:39	59	72	-13	513-BKGDS1A	133	
598	11/12/2010 9:39	51	72	-21	513-BKGDS1A	133	
599	11/12/2010 9:40	73	72	1	513-BKGDS1A	133	
600	11/12/2010 9:40	103	72	31	513-BKGDS1A	133	
601	11/12/2010 9:40	79	72	7	513-BKGDS1A	133	
602	11/12/2010 9:40	69	72	-3	513-BKGDS1A	133	
603	11/12/2010 9:40	92	72	20	513-BKGDS1A	133	
604	11/12/2010 9:40	76	72	4	513-BKGDS1A	133	
605	11/12/2010 9:40	98	72	26	513-BKGDS1A	133	
606	11/12/2010 9:40	54	72	-18	513-BKGDS1A	133	
607	11/12/2010 9:40	56	72	-16	513-BKGDS1A	133	
608	11/12/2010 9:41	66	72	-6	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 9** **Class: 1** **Area: 886.82 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
609	11/12/2010 9:41	82	72	10	513-BKGDS1A	133	
610	11/12/2010 9:41	83	72	11	513-BKGDS1A	133	
611	11/12/2010 9:42	69	72	-3	513-BKGDS1A	133	
612	11/12/2010 9:42	65	72	-7	513-BKGDS1A	133	
613	11/12/2010 9:42	71	72	-1	513-BKGDS1A	133	
614	11/12/2010 9:42	75	72	3	513-BKGDS1A	133	
615	11/12/2010 9:42	61	72	-11	513-BKGDS1A	133	
616	11/12/2010 9:42	59	72	-13	513-BKGDS1A	133	
617	11/12/2010 9:42	72	72	0	513-BKGDS1A	133	
618	11/12/2010 9:42	92	72	20	513-BKGDS1A	133	
619	11/12/2010 9:42	72	72	0	513-BKGDS1A	133	
620	11/12/2010 9:43	66	72	-6	513-BKGDS1A	133	
621	11/12/2010 9:43	73	72	1	513-BKGDS1A	133	
622	11/12/2010 9:43	56	72	-16	513-BKGDS1A	133	
623	11/12/2010 9:43	48	72	-24	513-BKGDS1A	133	
624	11/12/2010 9:43	59	72	-13	513-BKGDS1A	133	
625	11/12/2010 9:43	51	72	-21	513-BKGDS1A	133	
626	11/12/2010 9:43	57	72	-15	513-BKGDS1A	133	
627	11/12/2010 9:43	102	72	30	513-BKGDS1A	133	
628	11/12/2010 9:44	86	72	14	513-BKGDS1A	133	
629	11/12/2010 9:44	84	72	12	513-BKGDS1A	133	
630	11/12/2010 9:44	62	72	-10	513-BKGDS1A	133	
631	11/12/2010 9:44	56	72	-16	513-BKGDS1A	133	
632	11/12/2010 9:44	56	72	-16	513-BKGDS1A	133	
633	11/12/2010 9:44	58	72	-14	513-BKGDS1A	133	
634	11/12/2010 9:44	55	72	-17	513-BKGDS1A	133	
635	11/12/2010 9:44	59	72	-13	513-BKGDS1A	133	
636	11/12/2010 9:44	69	72	-3	513-BKGDS1A	133	
637	11/12/2010 9:45	64	72	-8	513-BKGDS1A	133	
638	11/12/2010 9:45	54	72	-18	513-BKGDS1A	133	
639	11/12/2010 9:45	69	72	-3	513-BKGDS1A	133	
640	11/12/2010 9:46	56	72	-16	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
641	11/12/2010 9:46	90	72	18	513-BKGDS1A	133	
642	11/12/2010 9:46	63	72	-9	513-BKGDS1A	133	
643	11/12/2010 9:46	69	72	-3	513-BKGDS1A	133	
644	11/12/2010 9:46	70	72	-2	513-BKGDS1A	133	
645	11/12/2010 9:46	58	72	-14	513-BKGDS1A	133	
646	11/12/2010 9:46	48	72	-24	513-BKGDS1A	133	
647	11/12/2010 9:46	46	72	-26	513-BKGDS1A	133	
648	11/12/2010 9:47	59	72	-13	513-BKGDS1A	133	
649	11/12/2010 9:47	54	72	-18	513-BKGDS1A	133	
650	11/12/2010 9:47	89	72	17	513-BKGDS1A	133	
651	11/12/2010 9:47	74	72	2	513-BKGDS1A	133	
652	11/12/2010 9:47	50	72	-22	513-BKGDS1A	133	
653	11/12/2010 9:47	58	72	-14	513-BKGDS1A	133	
654	11/12/2010 9:47	83	72	11	513-BKGDS1A	133	
655	11/12/2010 9:47	75	72	3	513-BKGDS1A	133	
656	11/12/2010 9:47	69	72	-3	513-BKGDS1A	133	
657	11/12/2010 9:48	75	72	3	513-BKGDS1A	133	
658	11/12/2010 9:48	65	72	-7	513-BKGDS1A	133	
659	11/12/2010 9:48	105	72	33	513-BKGDS1A	133	
660	11/12/2010 9:48	100	72	28	513-BKGDS1A	133	
661	11/12/2010 9:48	84	72	12	513-BKGDS1A	133	
662	11/12/2010 9:48	107	72	35	513-BKGDS1A	133	
663	11/12/2010 9:48	98	72	26	513-BKGDS1A	133	
664	11/12/2010 9:48	73	72	1	513-BKGDS1A	133	
665	11/12/2010 9:49	75	72	3	513-BKGDS1A	133	
666	11/12/2010 9:49	75	72	3	513-BKGDS1A	133	
667	11/12/2010 9:49	118	72	46	513-BKGDS1A	133	
668	11/12/2010 9:49	95	72	23	513-BKGDS1A	133	
669	11/12/2010 9:49	56	72	-16	513-BKGDS1A	133	
670	11/12/2010 9:50	81	72	9	513-BKGDS1A	133	
671	11/12/2010 9:50	75	72	3	513-BKGDS1A	133	
672	11/12/2010 9:50	62	72	-10	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
673	11/12/2010 9:50	58	72	-14	513-BKGDS1A	133	
674	11/12/2010 9:50	59	72	-13	513-BKGDS1A	133	
675	11/12/2010 9:50	89	72	17	513-BKGDS1A	133	
676	11/12/2010 9:51	86	72	14	513-BKGDS1A	133	
677	11/12/2010 9:51	113	72	41	513-BKGDS1A	133	
678	11/12/2010 9:51	109	72	37	513-BKGDS1A	133	
679	11/12/2010 9:51	115	72	43	513-BKGDS1A	133	
680	11/12/2010 9:51	97	72	25	513-BKGDS1A	133	
681	11/12/2010 9:51	84	72	12	513-BKGDS1A	133	
682	11/12/2010 9:51	80	72	8	513-BKGDS1A	133	
683	11/12/2010 9:51	82	72	10	513-BKGDS1A	133	
684	11/12/2010 9:52	88	72	16	513-BKGDS1A	133	
685	11/12/2010 9:52	60	72	-12	513-BKGDS1A	133	
686	11/12/2010 9:52	53	72	-19	513-BKGDS1A	133	
687	11/12/2010 9:52	46	72	-26	513-BKGDS1A	133	
688	11/12/2010 9:52	64	72	-8	513-BKGDS1A	133	
689	11/12/2010 9:52	68	72	-4	513-BKGDS1A	133	
690	11/12/2010 9:52	84	72	12	513-BKGDS1A	133	
691	11/12/2010 9:52	54	72	-18	513-BKGDS1A	133	
692	11/12/2010 9:52	64	72	-8	513-BKGDS1A	133	
693	11/12/2010 9:53	52	72	-20	513-BKGDS1A	133	
694	11/12/2010 9:53	59	72	-13	513-BKGDS1A	133	
695	11/12/2010 9:53	49	72	-23	513-BKGDS1A	133	
696	11/12/2010 9:53	48	72	-24	513-BKGDS1A	133	
697	11/12/2010 9:53	57	72	-15	513-BKGDS1A	133	
698	11/12/2010 9:53	70	72	-2	513-BKGDS1A	133	
699	11/12/2010 9:54	84	72	12	513-BKGDS1A	133	
700	11/12/2010 9:54	86	72	14	513-BKGDS1A	133	
701	11/12/2010 9:55	64	72	-8	513-BKGDS1A	133	
702	11/12/2010 9:55	73	72	1	513-BKGDS1A	133	
703	11/12/2010 9:55	115	72	43	513-BKGDS1A	133	
704	11/12/2010 9:55	89	72	17	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
705	11/12/2010 9:55	86	72	14	513-BKGDS1A	133	
706	11/12/2010 9:55	79	72	7	513-BKGDS1A	133	
707	11/12/2010 9:55	92	72	20	513-BKGDS1A	133	
708	11/12/2010 9:55	104	72	32	513-BKGDS1A	133	
709	11/12/2010 9:56	106	72	34	513-BKGDS1A	133	
710	11/12/2010 9:56	100	72	28	513-BKGDS1A	133	
711	11/12/2010 9:56	91	72	19	513-BKGDS1A	133	
712	11/12/2010 9:56	98	72	26	513-BKGDS1A	133	
713	11/12/2010 9:56	95	72	23	513-BKGDS1A	133	
714	11/12/2010 9:56	130	72	58	513-BKGDS1A	133	
715	11/12/2010 9:56	101	72	29	513-BKGDS1A	133	
716	11/12/2010 9:56	98	72	26	513-BKGDS1A	133	
717	11/12/2010 9:56	72	72	0	513-BKGDS1A	133	
718	11/12/2010 9:57	92	72	20	513-BKGDS1A	133	
719	11/12/2010 9:57	99	72	27	513-BKGDS1A	133	
720	11/12/2010 9:57	87	72	15	513-BKGDS1A	133	
721	11/12/2010 9:57	65	72	-7	513-BKGDS1A	133	
722	11/12/2010 9:57	114	72	42	513-BKGDS1A	133	
723	11/12/2010 9:57	99	72	27	513-BKGDS1A	133	
724	11/12/2010 9:57	76	72	4	513-BKGDS1A	133	
725	11/12/2010 9:57	72	72	0	513-BKGDS1A	133	
726	11/12/2010 9:57	76	72	4	513-BKGDS1A	133	
727	11/12/2010 9:59	102	72	30	513-BKGDS1A	133	
728	11/12/2010 9:59	110	72	38	513-BKGDS1A	133	
729	11/12/2010 10:00	79	72	7	513-BKGDS1A	133	
730	11/12/2010 10:00	92	72	20	513-BKGDS1A	133	
731	11/12/2010 10:00	112	72	40	513-BKGDS1A	133	
732	11/12/2010 10:00	84	72	12	513-BKGDS1A	133	
733	11/12/2010 10:00	98	72	26	513-BKGDS1A	133	
734	11/12/2010 10:00	76	72	4	513-BKGDS1A	133	
735	11/12/2010 10:00	62	72	-10	513-BKGDS1A	133	
736	11/12/2010 10:00	66	72	-6	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
737	11/12/2010 10:00	61	72	-11	513-BKGDS1A	133	
738	11/12/2010 10:01	100	72	28	513-BKGDS1A	133	
739	11/12/2010 10:01	89	72	17	513-BKGDS1A	133	
740	11/12/2010 10:01	52	72	-20	513-BKGDS1A	133	
741	11/12/2010 10:01	64	72	-8	513-BKGDS1A	133	
742	11/12/2010 10:01	56	72	-16	513-BKGDS1A	133	
743	11/12/2010 10:01	85	72	13	513-BKGDS1A	133	
744	11/12/2010 10:01	71	72	-1	513-BKGDS1A	133	
745	11/12/2010 10:01	69	72	-3	513-BKGDS1A	133	
746	11/12/2010 10:02	88	72	16	513-BKGDS1A	133	
747	11/12/2010 10:02	72	72	0	513-BKGDS1A	133	
748	11/12/2010 10:02	47	72	-25	513-BKGDS1A	133	
749	11/12/2010 10:02	75	72	3	513-BKGDS1A	133	
750	11/12/2010 10:02	57	72	-15	513-BKGDS1A	133	
751	11/12/2010 10:02	59	72	-13	513-BKGDS1A	133	
752	11/12/2010 10:02	100	72	28	513-BKGDS1A	133	
753	11/12/2010 10:02	91	72	19	513-BKGDS1A	133	
754	11/12/2010 10:02	79	72	7	513-BKGDS1A	133	
755	11/12/2010 10:03	64	72	-8	513-BKGDS1A	133	
756	11/12/2010 10:03	56	72	-16	513-BKGDS1A	133	
757	11/12/2010 10:04	96	72	24	513-BKGDS1A	133	
758	11/12/2010 10:04	95	72	23	513-BKGDS1A	133	
759	11/12/2010 10:04	73	72	1	513-BKGDS1A	133	
760	11/12/2010 10:04	58	72	-14	513-BKGDS1A	133	
761	11/12/2010 10:04	75	72	3	513-BKGDS1A	133	
762	11/12/2010 10:04	69	72	-3	513-BKGDS1A	133	
763	11/12/2010 10:04	66	72	-6	513-BKGDS1A	133	
764	11/12/2010 10:04	48	72	-24	513-BKGDS1A	133	
765	11/12/2010 10:04	83	72	11	513-BKGDS1A	133	
766	11/12/2010 10:05	131	72	59	513-BKGDS1A	133	
767	11/12/2010 10:05	114	72	42	513-BKGDS1A	133	
768	11/12/2010 10:05	99	72	27	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
769	11/12/2010 10:05	89	72	17	513-BKGDS1A	133	
770	11/12/2010 10:05	73	72	1	513-BKGDS1A	133	
771	11/12/2010 10:05	67	72	-5	513-BKGDS1A	133	
772	11/12/2010 10:05	62	72	-10	513-BKGDS1A	133	
773	11/12/2010 10:05	73	72	1	513-BKGDS1A	133	
774	11/12/2010 10:05	59	72	-13	513-BKGDS1A	133	
775	11/12/2010 10:06	69	72	-3	513-BKGDS1A	133	
776	11/12/2010 10:06	60	72	-12	513-BKGDS1A	133	
777	11/12/2010 10:06	53	72	-19	513-BKGDS1A	133	
778	11/12/2010 10:06	79	72	7	513-BKGDS1A	133	
779	11/12/2010 10:06	71	72	-1	513-BKGDS1A	133	
780	11/12/2010 10:06	54	72	-18	513-BKGDS1A	133	
781	11/12/2010 10:06	54	72	-18	513-BKGDS1A	133	
782	11/12/2010 10:06	81	72	9	513-BKGDS1A	133	
783	11/12/2010 10:07	61	72	-11	513-BKGDS1A	133	
784	11/12/2010 10:07	74	72	2	513-BKGDS1A	133	
785	11/12/2010 10:08	54	72	-18	513-BKGDS1A	133	
786	11/12/2010 10:08	86	72	14	513-BKGDS1A	133	
787	11/12/2010 10:08	83	72	11	513-BKGDS1A	133	
788	11/12/2010 10:08	67	72	-5	513-BKGDS1A	133	
789	11/12/2010 10:08	82	72	10	513-BKGDS1A	133	
790	11/12/2010 10:08	70	72	-2	513-BKGDS1A	133	
791	11/12/2010 10:08	100	72	28	513-BKGDS1A	133	
792	11/12/2010 10:08	96	72	24	513-BKGDS1A	133	
793	11/12/2010 10:08	73	72	1	513-BKGDS1A	133	
794	11/12/2010 10:09	68	72	-4	513-BKGDS1A	133	
795	11/12/2010 10:09	81	72	9	513-BKGDS1A	133	
796	11/12/2010 10:09	85	72	13	513-BKGDS1A	133	
797	11/12/2010 10:09	67	72	-5	513-BKGDS1A	133	
798	11/12/2010 10:09	60	72	-12	513-BKGDS1A	133	
799	11/12/2010 10:09	63	72	-9	513-BKGDS1A	133	
800	11/12/2010 10:09	54	72	-18	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
801	11/12/2010 10:09	66	72	-6	513-BKGDS1A	133	
802	11/12/2010 10:10	48	72	-24	513-BKGDS1A	133	
803	11/12/2010 10:10	49	72	-23	513-BKGDS1A	133	
804	11/12/2010 10:10	54	72	-18	513-BKGDS1A	133	
805	11/12/2010 10:10	69	72	-3	513-BKGDS1A	133	
806	11/12/2010 10:10	60	72	-12	513-BKGDS1A	133	
807	11/12/2010 10:10	68	72	-4	513-BKGDS1A	133	
808	11/12/2010 10:10	85	72	13	513-BKGDS1A	133	
809	11/12/2010 10:11	69	72	-3	513-BKGDS1A	133	
810	11/12/2010 10:11	77	72	5	513-BKGDS1A	133	
811	11/12/2010 10:11	75	72	3	513-BKGDS1A	133	
812	11/12/2010 10:11	92	72	20	513-BKGDS1A	133	
813	11/12/2010 10:11	107	72	35	513-BKGDS1A	133	
814	11/12/2010 10:11	75	72	3	513-BKGDS1A	133	
815	11/12/2010 10:12	85	72	13	513-BKGDS1A	133	
816	11/12/2010 10:12	62	72	-10	513-BKGDS1A	133	
817	11/12/2010 10:12	73	72	1	513-BKGDS1A	133	
818	11/12/2010 10:12	72	72	0	513-BKGDS1A	133	
819	11/12/2010 10:12	79	72	7	513-BKGDS1A	133	
820	11/12/2010 10:12	97	72	25	513-BKGDS1A	133	
821	11/12/2010 10:12	129	72	57	513-BKGDS1A	133	
822	11/12/2010 10:12	99	72	27	513-BKGDS1A	133	
823	11/12/2010 10:12	87	72	15	513-BKGDS1A	133	
824	11/12/2010 10:13	79	72	7	513-BKGDS1A	133	
825	11/12/2010 10:13	90	72	18	513-BKGDS1A	133	
826	11/12/2010 10:13	76	72	4	513-BKGDS1A	133	
827	11/12/2010 10:13	82	72	10	513-BKGDS1A	133	
828	11/12/2010 10:13	73	72	1	513-BKGDS1A	133	
829	11/12/2010 10:13	53	72	-19	513-BKGDS1A	133	
830	11/12/2010 10:13	55	72	-17	513-BKGDS1A	133	
831	11/12/2010 10:13	74	72	2	513-BKGDS1A	133	
832	11/12/2010 10:14	75	72	3	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
833	11/12/2010 10:14	67	72	-5	513-BKGDS1A	133	
834	11/12/2010 10:14	74	72	2	513-BKGDS1A	133	
835	11/12/2010 10:15	59	72	-13	513-BKGDS1A	133	
836	11/12/2010 10:15	85	72	13	513-BKGDS1A	133	
837	11/12/2010 10:15	58	72	-14	513-BKGDS1A	133	
838	11/12/2010 10:15	70	72	-2	513-BKGDS1A	133	
839	11/12/2010 10:15	62	72	-10	513-BKGDS1A	133	
840	11/12/2010 10:15	63	72	-9	513-BKGDS1A	133	
841	11/12/2010 10:15	55	72	-17	513-BKGDS1A	133	
842	11/12/2010 10:15	43	72	-29	513-BKGDS1A	133	
843	11/12/2010 10:15	51	72	-21	513-BKGDS1A	133	
844	11/12/2010 10:16	61	72	-11	513-BKGDS1A	133	
845	11/12/2010 10:16	86	72	14	513-BKGDS1A	133	
846	11/12/2010 10:16	87	72	15	513-BKGDS1A	133	
847	11/12/2010 10:16	68	72	-4	513-BKGDS1A	133	
848	11/12/2010 10:16	65	72	-7	513-BKGDS1A	133	
849	11/12/2010 10:16	47	72	-25	513-BKGDS1A	133	
850	11/12/2010 10:16	62	72	-10	513-BKGDS1A	133	
851	11/12/2010 10:16	70	72	-2	513-BKGDS1A	133	
852	11/12/2010 10:17	69	72	-3	513-BKGDS1A	133	
853	11/12/2010 10:17	65	72	-7	513-BKGDS1A	133	
854	11/12/2010 10:17	55	72	-17	513-BKGDS1A	133	
855	11/12/2010 10:17	71	72	-1	513-BKGDS1A	133	
856	11/12/2010 10:17	66	72	-6	513-BKGDS1A	133	
857	11/12/2010 10:17	50	72	-22	513-BKGDS1A	133	
858	11/12/2010 10:17	54	72	-18	513-BKGDS1A	133	
859	11/12/2010 10:50	53	72	-19	513-BKGDS1A	133	
860	11/12/2010 10:50	66	72	-6	513-BKGDS1A	133	
861	11/12/2010 10:50	82	72	10	513-BKGDS1A	133	
862	11/12/2010 10:50	73	72	1	513-BKGDS1A	133	
863	11/12/2010 10:50	88	72	16	513-BKGDS1A	133	
864	11/12/2010 10:50	67	72	-5	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
865	11/12/2010 10:50	69	72	-3	513-BKGDS1A	133	
866	11/12/2010 10:51	67	72	-5	513-BKGDS1A	133	
867	11/12/2010 10:51	95	72	23	513-BKGDS1A	133	
868	11/12/2010 10:51	61	72	-11	513-BKGDS1A	133	
869	11/12/2010 10:51	83	72	11	513-BKGDS1A	133	
870	11/12/2010 10:51	61	72	-11	513-BKGDS1A	133	
871	11/12/2010 10:51	48	72	-24	513-BKGDS1A	133	
872	11/12/2010 10:51	57	72	-15	513-BKGDS1A	133	
873	11/12/2010 10:51	63	72	-9	513-BKGDS1A	133	
874	11/12/2010 10:51	67	72	-5	513-BKGDS1A	133	
875	11/12/2010 10:52	75	72	3	513-BKGDS1A	133	
876	11/12/2010 10:52	91	72	19	513-BKGDS1A	133	
877	11/12/2010 10:52	100	72	28	513-BKGDS1A	133	
878	11/12/2010 10:52	90	72	18	513-BKGDS1A	133	
879	11/12/2010 10:52	77	72	5	513-BKGDS1A	133	
880	11/12/2010 10:52	79	72	7	513-BKGDS1A	133	
881	11/12/2010 10:52	66	72	-6	513-BKGDS1A	133	
882	11/12/2010 10:52	62	72	-10	513-BKGDS1A	133	
883	11/12/2010 10:53	65	72	-7	513-BKGDS1A	133	
884	11/12/2010 10:54	96	72	24	513-BKGDS1A	133	
885	11/12/2010 10:54	87	72	15	513-BKGDS1A	133	
886	11/12/2010 10:54	62	72	-10	513-BKGDS1A	133	
887	11/12/2010 10:54	64	72	-8	513-BKGDS1A	133	
888	11/12/2010 10:54	89	72	17	513-BKGDS1A	133	
889	11/12/2010 10:54	99	72	27	513-BKGDS1A	133	
890	11/12/2010 10:54	69	72	-3	513-BKGDS1A	133	
891	11/12/2010 10:55	64	72	-8	513-BKGDS1A	133	
892	11/12/2010 10:55	56	72	-16	513-BKGDS1A	133	
893	11/12/2010 10:55	53	72	-19	513-BKGDS1A	133	
894	11/12/2010 10:55	67	72	-5	513-BKGDS1A	133	
895	11/12/2010 10:55	82	72	10	513-BKGDS1A	133	
896	11/12/2010 10:55	68	72	-4	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
897	11/12/2010 10:55	91	72	19	513-BKGDS1A	133	
898	11/12/2010 10:55	77	72	5	513-BKGDS1A	133	
899	11/12/2010 10:55	63	72	-9	513-BKGDS1A	133	
900	11/12/2010 10:56	52	72	-20	513-BKGDS1A	133	
901	11/12/2010 10:56	60	72	-12	513-BKGDS1A	133	
902	11/12/2010 10:56	53	72	-19	513-BKGDS1A	133	
903	11/12/2010 10:56	55	72	-17	513-BKGDS1A	133	
904	11/12/2010 10:56	48	72	-24	513-BKGDS1A	133	
905	11/12/2010 10:56	61	72	-11	513-BKGDS1A	133	
906	11/12/2010 10:56	64	72	-8	513-BKGDS1A	133	
907	11/12/2010 10:57	52	72	-20	513-BKGDS1A	133	
908	11/12/2010 10:58	64	72	-8	513-BKGDS1A	133	
909	11/12/2010 10:58	75	72	3	513-BKGDS1A	133	
910	11/12/2010 10:58	54	72	-18	513-BKGDS1A	133	
911	11/12/2010 10:58	61	72	-11	513-BKGDS1A	133	
912	11/12/2010 10:58	56	72	-16	513-BKGDS1A	133	
913	11/12/2010 10:58	55	72	-17	513-BKGDS1A	133	
914	11/12/2010 10:58	46	72	-26	513-BKGDS1A	133	
915	11/12/2010 10:58	54	72	-18	513-BKGDS1A	133	
916	11/12/2010 10:58	104	72	32	513-BKGDS1A	133	
917	11/12/2010 10:59	81	72	9	513-BKGDS1A	133	
918	11/12/2010 10:59	85	72	13	513-BKGDS1A	133	
919	11/12/2010 10:59	65	72	-7	513-BKGDS1A	133	
920	11/12/2010 10:59	65	72	-7	513-BKGDS1A	133	
921	11/12/2010 10:59	65	72	-7	513-BKGDS1A	133	
922	11/12/2010 10:59	75	72	3	513-BKGDS1A	133	
923	11/12/2010 10:59	67	72	-5	513-BKGDS1A	133	
924	11/12/2010 10:59	82	72	10	513-BKGDS1A	133	
925	11/12/2010 10:59	81	72	9	513-BKGDS1A	133	
926	11/12/2010 11:00	60	72	-12	513-BKGDS1A	133	
927	11/12/2010 11:00	61	72	-11	513-BKGDS1A	133	
928	11/12/2010 11:00	68	72	-4	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
929	11/12/2010 11:01	84	72	12	513-BKGDS1A	133	
930	11/12/2010 11:01	79	72	7	513-BKGDS1A	133	
931	11/12/2010 11:01	98	72	26	513-BKGDS1A	133	
932	11/12/2010 11:01	87	72	15	513-BKGDS1A	133	
933	11/12/2010 11:01	76	72	4	513-BKGDS1A	133	
934	11/12/2010 11:01	57	72	-15	513-BKGDS1A	133	
935	11/12/2010 11:01	54	72	-18	513-BKGDS1A	133	
936	11/12/2010 11:01	64	72	-8	513-BKGDS1A	133	
937	11/12/2010 11:02	48	72	-24	513-BKGDS1A	133	
938	11/12/2010 11:02	56	72	-16	513-BKGDS1A	133	
939	11/12/2010 11:02	79	72	7	513-BKGDS1A	133	
940	11/12/2010 11:02	79	72	7	513-BKGDS1A	133	
941	11/12/2010 11:02	64	72	-8	513-BKGDS1A	133	
942	11/12/2010 11:02	77	72	5	513-BKGDS1A	133	
943	11/12/2010 11:02	81	72	9	513-BKGDS1A	133	
944	11/12/2010 11:02	68	72	-4	513-BKGDS1A	133	
945	11/12/2010 11:02	73	72	1	513-BKGDS1A	133	
946	11/12/2010 11:03	68	72	-4	513-BKGDS1A	133	
947	11/12/2010 11:03	68	72	-4	513-BKGDS1A	133	
948	11/12/2010 11:03	80	72	8	513-BKGDS1A	133	
949	11/12/2010 11:03	48	72	-24	513-BKGDS1A	133	
950	11/12/2010 11:03	56	72	-16	513-BKGDS1A	133	
951	11/12/2010 11:04	67	72	-5	513-BKGDS1A	133	
952	11/12/2010 11:04	92	72	20	513-BKGDS1A	133	
953	11/12/2010 11:04	80	72	8	513-BKGDS1A	133	
954	11/12/2010 11:04	90	72	18	513-BKGDS1A	133	
955	11/12/2010 11:05	83	72	11	513-BKGDS1A	133	
956	11/12/2010 11:05	69	72	-3	513-BKGDS1A	133	
957	11/12/2010 11:05	63	72	-9	513-BKGDS1A	133	
958	11/12/2010 11:05	54	72	-18	513-BKGDS1A	133	
959	11/12/2010 11:05	78	72	6	513-BKGDS1A	133	
960	11/12/2010 11:05	94	72	22	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
961	11/12/2010 11:05	79	72	7	513-BKGDS1A	133	
962	11/12/2010 11:05	76	72	4	513-BKGDS1A	133	
963	11/12/2010 11:05	115	72	43	513-BKGDS1A	133	
964	11/12/2010 11:06	103	72	31	513-BKGDS1A	133	
965	11/12/2010 11:06	129	72	57	513-BKGDS1A	133	
966	11/12/2010 11:06	105	72	33	513-BKGDS1A	133	
967	11/12/2010 11:06	91	72	19	513-BKGDS1A	133	
968	11/12/2010 11:06	101	72	29	513-BKGDS1A	133	
969	11/12/2010 11:06	121	72	49	513-BKGDS1A	133	
970	11/12/2010 11:06	102	72	30	513-BKGDS1A	133	
971	11/12/2010 11:06	78	72	6	513-BKGDS1A	133	
972	11/12/2010 11:07	48	72	-24	513-BKGDS1A	133	
973	11/12/2010 11:07	46	72	-26	513-BKGDS1A	133	
974	11/12/2010 11:07	49	72	-23	513-BKGDS1A	133	
975	11/12/2010 11:07	75	72	3	513-BKGDS1A	133	
976	11/12/2010 11:08	66	72	-6	513-BKGDS1A	133	
977	11/12/2010 11:08	64	72	-8	513-BKGDS1A	133	
978	11/12/2010 11:08	64	72	-8	513-BKGDS1A	133	
979	11/12/2010 11:08	69	72	-3	513-BKGDS1A	133	
980	11/12/2010 11:08	71	72	-1	513-BKGDS1A	133	
981	11/12/2010 11:08	82	72	10	513-BKGDS1A	133	
982	11/12/2010 11:08	82	72	10	513-BKGDS1A	133	
983	11/12/2010 11:08	103	72	31	513-BKGDS1A	133	
984	11/12/2010 11:08	77	72	5	513-BKGDS1A	133	
985	11/12/2010 11:09	80	72	8	513-BKGDS1A	133	
986	11/12/2010 11:09	94	72	22	513-BKGDS1A	133	
987	11/12/2010 11:09	89	72	17	513-BKGDS1A	133	
988	11/12/2010 11:09	94	72	22	513-BKGDS1A	133	
989	11/12/2010 11:09	76	72	4	513-BKGDS1A	133	
990	11/12/2010 11:09	76	72	4	513-BKGDS1A	133	
991	11/12/2010 11:09	51	72	-21	513-BKGDS1A	133	
992	11/12/2010 11:10	47	72	-25	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
993	11/12/2010 11:10	52	72	-20	513-BKGDS1A	133	
994	11/12/2010 11:10	58	72	-14	513-BKGDS1A	133	
995	11/12/2010 11:10	89	72	17	513-BKGDS1A	133	
996	11/12/2010 11:10	72	72	0	513-BKGDS1A	133	
997	11/12/2010 11:10	69	72	-3	513-BKGDS1A	133	
998	11/12/2010 11:11	70	72	-2	513-BKGDS1A	133	
999	11/12/2010 11:11	76	72	4	513-BKGDS1A	133	
1000	11/12/2010 11:11	89	72	17	513-BKGDS1A	133	
1001	11/12/2010 11:11	82	72	10	513-BKGDS1A	133	
1002	11/12/2010 11:11	76	72	4	513-BKGDS1A	133	
1003	11/12/2010 11:11	72	72	0	513-BKGDS1A	133	
1004	11/12/2010 11:11	51	72	-21	513-BKGDS1A	133	
1005	11/12/2010 11:11	57	72	-15	513-BKGDS1A	133	
1006	11/12/2010 11:11	58	72	-14	513-BKGDS1A	133	
1007	11/12/2010 11:12	83	72	11	513-BKGDS1A	133	
1008	11/12/2010 11:12	75	72	3	513-BKGDS1A	133	
1009	11/12/2010 11:12	84	72	12	513-BKGDS1A	133	
1010	11/12/2010 11:12	99	72	27	513-BKGDS1A	133	
1011	11/12/2010 11:12	75	72	3	513-BKGDS1A	133	
1012	11/12/2010 11:13	86	72	14	513-BKGDS1A	133	
1013	11/12/2010 11:13	73	72	1	513-BKGDS1A	133	
1014	11/12/2010 11:13	80	72	8	513-BKGDS1A	133	
1015	11/12/2010 11:13	75	72	3	513-BKGDS1A	133	
1016	11/12/2010 11:13	68	72	-4	513-BKGDS1A	133	
1017	11/12/2010 11:14	62	72	-10	513-BKGDS1A	133	
1018	11/12/2010 11:14	75	72	3	513-BKGDS1A	133	
1019	11/12/2010 11:14	60	72	-12	513-BKGDS1A	133	
1020	11/12/2010 11:14	67	72	-5	513-BKGDS1A	133	
1021	11/12/2010 11:14	57	72	-15	513-BKGDS1A	133	
1022	11/12/2010 11:14	94	72	22	513-BKGDS1A	133	
1023	11/12/2010 11:14	76	72	4	513-BKGDS1A	133	
1024	11/12/2010 11:14	72	72	0	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1025	11/12/2010 11:14	56	72	-16	513-BKGDS1A	133	
1026	11/12/2010 11:15	49	72	-23	513-BKGDS1A	133	
1027	11/12/2010 11:15	51	72	-21	513-BKGDS1A	133	
1028	11/12/2010 11:15	71	72	-1	513-BKGDS1A	133	
1029	11/12/2010 11:15	74	72	2	513-BKGDS1A	133	
1030	11/12/2010 11:15	97	72	25	513-BKGDS1A	133	
1031	11/12/2010 11:16	71	72	-1	513-BKGDS1A	133	
1032	11/12/2010 11:16	80	72	8	513-BKGDS1A	133	
1033	11/12/2010 11:16	75	72	3	513-BKGDS1A	133	
1034	11/12/2010 11:16	58	72	-14	513-BKGDS1A	133	
1035	11/12/2010 11:16	54	72	-18	513-BKGDS1A	133	
1036	11/12/2010 11:16	53	72	-19	513-BKGDS1A	133	
1037	11/12/2010 11:16	60	72	-12	513-BKGDS1A	133	
1038	11/12/2010 11:16	72	72	0	513-BKGDS1A	133	
1039	11/12/2010 11:17	93	72	21	513-BKGDS1A	133	
1040	11/12/2010 11:17	60	72	-12	513-BKGDS1A	133	
1041	11/12/2010 11:17	83	72	11	513-BKGDS1A	133	
1042	11/12/2010 11:17	82	72	10	513-BKGDS1A	133	
1043	11/12/2010 11:17	83	72	11	513-BKGDS1A	133	
1044	11/12/2010 11:17	115	72	43	513-BKGDS1A	133	
1045	11/12/2010 11:17	90	72	18	513-BKGDS1A	133	
1046	11/12/2010 11:17	99	72	27	513-BKGDS1A	133	
1047	11/12/2010 11:17	74	72	2	513-BKGDS1A	133	
1048	11/12/2010 11:18	89	72	17	513-BKGDS1A	133	
1049	11/12/2010 11:18	66	72	-6	513-BKGDS1A	133	
1050	11/12/2010 11:18	65	72	-7	513-BKGDS1A	133	
1051	11/12/2010 11:19	93	72	21	513-BKGDS1A	133	
1052	11/12/2010 11:19	50	72	-22	513-BKGDS1A	133	
1053	11/12/2010 11:19	59	72	-13	513-BKGDS1A	133	
1054	11/12/2010 11:19	58	72	-14	513-BKGDS1A	133	
1055	11/12/2010 11:19	72	72	0	513-BKGDS1A	133	
1056	11/12/2010 11:19	107	72	35	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1057	11/12/2010 11:19	102	72	30	513-BKGDS1A	133	
1058	11/12/2010 11:19	94	72	22	513-BKGDS1A	133	
1059	11/12/2010 11:20	86	72	14	513-BKGDS1A	133	
1060	11/12/2010 11:20	82	72	10	513-BKGDS1A	133	
1061	11/12/2010 11:20	65	72	-7	513-BKGDS1A	133	
1062	11/12/2010 11:20	54	72	-18	513-BKGDS1A	133	
1063	11/12/2010 11:20	53	72	-19	513-BKGDS1A	133	
1064	11/12/2010 11:20	53	72	-19	513-BKGDS1A	133	
1065	11/12/2010 11:20	51	72	-21	513-BKGDS1A	133	
1066	11/12/2010 11:20	53	72	-19	513-BKGDS1A	133	
1067	11/12/2010 11:21	60	72	-12	513-BKGDS1A	133	
1068	11/12/2010 11:23	53	72	-19	513-BKGDS1A	133	
1069	11/12/2010 11:23	61	72	-11	513-BKGDS1A	133	
1070	11/12/2010 11:23	84	72	12	513-BKGDS1A	133	
1071	11/12/2010 11:23	93	72	21	513-BKGDS1A	133	
1072	11/12/2010 11:23	85	72	13	513-BKGDS1A	133	
1073	11/12/2010 11:23	82	72	10	513-BKGDS1A	133	
1074	11/12/2010 11:23	60	72	-12	513-BKGDS1A	133	
1075	11/12/2010 11:24	53	72	-19	513-BKGDS1A	133	
1076	11/12/2010 11:24	64	72	-8	513-BKGDS1A	133	
1077	11/12/2010 11:24	62	72	-10	513-BKGDS1A	133	
1078	11/12/2010 11:24	51	72	-21	513-BKGDS1A	133	
1079	11/12/2010 11:24	78	72	6	513-BKGDS1A	133	
1080	11/12/2010 11:24	61	72	-11	513-BKGDS1A	133	
1081	11/12/2010 11:24	65	72	-7	513-BKGDS1A	133	
1082	11/12/2010 11:24	60	72	-12	513-BKGDS1A	133	
1083	11/12/2010 11:25	86	72	14	513-BKGDS1A	133	
1084	11/12/2010 11:26	61	72	-11	513-BKGDS1A	133	
1085	11/12/2010 11:26	57	72	-15	513-BKGDS1A	133	
1086	11/12/2010 11:26	55	72	-17	513-BKGDS1A	133	
1087	11/12/2010 11:26	64	72	-8	513-BKGDS1A	133	
1088	11/12/2010 11:26	73	72	1	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1089	11/12/2010 11:26	57	72	-15	513-BKGDS1A	133	
1090	11/12/2010 11:26	51	72	-21	513-BKGDS1A	133	
1091	11/12/2010 11:26	68	72	-4	513-BKGDS1A	133	
1092	11/12/2010 11:26	91	72	19	513-BKGDS1A	133	
1093	11/12/2010 11:27	74	72	2	513-BKGDS1A	133	
1094	11/12/2010 11:27	65	72	-7	513-BKGDS1A	133	
1095	11/12/2010 11:27	91	72	19	513-BKGDS1A	133	
1096	11/12/2010 11:27	84	72	12	513-BKGDS1A	133	
1097	11/12/2010 11:27	109	72	37	513-BKGDS1A	133	
1098	11/12/2010 11:27	94	72	22	513-BKGDS1A	133	
1099	11/12/2010 11:29	71	72	-1	513-BKGDS1A	133	
1100	11/12/2010 11:29	48	72	-24	513-BKGDS1A	133	
1101	11/12/2010 11:29	47	72	-25	513-BKGDS1A	133	
1102	11/12/2010 11:29	47	72	-25	513-BKGDS1A	133	
1103	11/12/2010 11:29	46	72	-26	513-BKGDS1A	133	
1104	11/12/2010 11:29	60	72	-12	513-BKGDS1A	133	
1105	11/12/2010 11:29	77	72	5	513-BKGDS1A	133	
1106	11/12/2010 11:29	45	72	-27	513-BKGDS1A	133	
1107	11/12/2010 11:29	49	72	-23	513-BKGDS1A	133	
1108	11/12/2010 11:30	71	72	-1	513-BKGDS1A	133	
1109	11/12/2010 11:30	67	72	-5	513-BKGDS1A	133	
1110	11/12/2010 11:30	57	72	-15	513-BKGDS1A	133	
1111	11/12/2010 11:30	51	72	-21	513-BKGDS1A	133	
1112	11/12/2010 11:30	50	72	-22	513-BKGDS1A	133	
1113	11/12/2010 11:31	75	72	3	513-BKGDS1A	133	
1114	11/12/2010 11:31	68	72	-4	513-BKGDS1A	133	
1115	11/12/2010 11:31	81	72	9	513-BKGDS1A	133	
1116	11/12/2010 11:31	89	72	17	513-BKGDS1A	133	
1117	11/12/2010 11:31	95	72	23	513-BKGDS1A	133	
1118	11/12/2010 11:31	78	72	6	513-BKGDS1A	133	
1119	11/12/2010 11:31	57	72	-15	513-BKGDS1A	133	
1120	11/12/2010 11:32	72	72	0	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1121	11/12/2010 11:32	68	72	-4	513-BKGDS1A	133	
1122	11/12/2010 11:32	72	72	0	513-BKGDS1A	133	
1123	11/12/2010 11:32	79	72	7	513-BKGDS1A	133	
1124	11/12/2010 11:32	72	72	0	513-BKGDS1A	133	
1125	11/12/2010 11:32	68	72	-4	513-BKGDS1A	133	
1126	11/12/2010 11:32	59	72	-13	513-BKGDS1A	133	
1127	11/12/2010 11:33	52	72	-20	513-BKGDS1A	133	
1128	11/12/2010 11:33	49	72	-23	513-BKGDS1A	133	
1129	11/12/2010 11:33	58	72	-14	513-BKGDS1A	133	
1130	11/12/2010 11:33	57	72	-15	513-BKGDS1A	133	
1131	11/12/2010 11:33	80	72	8	513-BKGDS1A	133	
1132	11/12/2010 11:34	79	72	7	513-BKGDS1A	133	
1133	11/12/2010 11:34	55	72	-17	513-BKGDS1A	133	
1134	11/12/2010 11:34	56	72	-16	513-BKGDS1A	133	
1135	11/12/2010 11:34	64	72	-8	513-BKGDS1A	133	
1136	11/12/2010 11:34	66	72	-6	513-BKGDS1A	133	
1137	11/12/2010 11:34	82	72	10	513-BKGDS1A	133	
1138	11/12/2010 11:34	72	72	0	513-BKGDS1A	133	
1139	11/12/2010 11:34	96	72	24	513-BKGDS1A	133	
1140	11/12/2010 11:35	82	72	10	513-BKGDS1A	133	
1141	11/12/2010 11:35	88	72	16	513-BKGDS1A	133	
1142	11/12/2010 11:35	82	72	10	513-BKGDS1A	133	
1143	11/12/2010 11:35	58	72	-14	513-BKGDS1A	133	
1144	11/12/2010 11:36	55	72	-17	513-BKGDS1A	133	
1145	11/12/2010 11:36	53	72	-19	513-BKGDS1A	133	
1146	11/12/2010 11:36	63	72	-9	513-BKGDS1A	133	
1147	11/12/2010 11:36	75	72	3	513-BKGDS1A	133	
1148	11/12/2010 11:36	69	72	-3	513-BKGDS1A	133	
1149	11/12/2010 11:36	68	72	-4	513-BKGDS1A	133	
1150	11/12/2010 11:36	82	72	10	513-BKGDS1A	133	
1151	11/12/2010 11:36	75	72	3	513-BKGDS1A	133	
1152	11/12/2010 11:39	96	72	24	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1153	11/12/2010 11:39	69	72	-3	513-BKGDS1A	133	
1154	11/12/2010 11:39	69	72	-3	513-BKGDS1A	133	
1155	11/12/2010 11:39	71	72	-1	513-BKGDS1A	133	
1156	11/12/2010 11:39	66	72	-6	513-BKGDS1A	133	
1157	11/12/2010 11:39	54	72	-18	513-BKGDS1A	133	
1158	11/12/2010 11:39	47	72	-25	513-BKGDS1A	133	
1159	11/12/2010 11:39	49	72	-23	513-BKGDS1A	133	
1160	11/12/2010 11:39	53	72	-19	513-BKGDS1A	133	
1161	11/12/2010 11:40	46	72	-26	513-BKGDS1A	133	
1162	11/12/2010 11:40	54	72	-18	513-BKGDS1A	133	
1163	11/12/2010 11:40	83	72	11	513-BKGDS1A	133	
1164	11/12/2010 11:41	76	72	4	513-BKGDS1A	133	
1165	11/12/2010 11:41	50	72	-22	513-BKGDS1A	133	
1166	11/12/2010 11:41	55	72	-17	513-BKGDS1A	133	
1167	11/12/2010 11:41	75	72	3	513-BKGDS1A	133	
1168	11/12/2010 11:41	63	72	-9	513-BKGDS1A	133	
1169	11/12/2010 11:41	75	72	3	513-BKGDS1A	133	
1170	11/12/2010 11:41	61	72	-11	513-BKGDS1A	133	
1171	11/12/2010 11:41	82	72	10	513-BKGDS1A	133	
1172	11/12/2010 11:41	56	72	-16	513-BKGDS1A	133	
1173	11/12/2010 11:43	60	72	-12	513-BKGDS1A	133	
1174	11/12/2010 11:43	58	72	-14	513-BKGDS1A	133	
1175	11/12/2010 11:43	47	72	-25	513-BKGDS1A	133	
1176	11/12/2010 11:44	59	72	-13	513-BKGDS1A	133	
1177	11/12/2010 11:44	53	72	-19	513-BKGDS1A	133	
1178	11/12/2010 11:44	89	72	17	513-BKGDS1A	133	
1179	11/12/2010 11:44	74	72	2	513-BKGDS1A	133	
1180	11/12/2010 11:44	92	72	20	513-BKGDS1A	133	
1181	11/12/2010 11:44	101	72	29	513-BKGDS1A	133	
1182	11/12/2010 11:44	112	72	40	513-BKGDS1A	133	
1183	11/12/2010 11:45	106	72	34	513-BKGDS1A	133	
1184	11/12/2010 11:45	105	72	33	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1185	11/12/2010 11:45	87	72	15	513-BKGDS1A	133	
1186	11/12/2010 11:45	70	72	-2	513-BKGDS1A	133	
1187	11/12/2010 11:45	79	72	7	513-BKGDS1A	133	
1188	11/12/2010 11:46	67	72	-5	513-BKGDS1A	133	
1189	11/12/2010 11:46	63	72	-9	513-BKGDS1A	133	
1190	11/12/2010 11:46	78	72	6	513-BKGDS1A	133	
1191	11/12/2010 11:46	82	72	10	513-BKGDS1A	133	
1192	11/12/2010 11:46	104	72	32	513-BKGDS1A	133	
1193	11/12/2010 11:47	66	72	-6	513-BKGDS1A	133	
1194	11/12/2010 11:47	79	72	7	513-BKGDS1A	133	
1195	11/12/2010 11:48	59	72	-13	513-BKGDS1A	133	
1196	11/12/2010 11:48	62	72	-10	513-BKGDS1A	133	
1197	11/12/2010 11:48	58	72	-14	513-BKGDS1A	133	
1198	11/12/2010 11:48	66	72	-6	513-BKGDS1A	133	
1199	11/12/2010 11:48	67	72	-5	513-BKGDS1A	133	
1200	11/12/2010 11:48	64	72	-8	513-BKGDS1A	133	
1201	11/12/2010 11:48	53	72	-19	513-BKGDS1A	133	
1202	11/12/2010 11:48	77	72	5	513-BKGDS1A	133	
1203	11/12/2010 12:42	61	72	-11	513-BKGDS1A	133	
1204	11/12/2010 12:42	65	72	-7	513-BKGDS1A	133	
1205	11/12/2010 12:42	59	72	-13	513-BKGDS1A	133	
1206	11/12/2010 12:42	70	72	-2	513-BKGDS1A	133	
1207	11/12/2010 12:42	61	72	-11	513-BKGDS1A	133	
1208	11/12/2010 12:43	65	72	-7	513-BKGDS1A	133	
1209	11/12/2010 12:43	63	72	-9	513-BKGDS1A	133	
1210	11/12/2010 12:43	49	72	-23	513-BKGDS1A	133	
1211	11/12/2010 12:43	44	72	-28	513-BKGDS1A	133	
1212	11/12/2010 12:43	54	72	-18	513-BKGDS1A	133	
1213	11/12/2010 12:43	64	72	-8	513-BKGDS1A	133	
1214	11/12/2010 12:43	49	72	-23	513-BKGDS1A	133	
1215	11/12/2010 12:44	57	72	-15	513-BKGDS1A	133	
1216	11/12/2010 12:44	58	72	-14	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1217	11/12/2010 12:44	52	72	-20	513-BKGDS1A	133	
1218	11/12/2010 12:44	49	72	-23	513-BKGDS1A	133	
1219	11/12/2010 12:44	52	72	-20	513-BKGDS1A	133	
1220	11/12/2010 12:44	53	72	-19	513-BKGDS1A	133	
1221	11/12/2010 12:45	57	72	-15	513-BKGDS1A	133	
1222	11/12/2010 12:45	60	72	-12	513-BKGDS1A	133	
1223	11/12/2010 12:45	68	72	-4	513-BKGDS1A	133	
1224	11/12/2010 12:45	48	72	-24	513-BKGDS1A	133	
1225	11/12/2010 12:45	101	72	29	513-BKGDS1A	133	
1226	11/12/2010 12:45	110	72	38	513-BKGDS1A	133	
1227	11/12/2010 12:46	83	72	11	513-BKGDS1A	133	
1228	11/12/2010 12:46	73	72	1	513-BKGDS1A	133	
1229	11/12/2010 12:46	70	72	-2	513-BKGDS1A	133	
1230	11/12/2010 12:46	60	72	-12	513-BKGDS1A	133	
1231	11/12/2010 12:46	60	72	-12	513-BKGDS1A	133	
1232	11/12/2010 12:47	49	72	-23	513-BKGDS1A	133	
1233	11/12/2010 12:47	45	72	-27	513-BKGDS1A	133	
1234	11/12/2010 12:47	73	72	1	513-BKGDS1A	133	
1235	11/12/2010 12:47	70	72	-2	513-BKGDS1A	133	
1236	11/12/2010 12:47	48	72	-24	513-BKGDS1A	133	
1237	11/12/2010 12:47	54	72	-18	513-BKGDS1A	133	
1238	11/12/2010 12:47	51	72	-21	513-BKGDS1A	133	
1239	11/12/2010 12:47	52	72	-20	513-BKGDS1A	133	
1240	11/12/2010 12:48	67	72	-5	513-BKGDS1A	133	
1241	11/12/2010 12:48	61	72	-11	513-BKGDS1A	133	
1242	11/12/2010 12:48	71	72	-1	513-BKGDS1A	133	
1243	11/12/2010 12:48	89	72	17	513-BKGDS1A	133	
1244	11/12/2010 12:48	71	72	-1	513-BKGDS1A	133	
1245	11/12/2010 12:49	64	72	-8	513-BKGDS1A	133	
1246	11/12/2010 12:49	84	72	12	513-BKGDS1A	133	
1247	11/12/2010 12:49	73	72	1	513-BKGDS1A	133	
1248	11/12/2010 12:49	61	72	-11	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1249	11/12/2010 12:49	81	72	9	513-BKGDS1A	133	
1250	11/12/2010 12:49	76	72	4	513-BKGDS1A	133	
1251	11/12/2010 12:49	62	72	-10	513-BKGDS1A	133	
1252	11/12/2010 12:49	50	72	-22	513-BKGDS1A	133	
1253	11/12/2010 12:51	69	72	-3	513-BKGDS1A	133	
1254	11/12/2010 12:51	50	72	-22	513-BKGDS1A	133	
1255	11/12/2010 12:51	67	72	-5	513-BKGDS1A	133	
1256	11/12/2010 12:51	52	72	-20	513-BKGDS1A	133	
1257	11/12/2010 12:51	71	72	-1	513-BKGDS1A	133	
1258	11/12/2010 12:51	49	72	-23	513-BKGDS1A	133	
1259	11/12/2010 12:51	48	72	-24	513-BKGDS1A	133	
1260	11/12/2010 12:51	72	72	0	513-BKGDS1A	133	
1261	11/12/2010 12:51	85	72	13	513-BKGDS1A	133	
1262	11/12/2010 12:52	78	72	6	513-BKGDS1A	133	
1263	11/12/2010 12:52	61	72	-11	513-BKGDS1A	133	
1264	11/12/2010 12:52	84	72	12	513-BKGDS1A	133	
1265	11/12/2010 12:52	87	72	15	513-BKGDS1A	133	
1266	11/12/2010 12:52	73	72	1	513-BKGDS1A	133	
1267	11/12/2010 12:54	48	72	-24	513-BKGDS1A	133	
1268	11/12/2010 12:54	72	72	0	513-BKGDS1A	133	
1269	11/12/2010 12:54	75	72	3	513-BKGDS1A	133	
1270	11/12/2010 12:54	76	72	4	513-BKGDS1A	133	
1271	11/12/2010 12:54	65	72	-7	513-BKGDS1A	133	
1272	11/12/2010 12:54	61	72	-11	513-BKGDS1A	133	
1273	11/12/2010 12:54	60	72	-12	513-BKGDS1A	133	
1274	11/12/2010 12:54	51	72	-21	513-BKGDS1A	133	
1275	11/12/2010 12:54	46	72	-26	513-BKGDS1A	133	
1276	11/12/2010 12:55	63	72	-9	513-BKGDS1A	133	
1277	11/12/2010 12:55	57	72	-15	513-BKGDS1A	133	
1278	11/12/2010 12:55	45	72	-27	513-BKGDS1A	133	
1279	11/12/2010 12:55	58	72	-14	513-BKGDS1A	133	
1280	11/12/2010 12:55	83	72	11	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1281	11/12/2010 12:55	77	72	5	513-BKGDS1A	133	
1282	11/12/2010 12:55	96	72	24	513-BKGDS1A	133	
1283	11/12/2010 13:40	45	72	-27	513-BKGDS1A	133	
1284	11/12/2010 13:40	42	72	-30	513-BKGDS1A	133	
1285	11/12/2010 13:40	71	72	-1	513-BKGDS1A	133	
1286	11/12/2010 13:41	64	72	-8	513-BKGDS1A	133	
1287	11/12/2010 13:41	64	72	-8	513-BKGDS1A	133	
1288	11/12/2010 13:41	71	72	-1	513-BKGDS1A	133	
1289	11/12/2010 13:41	62	72	-10	513-BKGDS1A	133	
1290	11/12/2010 13:41	49	72	-23	513-BKGDS1A	133	
1291	11/12/2010 13:41	44	72	-28	513-BKGDS1A	133	
1292	11/12/2010 13:41	47	72	-25	513-BKGDS1A	133	
1293	11/12/2010 13:41	65	72	-7	513-BKGDS1A	133	
1294	11/12/2010 13:41	63	72	-9	513-BKGDS1A	133	
1295	11/12/2010 13:42	48	72	-24	513-BKGDS1A	133	
1296	11/12/2010 13:42	46	72	-26	513-BKGDS1A	133	
1297	11/12/2010 13:42	59	72	-13	513-BKGDS1A	133	
1298	11/12/2010 13:43	76	72	4	513-BKGDS1A	133	
1299	11/12/2010 13:43	42	72	-30	513-BKGDS1A	133	
1300	11/12/2010 13:43	65	72	-7	513-BKGDS1A	133	
1301	11/12/2010 13:43	60	72	-12	513-BKGDS1A	133	
1302	11/12/2010 13:43	44	72	-28	513-BKGDS1A	133	
1303	11/12/2010 13:43	42	72	-30	513-BKGDS1A	133	
1304	11/12/2010 13:43	59	72	-13	513-BKGDS1A	133	
1305	11/12/2010 13:43	60	72	-12	513-BKGDS1A	133	
1306	11/12/2010 13:44	62	72	-10	513-BKGDS1A	133	
1307	11/12/2010 13:44	62	72	-10	513-BKGDS1A	133	
1308	11/12/2010 13:44	75	72	3	513-BKGDS1A	133	
1309	11/12/2010 13:44	89	72	17	513-BKGDS1A	133	
1310	11/12/2010 13:44	81	72	9	513-BKGDS1A	133	
1311	11/12/2010 13:44	79	72	7	513-BKGDS1A	133	
1312	11/12/2010 13:44	84	72	12	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 9 **Class:** 1 **Area:** 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1313	11/12/2010 13:44	91	72	19	513-BKGDS1A	133	
1314	11/12/2010 13:45	54	72	-18	513-BKGDS1A	133	
1315	11/12/2010 13:45	48	72	-24	513-BKGDS1A	133	
1316	11/12/2010 13:45	82	72	10	513-BKGDS1A	133	
1317	11/12/2010 13:46	58	72	-14	513-BKGDS1A	133	
1318	11/12/2010 13:46	64	72	-8	513-BKGDS1A	133	
1319	11/12/2010 13:46	56	72	-16	513-BKGDS1A	133	
1320	11/12/2010 13:46	59	72	-13	513-BKGDS1A	133	
1321	11/12/2010 13:46	61	72	-11	513-BKGDS1A	133	
1322	11/12/2010 13:46	56	72	-16	513-BKGDS1A	133	
1323	11/12/2010 13:46	60	72	-12	513-BKGDS1A	133	
1324	11/12/2010 13:46	47	72	-25	513-BKGDS1A	133	
1325	11/12/2010 13:46	46	72	-26	513-BKGDS1A	133	
1326	11/12/2010 13:47	56	72	-16	513-BKGDS1A	133	
1327	11/12/2010 13:47	48	72	-24	513-BKGDS1A	133	
1328	11/12/2010 13:47	49	72	-23	513-BKGDS1A	133	
1329	11/12/2010 13:47	41	72	-31	513-BKGDS1A	133	
1330	11/12/2010 13:47	48	72	-24	513-BKGDS1A	133	
1331	11/12/2010 13:48	57	72	-15	513-BKGDS1A	133	
1332	11/12/2010 13:48	51	72	-21	513-BKGDS1A	133	
1333	11/12/2010 13:48	85	72	13	513-BKGDS1A	133	
1334	11/12/2010 13:48	94	72	22	513-BKGDS1A	133	
1335	11/12/2010 13:48	70	72	-2	513-BKGDS1A	133	
1336	11/12/2010 13:48	69	72	-3	513-BKGDS1A	133	
1337	11/12/2010 13:48	49	72	-23	513-BKGDS1A	133	
1338	11/12/2010 13:49	55	72	-17	513-BKGDS1A	133	
1339	11/12/2010 13:49	61	72	-11	513-BKGDS1A	133	
1340	11/12/2010 13:49	64	72	-8	513-BKGDS1A	133	
1341	11/12/2010 13:49	72	72	0	513-BKGDS1A	133	
1342	11/12/2010 13:49	83	72	11	513-BKGDS1A	133	
1343	11/12/2010 13:49	73	72	1	513-BKGDS1A	133	
1344	11/12/2010 13:49	73	72	1	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1345	11/12/2010 13:49	75	72	3	513-BKGDS1A	133	
1346	11/12/2010 13:49	55	72	-17	513-BKGDS1A	133	
1347	11/12/2010 13:50	57	72	-15	513-BKGDS1A	133	
1348	11/12/2010 13:50	65	72	-7	513-BKGDS1A	133	
1349	11/12/2010 13:50	50	72	-22	513-BKGDS1A	133	
1350	11/12/2010 13:51	64	72	-8	513-BKGDS1A	133	
1351	11/12/2010 13:51	47	72	-25	513-BKGDS1A	133	
1352	11/12/2010 13:51	64	72	-8	513-BKGDS1A	133	
1353	11/12/2010 13:51	77	72	5	513-BKGDS1A	133	
1354	11/12/2010 13:51	70	72	-2	513-BKGDS1A	133	
1355	11/12/2010 13:51	53	72	-19	513-BKGDS1A	133	
1356	11/12/2010 13:51	65	72	-7	513-BKGDS1A	133	
1357	11/12/2010 13:51	57	72	-15	513-BKGDS1A	133	
1358	11/12/2010 13:52	70	72	-2	513-BKGDS1A	133	
1359	11/12/2010 13:52	74	72	2	513-BKGDS1A	133	
1360	11/12/2010 13:52	103	72	31	513-BKGDS1A	133	
1361	11/12/2010 13:52	101	72	29	513-BKGDS1A	133	
1362	11/12/2010 13:52	81	72	9	513-BKGDS1A	133	
1363	11/12/2010 13:52	75	72	3	513-BKGDS1A	133	
1364	11/12/2010 13:52	62	72	-10	513-BKGDS1A	133	
1365	11/12/2010 13:52	60	72	-12	513-BKGDS1A	133	
1366	11/12/2010 13:52	67	72	-5	513-BKGDS1A	133	
1367	11/12/2010 13:53	58	72	-14	513-BKGDS1A	133	
1368	11/12/2010 13:54	61	72	-11	513-BKGDS1A	133	
1369	11/12/2010 13:54	48	72	-24	513-BKGDS1A	133	
1370	11/12/2010 13:54	61	72	-11	513-BKGDS1A	133	
1371	11/12/2010 13:54	61	72	-11	513-BKGDS1A	133	
1372	11/12/2010 13:54	48	72	-24	513-BKGDS1A	133	
1373	11/12/2010 13:54	87	72	15	513-BKGDS1A	133	
1374	11/12/2010 13:54	101	72	29	513-BKGDS1A	133	
1375	11/12/2010 13:54	88	72	16	513-BKGDS1A	133	
1376	11/12/2010 13:54	79	72	7	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 9** **Class: 1** **Area: 886.82 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1377	11/12/2010 13:55	68	72	-4	513-BKGDS1A	133	
1378	11/12/2010 13:55	47	72	-25	513-BKGDS1A	133	
1379	11/12/2010 13:55	47	72	-25	513-BKGDS1A	133	
1380	11/12/2010 13:55	72	72	0	513-BKGDS1A	133	
1381	11/12/2010 13:55	78	72	6	513-BKGDS1A	133	
1382	11/12/2010 13:55	76	72	4	513-BKGDS1A	133	
1383	11/12/2010 13:55	70	72	-2	513-BKGDS1A	133	
1384	11/12/2010 13:55	90	72	18	513-BKGDS1A	133	
1385	11/12/2010 13:56	62	72	-10	513-BKGDS1A	133	
1386	11/12/2010 13:56	44	72	-28	513-BKGDS1A	133	
1387	11/12/2010 13:56	43	72	-29	513-BKGDS1A	133	
1388	11/12/2010 13:57	51	72	-21	513-BKGDS1A	133	
1389	11/12/2010 13:57	79	72	7	513-BKGDS1A	133	
1390	11/12/2010 13:57	100	72	28	513-BKGDS1A	133	
1391	11/12/2010 13:57	116	72	44	513-BKGDS1A	133	
1392	11/12/2010 13:57	94	72	22	513-BKGDS1A	133	
1393	11/12/2010 13:57	80	72	8	513-BKGDS1A	133	
1394	11/12/2010 13:57	82	72	10	513-BKGDS1A	133	
1395	11/12/2010 13:57	65	72	-7	513-BKGDS1A	133	
1396	11/12/2010 13:58	57	72	-15	513-BKGDS1A	133	
1397	11/12/2010 13:58	84	72	12	513-BKGDS1A	133	
1398	11/12/2010 13:58	65	72	-7	513-BKGDS1A	133	
1399	11/12/2010 13:58	61	72	-11	513-BKGDS1A	133	
1400	11/12/2010 13:58	64	72	-8	513-BKGDS1A	133	
1401	11/12/2010 13:58	54	72	-18	513-BKGDS1A	133	
1402	11/12/2010 13:58	68	72	-4	513-BKGDS1A	133	
1403	11/12/2010 13:58	62	72	-10	513-BKGDS1A	133	
1404	11/12/2010 13:58	68	72	-4	513-BKGDS1A	133	
1405	11/12/2010 13:59	53	72	-19	513-BKGDS1A	133	
1406	11/12/2010 13:59	42	72	-30	513-BKGDS1A	133	
1407	11/12/2010 13:59	43	72	-29	513-BKGDS1A	133	
1408	11/12/2010 14:04	78	72	6	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1409	11/12/2010 14:04	47	72	-25	513-BKGDS1A	133	
1410	11/12/2010 14:04	71	72	-1	513-BKGDS1A	133	
1411	11/12/2010 14:04	52	72	-20	513-BKGDS1A	133	
1412	11/12/2010 14:05	45	72	-27	513-BKGDS1A	133	
1413	11/12/2010 14:05	75	72	3	513-BKGDS1A	133	
1414	11/12/2010 14:05	87	72	15	513-BKGDS1A	133	
1415	11/12/2010 14:05	70	72	-2	513-BKGDS1A	133	
1416	11/12/2010 14:05	97	72	25	513-BKGDS1A	133	
1417	11/12/2010 14:05	110	72	38	513-BKGDS1A	133	
1418	11/12/2010 14:05	103	72	31	513-BKGDS1A	133	
1419	11/12/2010 14:05	76	72	4	513-BKGDS1A	133	
1420	11/12/2010 14:06	76	72	4	513-BKGDS1A	133	
1421	11/12/2010 14:06	123	72	51	513-BKGDS1A	133	
1422	11/12/2010 14:06	89	72	17	513-BKGDS1A	133	
1423	11/12/2010 14:06	88	72	16	513-BKGDS1A	133	
1424	11/12/2010 14:06	96	72	24	513-BKGDS1A	133	
1425	11/12/2010 14:06	116	72	44	513-BKGDS1A	133	
1426	11/12/2010 14:06	103	72	31	513-BKGDS1A	133	
1427	11/12/2010 14:06	87	72	15	513-BKGDS1A	133	
1428	11/12/2010 14:06	74	72	2	513-BKGDS1A	133	
1429	11/12/2010 14:07	57	72	-15	513-BKGDS1A	133	
1430	11/12/2010 14:07	45	72	-27	513-BKGDS1A	133	
1431	11/12/2010 14:07	65	72	-7	513-BKGDS1A	133	
1432	11/12/2010 14:08	43	72	-29	513-BKGDS1A	133	
1433	11/12/2010 14:08	77	72	5	513-BKGDS1A	133	
1434	11/12/2010 14:08	109	72	37	513-BKGDS1A	133	
1435	11/12/2010 14:08	94	72	22	513-BKGDS1A	133	
1436	11/12/2010 14:08	69	72	-3	513-BKGDS1A	133	
1437	11/12/2010 14:08	75	72	3	513-BKGDS1A	133	
1438	11/12/2010 14:08	76	72	4	513-BKGDS1A	133	
1439	11/12/2010 14:08	82	72	10	513-BKGDS1A	133	
1440	11/12/2010 14:09	74	72	2	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 9 **Class:** 1 **Area:** 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1441	11/12/2010 14:09	88	72	16	513-BKGDS1A	133	
1442	11/12/2010 14:09	74	72	2	513-BKGDS1A	133	
1443	11/12/2010 14:09	86	72	14	513-BKGDS1A	133	
1444	11/12/2010 14:09	105	72	33	513-BKGDS1A	133	
1445	11/12/2010 14:09	73	72	1	513-BKGDS1A	133	
1446	11/12/2010 14:09	68	72	-4	513-BKGDS1A	133	
1447	11/12/2010 14:09	53	72	-19	513-BKGDS1A	133	
1448	11/12/2010 14:09	54	72	-18	513-BKGDS1A	133	
1449	11/12/2010 14:10	57	72	-15	513-BKGDS1A	133	
1450	11/12/2010 14:10	53	72	-19	513-BKGDS1A	133	
1451	11/12/2010 14:10	44	72	-28	513-BKGDS1A	133	
1452	11/12/2010 14:10	68	72	-4	513-BKGDS1A	133	
1453	11/12/2010 14:15	71	72	-1	513-BKGDS1A	133	
1454	11/12/2010 14:15	43	72	-29	513-BKGDS1A	133	
1455	11/12/2010 14:16	50	72	-22	513-BKGDS1A	133	
1456	11/12/2010 14:16	59	72	-13	513-BKGDS1A	133	
1457	11/12/2010 14:16	53	72	-19	513-BKGDS1A	133	
1458	11/12/2010 14:16	101	72	29	513-BKGDS1A	133	
1459	11/12/2010 14:16	67	72	-5	513-BKGDS1A	133	
1460	11/12/2010 14:16	68	72	-4	513-BKGDS1A	133	
1461	11/12/2010 14:16	63	72	-9	513-BKGDS1A	133	
1462	11/12/2010 14:16	60	72	-12	513-BKGDS1A	133	
1463	11/12/2010 14:17	64	72	-8	513-BKGDS1A	133	
1464	11/12/2010 14:17	48	72	-24	513-BKGDS1A	133	
1465	11/12/2010 14:17	60	72	-12	513-BKGDS1A	133	
1466	11/12/2010 14:17	81	72	9	513-BKGDS1A	133	
1467	11/12/2010 14:17	79	72	7	513-BKGDS1A	133	
1468	11/12/2010 14:17	97	72	25	513-BKGDS1A	133	
1469	11/12/2010 14:17	63	72	-9	513-BKGDS1A	133	
1470	11/12/2010 14:17	60	72	-12	513-BKGDS1A	133	
1471	11/12/2010 14:17	65	72	-7	513-BKGDS1A	133	
1472	11/12/2010 14:18	86	72	14	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1473	11/12/2010 14:18	84	72	12	513-BKGDS1A	133	
1474	11/12/2010 14:18	70	72	-2	513-BKGDS1A	133	
1475	11/12/2010 14:19	47	72	-25	513-BKGDS1A	133	
1476	11/12/2010 14:19	64	72	-8	513-BKGDS1A	133	
1477	11/12/2010 14:19	83	72	11	513-BKGDS1A	133	
1478	11/12/2010 14:19	80	72	8	513-BKGDS1A	133	
1479	11/12/2010 14:20	104	72	32	513-BKGDS1A	133	
1480	11/12/2010 14:20	80	72	8	513-BKGDS1A	133	
1481	11/12/2010 14:20	67	72	-5	513-BKGDS1A	133	
1482	11/12/2010 14:20	68	72	-4	513-BKGDS1A	133	
1483	11/12/2010 14:20	63	72	-9	513-BKGDS1A	133	
1484	11/12/2010 14:20	56	72	-16	513-BKGDS1A	133	
1485	11/12/2010 14:20	49	72	-23	513-BKGDS1A	133	
1486	11/12/2010 14:20	61	72	-11	513-BKGDS1A	133	
1487	11/12/2010 14:20	60	72	-12	513-BKGDS1A	133	
1488	11/12/2010 14:21	92	72	20	513-BKGDS1A	133	
1489	11/12/2010 14:21	107	72	35	513-BKGDS1A	133	
1490	11/12/2010 14:21	68	72	-4	513-BKGDS1A	133	
1491	11/12/2010 14:21	46	72	-26	513-BKGDS1A	133	
1492	11/12/2010 14:21	67	72	-5	513-BKGDS1A	133	
1493	11/12/2010 14:21	45	72	-27	513-BKGDS1A	133	
1494	11/12/2010 14:21	72	72	0	513-BKGDS1A	133	
1495	11/12/2010 14:21	76	72	4	513-BKGDS1A	133	
1496	11/12/2010 14:22	70	72	-2	513-BKGDS1A	133	
1497	11/12/2010 14:22	64	72	-8	513-BKGDS1A	133	
1498	11/12/2010 14:22	59	72	-13	513-BKGDS1A	133	
1499	11/12/2010 14:22	50	72	-22	513-BKGDS1A	133	
1500	11/12/2010 14:23	68	72	-4	513-BKGDS1A	133	
1501	11/12/2010 14:23	45	72	-27	513-BKGDS1A	133	
1502	11/12/2010 14:23	53	72	-19	513-BKGDS1A	133	
1503	11/12/2010 14:23	49	72	-23	513-BKGDS1A	133	
1504	11/12/2010 14:23	56	72	-16	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1505	11/12/2010 14:23	86	72	14	513-BKGDS1A	133	
1506	11/12/2010 14:23	81	72	9	513-BKGDS1A	133	
1507	11/12/2010 14:23	109	72	37	513-BKGDS1A	133	
1508	11/12/2010 14:24	79	72	7	513-BKGDS1A	133	
1509	11/12/2010 14:24	62	72	-10	513-BKGDS1A	133	
1510	11/12/2010 14:24	59	72	-13	513-BKGDS1A	133	
1511	11/12/2010 14:24	63	72	-9	513-BKGDS1A	133	
1512	11/12/2010 14:24	88	72	16	513-BKGDS1A	133	
1513	11/12/2010 14:24	66	72	-6	513-BKGDS1A	133	
1514	11/12/2010 14:24	78	72	6	513-BKGDS1A	133	
1515	11/12/2010 14:24	59	72	-13	513-BKGDS1A	133	
1516	11/12/2010 14:24	68	72	-4	513-BKGDS1A	133	
1517	11/12/2010 14:25	60	72	-12	513-BKGDS1A	133	
1518	11/12/2010 14:25	87	72	15	513-BKGDS1A	133	
1519	11/12/2010 14:25	46	72	-26	513-BKGDS1A	133	
1520	11/12/2010 14:26	58	72	-14	513-BKGDS1A	133	
1521	11/12/2010 14:26	85	72	13	513-BKGDS1A	133	
1522	11/12/2010 14:26	86	72	14	513-BKGDS1A	133	
1523	11/12/2010 14:26	70	72	-2	513-BKGDS1A	133	
1524	11/12/2010 14:26	77	72	5	513-BKGDS1A	133	
1525	11/12/2010 14:26	73	72	1	513-BKGDS1A	133	
1526	11/12/2010 14:26	78	72	6	513-BKGDS1A	133	
1527	11/12/2010 14:26	68	72	-4	513-BKGDS1A	133	
1528	11/12/2010 14:27	55	72	-17	513-BKGDS1A	133	
1529	11/12/2010 14:27	74	72	2	513-BKGDS1A	133	
1530	11/12/2010 14:27	55	72	-17	513-BKGDS1A	133	
1531	11/12/2010 14:27	57	72	-15	513-BKGDS1A	133	
1532	11/12/2010 14:27	72	72	0	513-BKGDS1A	133	
1533	11/12/2010 14:27	80	72	8	513-BKGDS1A	133	
1534	11/12/2010 14:27	105	72	33	513-BKGDS1A	133	
1535	11/12/2010 14:27	81	72	9	513-BKGDS1A	133	
1536	11/12/2010 14:27	68	72	-4	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1537	11/12/2010 14:28	68	72	-4	513-BKGDS1A	133	
1538	11/12/2010 14:28	66	72	-6	513-BKGDS1A	133	
1539	11/12/2010 14:28	50	72	-22	513-BKGDS1A	133	
1540	11/12/2010 14:28	57	72	-15	513-BKGDS1A	133	
1541	11/12/2010 14:29	54	72	-18	513-BKGDS1A	133	
1542	11/12/2010 14:29	41	72	-31	513-BKGDS1A	133	
1543	11/12/2010 14:29	43	72	-29	513-BKGDS1A	133	
1544	11/12/2010 14:29	77	72	5	513-BKGDS1A	133	
1545	11/12/2010 14:29	57	72	-15	513-BKGDS1A	133	
1546	11/12/2010 14:29	43	72	-29	513-BKGDS1A	133	
1547	11/12/2010 14:29	52	72	-20	513-BKGDS1A	133	
1548	11/12/2010 14:29	49	72	-23	513-BKGDS1A	133	
1549	11/12/2010 14:30	53	72	-19	513-BKGDS1A	133	
1550	11/12/2010 14:30	76	72	4	513-BKGDS1A	133	
1551	11/12/2010 14:30	82	72	10	513-BKGDS1A	133	
1552	11/12/2010 14:30	77	72	5	513-BKGDS1A	133	
1553	11/12/2010 14:30	53	72	-19	513-BKGDS1A	133	
1554	11/12/2010 14:30	89	72	17	513-BKGDS1A	133	
1555	11/12/2010 14:30	75	72	3	513-BKGDS1A	133	
1556	11/12/2010 14:30	72	72	0	513-BKGDS1A	133	
1557	11/12/2010 14:30	85	72	13	513-BKGDS1A	133	
1558	11/12/2010 14:31	78	72	6	513-BKGDS1A	133	
1559	11/12/2010 14:31	79	72	7	513-BKGDS1A	133	
1560	11/12/2010 14:31	80	72	8	513-BKGDS1A	133	
1561	11/12/2010 14:31	84	72	12	513-BKGDS1A	133	
1562	11/12/2010 14:31	76	72	4	513-BKGDS1A	133	
1563	11/12/2010 14:31	101	72	29	513-BKGDS1A	133	
1564	11/12/2010 14:31	96	72	24	513-BKGDS1A	133	
1565	11/12/2010 14:32	68	72	-4	513-BKGDS1A	133	
1566	11/12/2010 14:32	47	72	-25	513-BKGDS1A	133	
1567	11/12/2010 14:32	61	72	-11	513-BKGDS1A	133	
1568	11/12/2010 14:32	55	72	-17	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (ram)	Comments
1569	11/12/2010 14:33	47	72	-25	513-BKGDS1A	133	
1570	11/12/2010 14:33	54	72	-18	513-BKGDS1A	133	
1571	11/12/2010 14:33	67	72	-5	513-BKGDS1A	133	
1572	11/12/2010 14:33	115	72	43	513-BKGDS1A	133	
1573	11/12/2010 14:33	109	72	37	513-BKGDS1A	133	
1574	11/12/2010 14:33	78	72	6	513-BKGDS1A	133	
1575	11/12/2010 14:33	78	72	6	513-BKGDS1A	133	
1576	11/12/2010 14:33	104	72	32	513-BKGDS1A	133	
1577	11/12/2010 14:34	74	72	2	513-BKGDS1A	133	
1578	11/12/2010 14:34	54	72	-18	513-BKGDS1A	133	
1579	11/12/2010 14:34	44	72	-28	513-BKGDS1A	133	
1580	11/12/2010 14:34	48	72	-24	513-BKGDS1A	133	
1581	11/12/2010 14:34	78	72	6	513-BKGDS1A	133	
1582	11/12/2010 14:34	68	72	-4	513-BKGDS1A	133	
1583	11/12/2010 14:34	63	72	-9	513-BKGDS1A	133	
1584	11/12/2010 14:34	55	72	-17	513-BKGDS1A	133	
1585	11/12/2010 14:34	65	72	-7	513-BKGDS1A	133	
1586	11/12/2010 14:35	53	72	-19	513-BKGDS1A	133	
1587	11/12/2010 14:35	58	72	-14	513-BKGDS1A	133	
1588	11/12/2010 14:35	64	72	-8	513-BKGDS1A	133	
1589	11/12/2010 14:36	79	72	7	513-BKGDS1A	133	
1590	11/12/2010 14:36	48	72	-24	513-BKGDS1A	133	
1591	11/12/2010 14:36	41	72	-31	513-BKGDS1A	133	
1592	11/12/2010 14:36	53	72	-19	513-BKGDS1A	133	
1593	11/12/2010 14:36	64	72	-8	513-BKGDS1A	133	
1594	11/12/2010 14:36	55	72	-17	513-BKGDS1A	133	
1595	11/12/2010 14:36	47	72	-25	513-BKGDS1A	133	
1596	11/12/2010 14:36	60	72	-12	513-BKGDS1A	133	
1597	11/12/2010 14:36	55	72	-17	513-BKGDS1A	133	
1598	11/12/2010 14:37	56	72	-16	513-BKGDS1A	133	
1599	11/12/2010 14:37	57	72	-15	513-BKGDS1A	133	
1600	11/12/2010 14:37	71	72	-1	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 9 **Class:** 1 **Area:** 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1601	11/12/2010 14:37	95	72	23	513-BKGDS1A	133	
1602	11/12/2010 14:37	82	72	10	513-BKGDS1A	133	
1603	11/12/2010 14:37	69	72	-3	513-BKGDS1A	133	
1604	11/12/2010 14:37	69	72	-3	513-BKGDS1A	133	
1605	11/12/2010 14:37	75	72	3	513-BKGDS1A	133	
1606	11/12/2010 14:37	61	72	-11	513-BKGDS1A	133	
1607	11/12/2010 14:38	88	72	16	513-BKGDS1A	133	
1608	11/12/2010 14:38	83	72	11	513-BKGDS1A	133	
1609	11/12/2010 14:38	85	72	13	513-BKGDS1A	133	
1610	11/12/2010 14:38	108	72	36	513-BKGDS1A	133	
1611	11/12/2010 14:38	75	72	3	513-BKGDS1A	133	
1612	11/12/2010 14:38	62	72	-10	513-BKGDS1A	133	
1613	11/12/2010 14:39	82	72	10	513-BKGDS1A	133	
1614	11/12/2010 14:39	46	72	-26	513-BKGDS1A	133	
1615	11/12/2010 14:39	62	72	-10	513-BKGDS1A	133	
1616	11/12/2010 14:40	91	72	19	513-BKGDS1A	133	
1617	11/12/2010 14:40	104	72	32	513-BKGDS1A	133	
1618	11/12/2010 14:40	72	72	0	513-BKGDS1A	133	
1619	11/12/2010 14:40	84	72	12	513-BKGDS1A	133	
1620	11/12/2010 14:40	66	72	-6	513-BKGDS1A	133	
1621	11/12/2010 14:40	63	72	-9	513-BKGDS1A	133	
1622	11/12/2010 14:40	50	72	-22	513-BKGDS1A	133	
1623	11/12/2010 14:40	49	72	-23	513-BKGDS1A	133	
1624	11/12/2010 14:41	73	72	1	513-BKGDS1A	133	
1625	11/12/2010 14:41	82	72	10	513-BKGDS1A	133	
1626	11/12/2010 14:41	70	72	-2	513-BKGDS1A	133	
1627	11/12/2010 14:41	64	72	-8	513-BKGDS1A	133	
1628	11/12/2010 14:41	73	72	1	513-BKGDS1A	133	
1629	11/12/2010 14:41	99	72	27	513-BKGDS1A	133	
1630	11/12/2010 14:41	96	72	24	513-BKGDS1A	133	
1631	11/12/2010 14:41	110	72	38	513-BKGDS1A	133	
1632	11/12/2010 14:41	119	72	47	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1633	11/12/2010 14:42	118	72	46	513-BKGDS1A	133	
1634	11/12/2010 14:42	83	72	11	513-BKGDS1A	133	
1635	11/12/2010 14:43	49	72	-23	513-BKGDS1A	133	
1636	11/12/2010 14:43	79	72	7	513-BKGDS1A	133	
1637	11/12/2010 14:43	66	72	-6	513-BKGDS1A	133	
1638	11/12/2010 14:43	41	72	-31	513-BKGDS1A	133	
1639	11/12/2010 14:43	72	72	0	513-BKGDS1A	133	
1640	11/12/2010 14:43	48	72	-24	513-BKGDS1A	133	
1641	11/12/2010 14:43	58	72	-14	513-BKGDS1A	133	
1642	11/12/2010 14:43	58	72	-14	513-BKGDS1A	133	
1643	11/12/2010 14:43	56	72	-16	513-BKGDS1A	133	
1644	11/12/2010 14:44	71	72	-1	513-BKGDS1A	133	
1645	11/12/2010 14:44	81	72	9	513-BKGDS1A	133	
1646	11/12/2010 14:44	66	72	-6	513-BKGDS1A	133	
1647	11/12/2010 14:44	69	72	-3	513-BKGDS1A	133	
1648	11/12/2010 14:44	67	72	-5	513-BKGDS1A	133	
1649	11/12/2010 14:44	85	72	13	513-BKGDS1A	133	
1650	11/12/2010 14:44	77	72	5	513-BKGDS1A	133	
1651	11/12/2010 14:44	84	72	12	513-BKGDS1A	133	
1652	11/12/2010 14:44	97	72	25	513-BKGDS1A	133	
1653	11/12/2010 14:45	80	72	8	513-BKGDS1A	133	
1654	11/12/2010 14:45	62	72	-10	513-BKGDS1A	133	
1655	11/12/2010 14:45	68	72	-4	513-BKGDS1A	133	
1656	11/12/2010 14:45	91	72	19	513-BKGDS1A	133	
1657	11/12/2010 14:46	64	72	-8	513-BKGDS1A	133	
1658	11/12/2010 14:46	73	72	1	513-BKGDS1A	133	
1659	11/12/2010 14:46	82	72	10	513-BKGDS1A	133	
1660	11/12/2010 14:46	90	72	18	513-BKGDS1A	133	
1661	11/12/2010 14:46	101	72	29	513-BKGDS1A	133	
1662	11/12/2010 14:46	69	72	-3	513-BKGDS1A	133	
1663	11/12/2010 14:46	100	72	28	513-BKGDS1A	133	
1664	11/12/2010 14:46	75	72	3	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1665	11/12/2010 14:47	72	72	0	513-BKGDS1A	133	
1666	11/12/2010 14:47	95	72	23	513-BKGDS1A	133	
1667	11/12/2010 14:47	89	72	17	513-BKGDS1A	133	
1668	11/12/2010 14:47	98	72	26	513-BKGDS1A	133	
1669	11/12/2010 14:47	77	72	5	513-BKGDS1A	133	
1670	11/12/2010 14:47	50	72	-22	513-BKGDS1A	133	
1671	11/12/2010 14:47	48	72	-24	513-BKGDS1A	133	
1672	11/12/2010 14:47	42	72	-30	513-BKGDS1A	133	
1673	11/12/2010 14:47	52	72	-20	513-BKGDS1A	133	
1674	11/12/2010 14:48	48	72	-24	513-BKGDS1A	133	
1675	11/12/2010 14:48	68	72	-4	513-BKGDS1A	133	
1676	11/12/2010 14:48	50	72	-22	513-BKGDS1A	133	
1677	11/12/2010 14:49	82	72	10	513-BKGDS1A	133	
1678	11/12/2010 14:49	99	72	27	513-BKGDS1A	133	
1679	11/12/2010 14:49	84	72	12	513-BKGDS1A	133	
1680	11/12/2010 14:49	89	72	17	513-BKGDS1A	133	
1681	11/12/2010 14:49	82	72	10	513-BKGDS1A	133	
1682	11/12/2010 14:49	54	72	-18	513-BKGDS1A	133	
1683	11/12/2010 14:49	48	72	-24	513-BKGDS1A	133	
1684	11/12/2010 14:49	66	72	-6	513-BKGDS1A	133	
1685	11/12/2010 14:49	49	72	-23	513-BKGDS1A	133	
1686	11/12/2010 14:50	56	72	-16	513-BKGDS1A	133	
1687	11/12/2010 14:50	64	72	-8	513-BKGDS1A	133	
1688	11/12/2010 14:50	68	72	-4	513-BKGDS1A	133	
1689	11/12/2010 14:50	64	72	-8	513-BKGDS1A	133	
1690	11/12/2010 14:50	82	72	10	513-BKGDS1A	133	
1691	11/12/2010 14:50	87	72	15	513-BKGDS1A	133	
1692	11/12/2010 14:50	93	72	21	513-BKGDS1A	133	
1693	11/12/2010 14:50	83	72	11	513-BKGDS1A	133	
1694	11/12/2010 14:51	81	72	9	513-BKGDS1A	133	
1695	11/12/2010 14:51	80	72	8	513-BKGDS1A	133	
1696	11/12/2010 14:51	77	72	5	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1697	11/12/2010 14:51	43	72	-29	513-BKGDS1A	133	
1698	11/12/2010 14:51	73	72	1	513-BKGDS1A	133	
1699	11/12/2010 14:52	73	72	1	513-BKGDS1A	133	
1700	11/12/2010 14:52	87	72	15	513-BKGDS1A	133	
1701	11/12/2010 14:52	80	72	8	513-BKGDS1A	133	
1702	11/12/2010 14:52	70	72	-2	513-BKGDS1A	133	
1703	11/12/2010 14:52	68	72	-4	513-BKGDS1A	133	
1704	11/12/2010 14:52	59	72	-13	513-BKGDS1A	133	
1705	11/12/2010 14:52	66	72	-6	513-BKGDS1A	133	
1706	11/12/2010 14:52	51	72	-21	513-BKGDS1A	133	
1707	11/12/2010 14:52	44	72	-28	513-BKGDS1A	133	
1708	11/12/2010 14:53	60	72	-12	513-BKGDS1A	133	
1709	11/12/2010 14:53	64	72	-8	513-BKGDS1A	133	
1710	11/12/2010 14:53	103	72	31	513-BKGDS1A	133	
1711	11/12/2010 14:53	92	72	20	513-BKGDS1A	133	
1712	11/12/2010 14:53	66	72	-6	513-BKGDS1A	133	
1713	11/12/2010 14:53	94	72	22	513-BKGDS1A	133	
1714	11/12/2010 14:53	66	72	-6	513-BKGDS1A	133	
1715	11/12/2010 14:53	60	72	-12	513-BKGDS1A	133	
1716	11/12/2010 14:54	87	72	15	513-BKGDS1A	133	
1717	11/12/2010 14:54	68	72	-4	513-BKGDS1A	133	
1718	11/12/2010 14:54	64	72	-8	513-BKGDS1A	133	
1719	11/12/2010 14:54	57	72	-15	513-BKGDS1A	133	
1720	11/12/2010 14:54	50	72	-22	513-BKGDS1A	133	

Net Gamma cpm Summary
Min: -31
Avg: 0
Max: 61
St Dev: 17

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRATECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 513 Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228703 Probe Serial #: 091806C1

Calibration Due Date: 10/22/2011

Reference Area Background Identification #: 513-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	11/02/2010 7:32	51
2	11/02/2010 7:34	90
3	11/02/2010 7:35	57
4	11/02/2010 7:36	77
5	11/02/2010 7:38	63
6	11/02/2010 7:39	84
7	11/02/2010 7:40	89
8	11/02/2010 7:41	141
9	11/02/2010 7:42	71
10	11/02/2010 7:44	46
11	11/02/2010 7:45	76
12	11/02/2010 7:46	65
13	11/02/2010 7:48	58
14	11/02/2010 7:49	65
15	11/02/2010 7:50	67
16	11/02/2010 7:51	81
17	11/02/2010 7:52	72
18	11/02/2010 7:54	56
19	11/02/2010 7:55	62
20	11/02/2010 7:56	65

Gamma Mean Background (cpm):	72
Standard Deviation:	20
Gamma 3σ Investigation Level (cpm):	133

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	421-BKGDS1
Instrument Serial Number:	167145	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	3/5/2011	Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	11/22/2010	6	
2	11/22/2010	6	
3	11/22/2010	6	
4	11/22/2010	7	
5	11/22/2010	7	
6	11/22/2010	7	
7	11/22/2010	6	
8	11/22/2010	6	
9	11/22/2010	6	
10	11/22/2010	7	
11	11/22/2010	6	
12	11/22/2010	6	
13	11/22/2010	7	
14	11/22/2010	6	
15	11/22/2010	6	
16	11/22/2010	6	
17	11/22/2010	7	
18	11/22/2010	8	
19	11/22/2010	8	
20	11/22/2010	8	
21	11/30/2010	7	
22	11/30/2010	8	
23	11/30/2010	8	
24	11/30/2010	7	
25	11/30/2010	7	
26	11/30/2010	8	
27	11/30/2010	7	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Rdg #	Date	Exposure Rate (µR/hr)	Comments
28	1/7/2011	5	
29	1/7/2011	6	
30	1/7/2011	7	
31	1/20/2011	6	
32	1/20/2011	6	
33	2/16/2011	5	
34	2/16/2011	5	

Instrument Model: **Model 19**

Instrument Serial Number: **207505**

Instrument Calibration Due Date: **2/24/2012**

Reference Area Background Identification #: **578-BKGDS1**

Reference Area Background Location: **Parcel D-1 Reference**

Exposure Rate Background (µR/hr): **5**

Rdg #	Date	Exposure Rate (µR/hr)	Comments
35	3/8/2011	6	
36	3/8/2011	6	
37	3/8/2011	4	
38	3/8/2011	6	
39	3/8/2011	6	
40	3/8/2011	6	
41	3/8/2011	6	
42	3/8/2011	6	
43	3/8/2011	6	
44	3/8/2011	6	
45	3/8/2011	6	
46	3/8/2011	6	
47	3/8/2011	6	
48	3/8/2011	6	
49	3/8/2011	6	
50	3/8/2011	6	
51	3/8/2011	6	
52	3/8/2011	6	
53	3/8/2011	6	
54	3/8/2011	6	
55	5/5/2011	6	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Rdg #	Date	Exposure Rate (µR/hr)	Comments
56	5/5/2011	6	
57	5/5/2011	6	
58	5/5/2011	5	
59	6/8/2011	5	
60	6/8/2011	5	
61	6/8/2011	5	
62	6/8/2011	5	
63	6/8/2011	5	
64	6/8/2011	5	
65	6/8/2011	5	
66	6/8/2011	5	
67	6/8/2011	5	
68	6/8/2011	5	
69	6/8/2011	5	
70	6/8/2011	5	
71	6/8/2011	5	
72	6/8/2011	5	
73	6/8/2011	5	
74	6/8/2011	5	
75	6/8/2011	5	
76	6/8/2011	6	
77	6/8/2011	6	
78	6/8/2011	6	

Exposure Rate Summary (µR/hr)

Min: 4.00
Avg: 6.00
Max: 8.00
St Dev: 0.88

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01726

JTAGS.

Project Name: Radiological Building Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 3670-003
Sampler Name: JEFF ROLFE	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

GAMMASPEC | SR90 | ALPHA

LABORATORY NAME: ONSITE - NWT

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	1	1	1	COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F001-01	11/22/2010	0735	1		S		☑	☑	☐					
03707-S0009-F002-01	11/22/2010	0740	1		S		☑	☑	☐					
03707-S0009-F003-01	11/22/2010	0745	1		S		☑	☑	☐					
03707-S0009-F004-01	11/22/2010	0750	1		S		☑	☑	☐					
03707-S0009-F005-01	11/22/2010	0755	1		S		☑	☑	☐					
03707-S0009-F006-01	11/22/2010	0800	1		S		☑	☑	☐					
03707-S0009-F007-01	11/22/2010	0805	1		S		☑	☑	☐					
03707-S0009-F008-01	11/22/2010	0810	1		S		☑	☑	☐					
03707-S0009-F009-01	11/22/2010	0815	1		S		☑	☑	☐					
03707-S0009-F010-01	11/22/2010	0820	1		S		☑	☑	☐					
03707-S0009-F011-01	11/22/2010	0825	1		S		☑	☑	☐	DUP				
03707-S0009-F012-01	11/22/2010	0830	1		S		☑	☑	☐					

Relinquished by: (signature) Jeff Rolfe	Date 11-22-10	Received by: (signature)
Company RSRS	Time 1508	Company NWT
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS: 25 samples per coc.

COMPOSITE DESCRIPTION:

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS: BUILDING 707 TRIANGLE SURVEY UNIT 9 SYSTEMATIC 1-20

PARCEL

ED_004747_00010903-00282

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01727

JHRS

Project Name: Radiological Building Survey	PO Number: N/A	LABORATORY NAME: ONSITE - NWT	**Project Information Section**
Project Location: HUNTERS POINT	Project Number: 3670-003		
Sampler Name: JEFF ROLFE	Airbill Number: N/A	LABORATORY ID:	
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC	SR90	ALPHA	COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F013-01	11/22/2010	0835	1		S		☑	☑	☐					
03707-S0009-F014-01	11/22/2010	0840	1		S		☑	☑	☐					
03707-S0009-F015-01	11/22/2010	0845	1		S		☑	☑	☐					
03707-S0009-F016-01	11/22/2010	0850	1		S		☑	☑	☐					
03707-S0009-F017-01	11/22/2010	0920	1		S		☑	☑	☐					
03707-S0009-F018-01	11/22/2010	0925	1		S		☑	☑	☐					
03707-S0009-F019-01	11/22/2010	0930	1		S		☑	☑	☐					
03707-S0009-F020-01	11/22/2010	0935	1		S		☑	☑	☐					

Relinquished by: (signature) JEFF ROLFE	Date 11-22-10	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS
Company RSRS	Time 1508	Company NWL	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
BUILDING 707 TRIANGLE
SURVEY UNIT 9
SYSTEMATIC 1-20

PARCEL E

ED_004747_00010903-00283

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01746

Bags

Project Name: Radiological Building Survey	PO Number: N/A	Laboratory Name: ONSITE - NWT	Project Information Section
Project Location: HUNTERS POINT	Project Number: 3670-003	Laboratory:	
Sampler Name: J. Rolfe	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMA SPEC 1	SR 90 1	ALPHA 1						COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F021-01	11/30/2010	0920	1		S		☑	☑	☐										
03707-S0009-F022-01	11/30/2010	0925	1		S		☑	☑	☐										
03707-S0009-F023-01	11/30/2010	0930	1		S		☑	☑	☐										
03707-S0009-F024-01	11/30/2010	0935	1		S		☑	☑	☐										
03707-S0009-F025-01	11/30/2010	0940	1		S		☑	☑	☐										
03707-S0009-F026-01	11/30/2010	0945	1		S		☑	☑	☐										
03707-S0009-F027-01	11/30/2010	0950	1		S		☑	☑	☐										

Relinquished by: (signature)	Date	Received by: (signature)	Laboratory Instructions/Comments	Sampling Comments
Jeff Rolfe	11-30-10	[signature]	2 Jars / Sample	Building 707 Triangle Survey Unit 9 Bladed 21-27
Company: RSRS	Time: 15:10	Company: NWT	Composite Description:	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	Sample Condition Upon Receipt (For Laboratory): Temperature: Sample Condition: Cooler Seal:	
Company	Time	Company		

TETRA TECH EC, INC.
1230 Columbia St. Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01819

Bag 1

Project Name: Radiological Building Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 3670-0003
Sampler Name: R. Zabransky	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

LABORATORY NAME: ONSITE - RSRS

LABORATORY ID:

Project Information Section

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC	SR90	ALPHA						COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F028-01	1/7/2011	1040	1		S		☑	☑	☐										
03707-S0009-F029-01	1/7/2011	1030	1		S		☑	☑	☐										
03707-S0009-F030-01	1/7/2011	1020	1		S		☑	☑	☐										

Relinquished by: (signature)	Date 1-7-11	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS: DUP samples
Company RSRS	Time 15:19	Company RSRS	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS: B707 TRIANGLE FSS SD-9 CHARACTERIZATION 28-30

ED_004747_00010903-00285

TETRA TECH EC, INC.
1230 Columbia St. Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01828

Bag i

Project Name: Radiological Building Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 3670-0003
Sampler Name: Anthony Smith	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Contact Phone: 949-756-7592

SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	QA	GAMMASPEC	SR90	ALPHA						COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F031-01	1/20/2011	1005	1		S		1	1	1										
03707-S0009-F032-01	1/20/2011	1010	1		S		1	1	1										

LABORATORY NAME: ONSITE - RSRS

LABORATORY ID:

Project Information Section

Relinquished by: (signature) Anthony Smith	Date 1-20-11	Received by: (signature)
Company RSRS	Time 1416	Company RSRS
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
B707 TRIANGLE FSS
SW-9
POST-REMEDIATION
31-32

ED_004747_00010903-00286

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01862

Project Name: Radiological Building Survey	PO Number: N/A	LABORATORY NAME: ONSITE - RSRS	Project Information Section
Project Location: HUNTERS POINT	Project Number: 3670-0003	LABORATORY ID:	
Sampler Name: R Zahensky	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TYPE	GAMMA SPEC 1	SR90 1	ALPHA 1						COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F033-01	2/16/2011	1335	1		S		☑	☑	☐										
03707-S0009-F034-01	2/16/2011	1345	1		S		☑	☑	☐										

Relinquished by: (signature) R Zahensky	Date 2.16.11	Received by: (signature) Eric Schroeder	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS B707 TRIANGLE FSS SU-9 POST-REMEDIATION 33-34
Company RSRS	Time 15.00	Company RSRS		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		

TERRATECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01908

Project Name: Radiological Building Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 3670-0003
Sampler Name: R. Zahensky	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F035-01	3/8/2011	1030	1		S		☑	☑	☐					
03707-S0009-F036-01	3/8/2011	1035	1		S		☑	☑	☐					
03707-S0009-F037-01	3/8/2011	1040	1		S		☑	☑	☐					
03707-S0009-F038-01	3/8/2011	1045	1		S		☑	☑	☐					
03707-S0009-F039-01	3/8/2011	1050	1		S		☑	☑	☐					
03707-S0009-F040-01	3/8/2011	1055	1		S		☑	☑	☐					
03707-S0009-F041-01	3/8/2011	1100	1		S		☑	☑	☐					
03707-S0009-F042-01	3/8/2011	1105	1		S		☑	☑	☐					
03707-S0009-F043-01	3/8/2011	1110	1		S		☑	☑	☐					
03707-S0009-F044-01	3/8/2011	1115	1		S		☑	☑	☐	DUP				
03707-S0009-F045-01	3/8/2011	1120	1		S		☑	☑	☐					
03707-S0009-F046-01	3/8/2011	1125	1		S		☑	☑	☐					

LABORATORY NAME: ONSITE - RSRS

LABORATORY ID:

Project Information Section

Relinquished by: (signature)	Date: 3-8-11	Received by: (signature)
Company: RSRS	Time: 15:30	Company: RSRS
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS
B707 TRIANGLE FSS
SU-9
SYSTEMATIC 35-54

ED_004747_00010903-00288

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01909

Project Name: Radiological Building Survey	PO Number: N/A
Project Location: HUNTERS POINT	Project Number: 3670-0003
Sampler Name: R. Zahensky	Airbill Number: N/A
Project Chemist: LISA BIENKOWSKI	Project Contact Phone: 949-756-7592

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
03707-S0009-F047-01	3/8/2011	1130	1		S		☑	☑	☐					
03707-S0009-F048-01	3/8/2011	1135	1		S		☑	☑	☐					
03707-S0009-F049-01	3/8/2011	1140	1		S		☑	☑	☐					
03707-S0009-F050-01	3/8/2011	1145	1		S		☑	☑	☐					
03707-S0009-F051-01	3/8/2011	1150	1		S		☑	☑	☐					
03707-S0009-F052-01	3/8/2011	1240	1		S		☑	☑	☐					
03707-S0009-F053-01	3/8/2011	1245	1		S		☑	☑	☐					
03707-S0009-F054-01	3/8/2011	1250	1		S		☑	☑	☐					

LABORATORY NAME: ONSITE - RSRS

LABORATORY ID:

Project Information Section

Relinquished by: (signature)	Date: 3-8-11	Received by: (signature)	
Company: RSRS	Time: 15:30	Company: RSES	
Relinquished by: (signature)	Date	Received by: (signature)	
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	
Company	Time	Company	

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

SAMPLING COMMENTS

ED_004747_00010903-00289

TETRA TECH EC, INC.
1230 Columbia St. Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01958

Project Name: Radiological Building Survey		PO Number: N/A				G A M M A S P E C	S R 9 0	A L P H A		LABORATORY NAME: ONSITE - RSRS	Project Information Section		
Project Location: HUNTERS POINT		Project Number: 3670-0003								LABORATORY ID:			
Sampler Name: R Zahensky		Airbill Number: N/A											
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	I	I	I	COMMENTS	LOCATION	SAMPLE ID	
03707-S0009-F055-01	5/5/2011	1335	1		S		☐	☑	☐				
03707-S0009-F056-01	5/5/2011	1340	1		S		☐	☑	☐				
03707-S0009-F057-01	5/5/2011	1345	1		S		☐	☑	☐				
03707-S0009-F058-01	5/5/2011	1400	1		S		☐	☑	☐				

Relinquished by: (signature) R Zahensky	Date 5.5.11	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS: B707 TRIANGLE AREA SE90 POST. REMEDIATION SO-09 & SS-58
Company RSRS	Time 16:10	Company RSRS		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		

ED_004747_00010903-00290

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01988

Project Name: Radiological Building Survey	PO Number: N/A	LABORATORY NAME: ONSITE - RSRS	Project Information Section
Project Location: HUNTERS POINT	Project Number: 3670-0003	LABORATORY ID:	
Sampler Name: J. Rolfe	Airbill Number: N/A		
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592		

SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	GAMMASPEC 1	SR90 1	ALPHA 1	COMMENTS	LOCATION	SAMPLE ID
03707-S0009-F059-01	6/8/2011	0815	1		S		☑	☑	☐			
03707-S0009-F060-01	6/8/2011	0820	1		S		☑	☑	☐			
03707-S0009-F061-01	6/8/2011	0825	1		S		☑	☑	☐			
03707-S0009-F062-01	6/8/2011	0830	1		S		☑	☑	☐			
03707-S0009-F063-01	6/8/2011	0835	1		S		☑	☑	☐			
03707-S0009-F064-01	6/8/2011	0840	1		S		☑	☑	☐			
03707-S0009-F065-01	6/8/2011	0845	1		S		☑	☑	☐			
03707-S0009-F066-01	6/8/2011	0850	1		S		☑	☑	☐	Dup		
03707-S0009-F067-01	6/8/2011	0925	1		S		☑	☑	☐			
03707-S0009-F068-01	6/8/2011	0930	1		S		☑	☑	☐			
03707-S0009-F069-01	6/8/2011	0935	1		S		☑	☑	☐			
03707-S0009-F070-01	6/8/2011	0940	1		S		☑	☑	☐			

Relinquished by: (signature) J. Rolfe	Date 6-8-11	Received by: (signature) [illegible]	LABORATORY INSTRUCTIONS/COMMENTS
Company RSRS	Time 1350	Company RSRS	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:
Company	Time	Company	

SAMPLING COMMENTS
B707 TRIANGLE AREA FSS
SU-9
SYSTEMATIC 59-78

TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

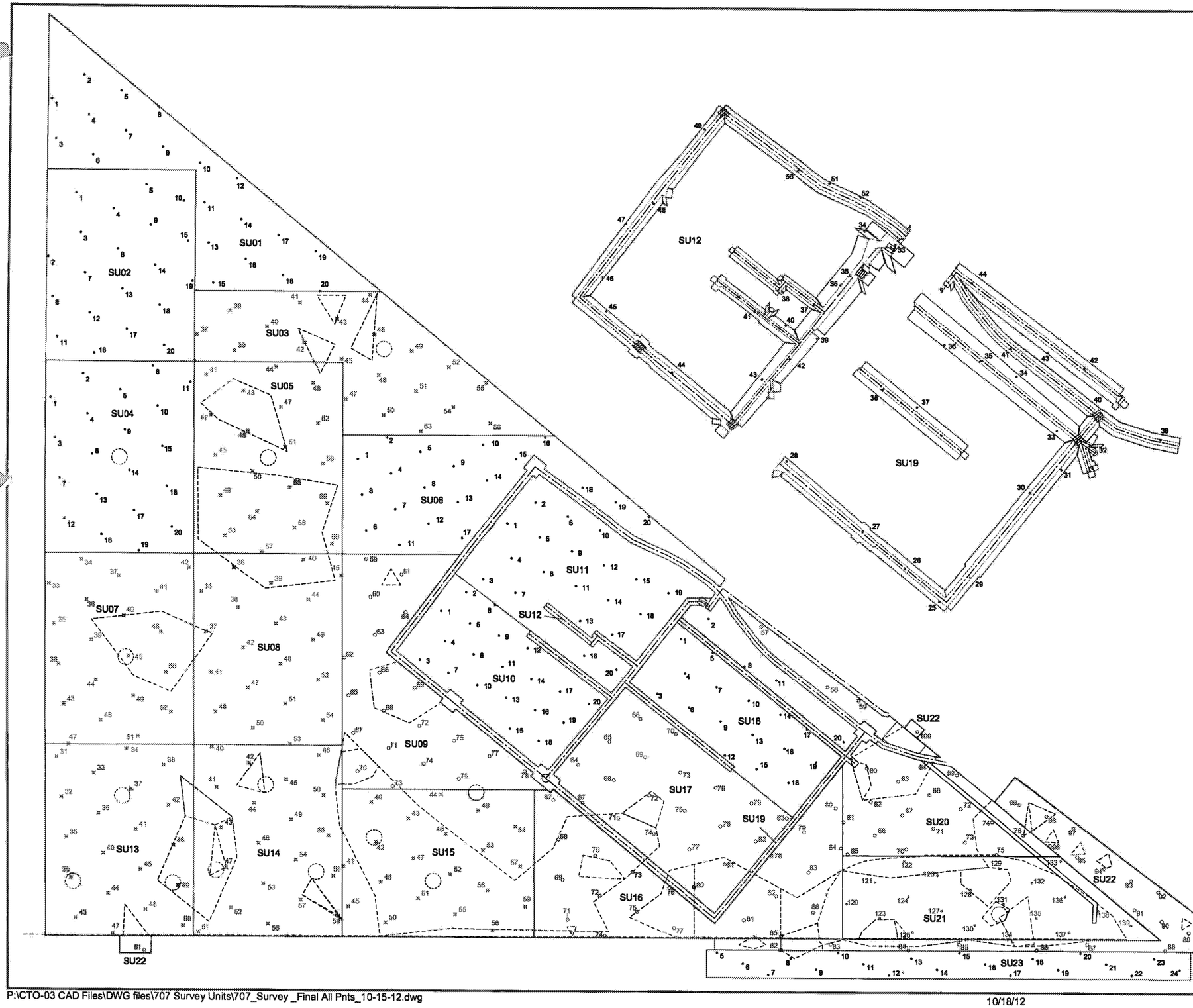
Chain-of-Custody Record

BFS 01989

Project Name: Radiological Building Survey	PO Number: N/A					G A M M A S P E C	S R 9 0	A L P H A		LABORATORY NAME: ONSITE - RSRS	Project Information Section		
Project Location: HUNTERS POINT	Project Number: 3670-0003									LABORATORY ID:			
Sampler Name: J Rolfe	Airbill Number: N/A												
Project Chemist: LISA BIENKOWSKI	Project Chemist Phone: 949-756-7592												
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TAT	I	I	I	COMMENTS	LOCATION	SAMPLE ID	
03707-S0009-F071-01	6/8/2011	0945	1		S		☑	☑	☐				
03707-S0009-F072-01	6/8/2011	0950	1		S		☑	☑	☐				
03707-S0009-F073-01	6/8/2011	0955	1		S		☑	☑	☐				
03707-S0009-F074-01	6/8/2011	1000	1		S		☑	☑	☐				
03707-S0009-F075-01	6/8/2011	1005	1		S		☑	☑	☐				
03707-S0009-F076-01	6/8/2011	1010	1		S		☑	☑	☐				
03707-S0009-F077-01	6/8/2011	1015	1		S		☑	☑	☐				
03707-S0009-F076-01	6/8/2011	1020	1		S		☑	☑	☐				

Relinquished by: (signature) J Rolfe	*Date* 6-8-11	*Received by: (signature)* C. Gasparel	LABORATORY INSTRUCTIONS/COMMENTS:
Company RSRS	*Time* 1350	*Company* RSRS	SAMPLING COMMENTS:
Relinquished by: (signature)	*Date*	*Received by: (signature)*	COMPOSITE DESCRIPTION:
Company	*Time*	*Company*	
Relinquished by: (signature)	*Date*	*Received by: (signature)*	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
Company	*Time*	*Company*	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:

ED_004747_00010903-00292



LEGEND:

- 1 SU-1 SYSTEMATIC SAMPLES 1-20
- 1 SU-2 SYSTEMATIC SAMPLES 1-20
- 37 SU-3 SYSTEMATIC 2 SAMPLES 37-56
- 1 SU-4 SYSTEMATIC SAMPLES 1-20
- 41 SU-5 SYSTEMATIC 2 SAMPLES 41-60
- 1 SU-6 SYSTEMATIC SAMPLES 1-20
- 33 SU-7 SYSTEMATIC 2 SAMPLES 33-52
- 35 SU-8 SYSTEMATIC 2 SAMPLES 35-54
- 59 SU-9 SYSTEMATIC 3 SAMPLES 59-78
- 1 SU-10 SYSTEMATIC SAMPLES 1-20
- 1 SU-11 SYSTEMATIC SAMPLES 1-20
- 33 SU-12 SYSTEMATIC SAMPLES 33-52
- 31 SU-13 SYSTEMATIC 2 SAMPLES 31-50
- 40 SU-14 SYSTEMATIC 2 SAMPLES 40-59
- 40 SU-15 SYSTEMATIC 2 SAMPLES 40-59
- 67 SU-16 SYSTEMATIC 3 SAMPLES 67-86
- 64 SU-17 SYSTEMATIC 2 SAMPLES 64-83
- 1 SU-18 SYSTEMATIC SAMPLES 1-20
- 1 SU-19 SYSTEMATIC SAMPLES 28-44
- 60 SU-20 SYSTEMATIC 3 SAMPLES 60-76
- 120 SU-21 SYSTEMATIC 4 SAMPLES 120-139
- 82 SU-22 SYSTEMATIC 3 SAMPLES 82-99
- 5 SU-23 SYSTEMATIC SAMPLES 5-24

PREVIOUS REMEDIATION

POTHOLE LOCATIONS

30 0 30 60

(feet)

RECORD COPY

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

PARCEL E

BUILDING 707 TRIANGLE FINAL SYSTEMATIC

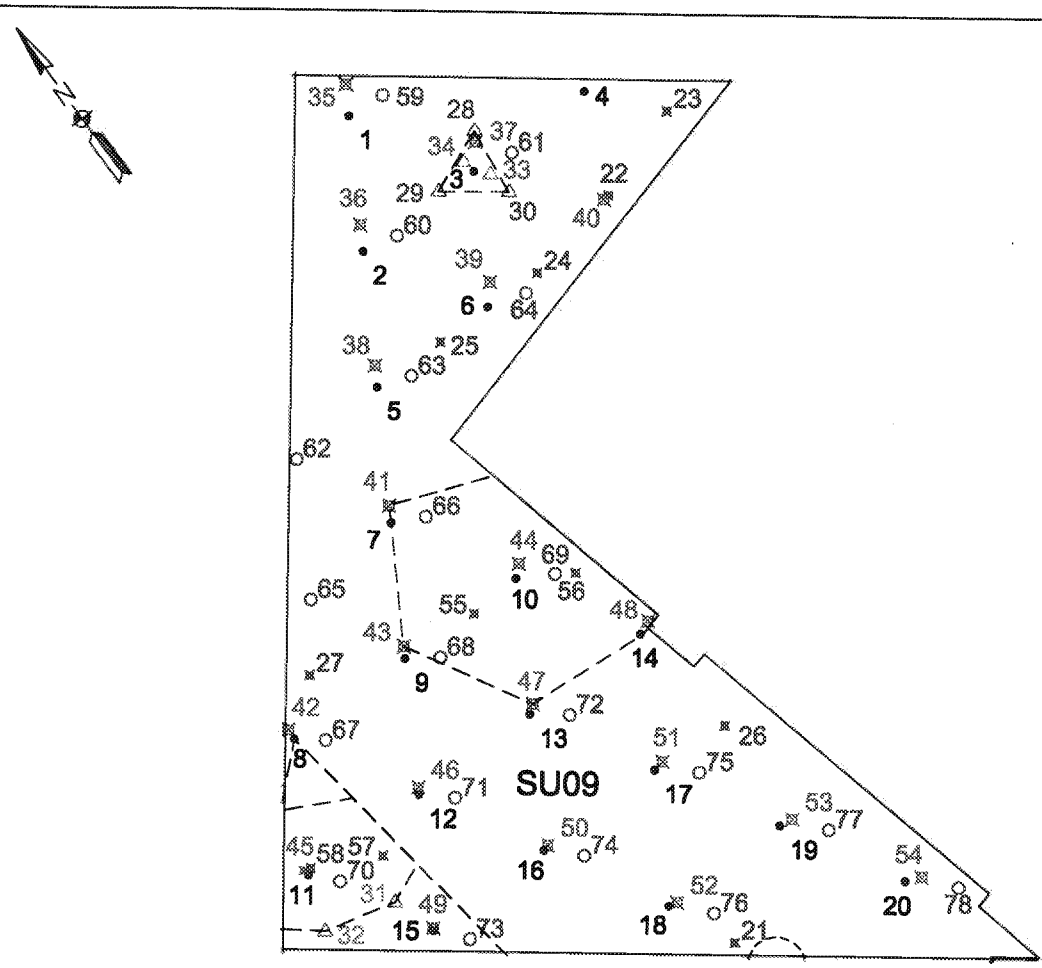
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA

REVISION:
AUTHOR: A. CRABTREE
PROJECT NO:
FILE: SEE BELOW

TETRA TECH EC, INC.

P:\CTO-03 CAD Files\DWG files\707 Survey Units\707_Survey _Final All Pnts_10-15-12.dwg

10/18/12



LEGEND:

•	1	SYSTEMATIC 1 SAMPLES 1–20
⊠	21	BIASED SAMPLES 21–27
△	28	CHARACTERIZATION 1 SAMPLES 28–30
△	31	POST REMEDIATION 1 SAMPLES 31–32
△	33	POST REMEDIATION 2 SAMPLES 33–34
⊠	41	SYSTEMATIC 2 SAMPLES 35–54
⊠	33	POST REMEDIATION 3 SAMPLES 55–58
○	59	SYSTEMATIC 3 SAMPLES 59–78
– – – – –		PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
PLOT/UPDATE: OCT 18 2012 10:30:06

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 9

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: November 22, 2010	RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Buildings 203, 241, 271 and 272, and Work Area #33. Details of the work activities performed are provided in the sections below.

Building 203

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of Hg contamination.

Building 241

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of mercury contamination and measuring proposed Class 1 survey areas.

Building 271

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of mercury contamination and the ongoing removal of interior walls and radiological surface scans of generated metal and wood debris; no contamination was identified during the scanning activities.

Building 272

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of mercury contamination.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: November 22, 2010	EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Scrap Yard, UC3, and Work Areas #16, #21 and #22. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 90 cpm for the FIDLER and 8,423 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 109 cpm for the FIDLER and 8,502 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Scrap Yard

Following a review of analytical results from Survey Unit 5, staged asphalt debris from Grids 18, 20 and 22 were transferred to the recycling stockpile.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

The HPS Team and the RASO concurred with backfilling Trench Unit No. 182.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

DAILY STATUS REPORT
HPS Base-Wide Activities

Report Dates: November 22, 2010	RAC V

Overview

The HPS team continued with Base-wide activities under CTO 18. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:
+ Restricted areas unlocked/established for daily activities: complete
+ Operational check prerequisites for project field instrumentation/machinery/equipment use: complete

NRC license compliance:
+ Attendance for regularly scheduled radiological awareness brief (Monday's): 0
+ Dosimetry assignments completed in support of radiologically controlled work tasks: 0
+ Routine radiological surveys: Daily - 3; Weekly – 14; Monthly – 0
+ Radiological status surveys (equipment and material): incoming –0; outgoing – 0; truck portal – 0
+ Radiological postings - upkeep and maintenance: ongoing

Radiological oversight, support, and field coverage (other contractors):
+ Kleinfelder – Sampling activities at groundwater monitoring wells (miscellaneous Basewide locations)

End of shift:
+ Project field instrument/machinery/equipment accountability and inventory status: complete
+ Restricted areas secured for day: complete

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, and housekeeping activities.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 8

Protean units available and operational for analytical analysis needs: 1 (Friday and Saturday)

Samples analyzed:
+ Protean swipe samples – 125
+ Protean air monitoring media – 3
+ Gamma spectroscopy samples – 72

Total number of gamma spectroscopy samples recounted:
+ Soil samples – 22

Total number of samples in process or awaiting analysis:
+ Gamma spectroscopy samples – 733

Other:
+ Samples sent for offsite analysis – 60 (Tetra Tech)

Note: + Samples processed for Alameda: 0
+ Samples processed for HPS:
- Shaw D1: 0
- Shaw PCB: 0
- ERRG: 0

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).
Excavated soil (ES) pile ES349, Pad C07; stockpiling pad contents pending receipt of Sr-90 analytical results: ongoing
ES pile ES354, Pad C10; stockpiling pad contents pending receipt of Sr-90 analytical results: ongoing
ES pile ES 355, Pad C09; preliminary preparation for systematic and biased sampling: ongoing
ES pile ES 358, Pad C21; systematic and biased sampling activities: complete
ES pile ES 361, Pad C22; systematic and biased sampling activities: complete
Receiving soil from Shaw work area (WA) 24 as ES pile ES 364, Pad C26: ongoing

RSY3:

No activities planned / conducted

RSY4:

No activities planned / conducted

RASO Notification, Approval and Survey/Sample Results

Received concurrence specific to: "Parcel UC 3 Backfilling Operations at WA 16, Trench Unit 182.

HPS LLRW Bin Activities

Empty bins staged for active use: 0
Bins receiving material in support of day's activities: 0
Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0
Prior week's bin count transferred to EMS for storage in the Parcel C bin storage area (reported every Monday): N/A

Support to Other Contracts / Organizations

Provided radiological field coverage for:
+ Kleinfelder

Provided analytical laboratory services for:
+ N/A

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: November 30, 2010	RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Building 271 and Work Area #33. Details of the work activities performed are provided in the sections below.

Building 271

The HPS Team completed dismantling the radiologically cleared and released ventilation hood (M&E Survey #HPS-ME-B271-002) and transferred the hood sections to Building 281 for storage.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: November 30, 2010	EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team performed Class 1 survey activities in Survey Unit 1. A total of 18 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 83 cpm for the FIDLER and 7,726 cpm. In addition, 9 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 6. A total of 10 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 91 cpm for the FIDLER and 7,608 cpm. In addition, 5 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 14 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 95 cpm for the FIDLER and 8,746 cpm. In addition, 7 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 10. A total of 20 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 190 cpm for the FIDLER and 8,419 cpm. In addition, 10 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 11. A total of 24 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 158 cpm for the FIDLER and 8,201 cpm. In addition, 12 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of 32 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 220 cpm for the FIDLER and 9,743 cpm. In addition, 16 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

Backfilling activities were initiated for Trench Unit No. 183 by the HPS Team.

The HPS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 187 along with a request for concurrence to backfill.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

DAILY STATUS REPORT
HPS Base-Wide Activities

Report Dates: November 30, 2010	RAC V

Overview

The HPS team continued with Base-wide activities under CTO 18. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:
+ Restricted areas unlocked/established for daily activities: completed.
+ Operational check prerequisites for project field instrumentation/machinery/equipment use: completed.

NRC license compliance:
+ Attendance for regularly scheduled radiological awareness brief (Monday's): N/A
+ Dosimetry assignments completed in support of radiologically controlled work tasks: 0
+ Routine radiological surveys: Daily - 3; Weekly – 8; Monthly – 0
+ Radiological status surveys (equipment and material): incoming –0; outgoing – 0; truck portal – 0
+ Radiological postings - upkeep and maintenance: ongoing

Radiological oversight, support, and field coverage (other contractors):
+ Support for Shaw activities in RSY2 (transfer of ES to pads).
+ Support for Kleinfelder sampling activities at groundwater monitoring wells (miscellaneous Basewide locations).

End of shift:
+ Project field instrument/machinery/equipment accountability and inventory status: completed.
+ Restricted areas secured for day: completed.

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, and housekeeping activities.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 8

Protean units available and operational for analytical analysis needs: 1

Samples analyzed:
+ Protean swipe samples – 24
+ Protean air monitoring media – 5
+ Gamma spectroscopy samples – 85

Total number of gamma spectroscopy samples recounted:
+ Soil samples – 27

Total number of samples in process or awaiting analysis:
+ Gamma spectroscopy samples – 692

Other:
+ Samples sent for offsite analysis – 44 (Tetra Tech)

Note: + Samples processed for Alameda: 0
+ Samples processed for HPS:
- Shaw D1: 13 (gamma spectroscopy with 10 recounts)
- Shaw PCB: 0
- ERRG: 0

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).
Preliminary preparations for the systematic and biased sampling of excavated soil (ES) pile ES 348, Pad C 06: ongoing
Preliminary preparations for the towed array survey of ES pile ES 364, Pad C 25: ongoing
ES pile ES 301, Pad C 16; stockpile relocation to SB4 staging area (pad is clear): complete
Excavated soil (ES) pile ES 354, Pad C 10; stockpile relocation to SB3 (Shaw) staging area (pad is clear): complete
Receiving soil from Shaw IR 32 work area (WA) 34 as ES pile ES 366, Pad C 28 (pad is full): complete
Receiving soil from Shaw IR 32 WA 24 as ES pile ES 367, Pad C 29: ongoing
Receiving soil from Shaw IR 32 WA 24 as ES pile ES 368, Pad C 30: ongoing

RSY3:

No activities planned / conducted

RSY4:

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).
ES pile ES 341, Pad E 18; stockpiling activities on pad: ongoing

RASO Notification, Approval and Survey/Sample Results

Forwarded analysis results from the offsite analytical laboratory specific to: "Strontium Sampling at Parcel G, ES Pile ES 311 (currently staged at RSY2, Pad C 28)"; requested concurrence to use entire pile as backfill material.
Forwarded analysis results from the offsite analytical laboratory specific to: "Strontium Sampling at Parcel G, ES Pile ES 314 (currently staged at RSY2, Pad C 31)"; requested concurrence to use entire pile as backfill material.
Forwarded analysis results from the onsite analytical laboratory specific to: "Systematic and Biased Sampling at Parcel G, ES Pile ES 358 (currently staged at RSY2, Pad C 21)"; requested concurrence to clear / stage entire pile pending receipt of strontium analysis results from the offsite analytical laboratory.
Received concurrence specific to: "Systematic and Biased Sampling at Parcel E, ES Pile ES 342 (staged at RSY4, Pad E 17)"; will clear / stage entire pile pending receipt of strontium results from offsite analytical laboratory.

HPS LLRW Bin Activities

Empty bins staged for active use: 0
Bins receiving material in support of day's activities: 1 (Tetra Tech)
Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0
Prior week's bin count transferred to EMS for storage in the Parcel C bin storage area (reported every Monday): N/A

Support to Other Contracts / Organizations

Provided radiological field coverage for:
+ Shaw Environmental
+ Kleinfelder

Provided analytical laboratory services for:
+ Shaw Environmental

DAILY REPORT
HPS RAD EMAC Basewide Status

Report Dates: January 7, 2011	RAC V

Overview

The HPS team continued with Basewide activities under CTO 04. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including any support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:
+ Restricted areas unlocked/established for daily activities: complete
+ Operational check prerequisites for project field instrumentation/machinery/equipment use: complete

NRC license compliance:
+ Attendance for regularly scheduled radiological awareness brief (Monday's): N/A
+ Dosimetry assignments completed in support of radiologically controlled work tasks: 0
+ Routine radiological surveys: Daily - 7; Weekly – 5; Monthly – 0
+ Radiological status surveys (equipment and material): incoming –2; outgoing – 0
+ Radiological truck portal screening: Baseline scans (empty) 0; Full load scans 0
+ Radiological postings (upkeep and maintenance): ongoing

Radiological oversight, support, and field coverage (other contractors):
+ None requested / scheduled

End of shift:
+ Project field instrument/machinery/equipment accountability and inventory status: complete
+ Restricted areas secured for day: complete

Miscellaneous
+ Radiological integrity field verifications: complete.
+ Laboratory waste packages generated / transferred for disposal to RSY bins: 10

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, sample consolidation, and housekeeping activities. Phase out of current gamma spectroscopy hardware to newer upgrade continues; relocation to new onsite facility ongoing.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 0

Protean units available and operational for analytical analysis needs: 1

Samples analyzed:
+ Protean swipe samples – 40
+ Protean air monitoring media – 21
+ Gamma spectroscopy samples – 0

Total number of gamma spectroscopy samples recounted:
+ Soil samples – N/A

Total number of samples in process or awaiting analysis:
+ Gamma spectroscopy samples – 335

Other:
+ Samples sent for offsite analysis – 0

Note: + Samples processed for Alameda: 0
+ Samples processed for HPS:
- Shaw D1: 0
- Shaw PCB: 0
- ERRG: 0

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).
Receiving soil from work area (WA) 30 (Shaw) as excavated soil (ES) pile ES 374, Pad C 12 : ongoing

RSY3

Radiological monitoring/control point support (personnel/area/equipment/material egress/air monitoring).
Receiving soil from WA 33 (Shaw) as ES pile ES 375, Pad D 06 : ongoing

RSY4

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).
Receiving soil from WA 33 as ES pile ES 380, Pad E 11: ongoing

HPS LLRW Bin Activities

Empty bins staged for active use: 4 (Tetra Tech)
Bins receiving material in support of day's activities: 6 (Tetra Tech)
Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0
Prior week's bin transfer total to EMS bin storage area in Parcel C (reported every Monday): 3

Support to Other Contracts / Organizations

Provided radiological field coverage for:
+ N/A

Provided analytical laboratory services for:
+ N/A

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: January 7, 2011	RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Work Area #33. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 300 cubic yards of soil from Work Area #33 and transferred the material to both RSY3 and RSY4 pending survey activities. Excavation activities were performed for the following trench segments:

- 02-C33-00-1S 20 linear feet completed
- 02-C33-00-1T 20 linear feet completed
- 02-C33-00-1V 28 linear feet completed
- 02-C33-00-1W 115 linear feet completed
- 02-C33-00-1X 25 linear feet completed
- 02-C33-00-1Z 10 linear feet completed.

A total of 218 linear feet of trench (including excavated soil, pipe, and manholes) identified on the design drawing was completed by the HPS Team.

Manholes MH1113, and MH1114 along with pipe excavated from trench segments 02-C33-00-1S, 02-C33-00-1T, 02-C33-00-1V, 02-C33-00-1W, 02-C33-00-1X, and 02-C33-00-1Z were placed on plastic pending further activities.

Two sediment samples were collected from Manholes MH1113 (MH0002) and MH1114 (MH0003) by the HPS Team and submitted to the on-site laboratory for analysis.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: January 7, 2011	EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Scrap Yard, UC3, and Work Areas #16, #20, and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team remediated approximately 65 cubic yards of soil from Survey Unit 21 and placed the material in LLRW bins BKRU026148, GFLU001153G6, GFLU001164G12, GFLU001172G15, and GFLU001203 for disposal.

The HPS Team performed Class 1 survey activities in Survey Units 3, 5, 7, 8, 9, 13, 14, and 20. A total of 18 characterization gamma static measurements were logged. The maximum gamma static measurement logged was 7,870 cpm. In addition, 18 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Scrap Yard

The HPS Team issued drawings to identify locations for post-remediation sample collection in Survey Units 6 and 8.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

Backfill activities were continued by the HPS Team in Trench Unit No. 184.

Standing water in UC3 active trenches continued to be pumped in preparation for FSS activities.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

DAILY REPORT
HPS RAD EMAC Basewide Status

Report Dates: January 20, 2011	RAD EMAC – CTO 04

Overview

The HPS team continued with Basewide activities under CTO 04. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including any support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:
+ Restricted areas unlocked/established for daily activities: complete
+ Operational check prerequisites for project field instrumentation/machinery/equipment use: complete

NRC license compliance:
+ Attendance for regularly scheduled radiological awareness brief (Monday's):N/A
+ Attendance for radiological awareness brief - escorted visitor (short term/task specific): 0
+ Dosimetry assignments completed in support of radiologically controlled work tasks: 0
+ Routine radiological surveys: Daily - 9; Weekly – 3; Monthly –1; Monthly RMA Inventory performed.
+ Radiological status surveys (equipment and material): incoming –1; outgoing –0
+ Radiological truck portal screening: Baseline scans (empty) 0; Full load scans 0
+ Radiological postings (upkeep and maintenance): ongoing

Radiological oversight, support, and field coverage (other contractors):
+ CE2/Kleinfelder: Basewide groundwater sampling project.

End of shift:
+ Project field instrument/machinery/equipment accountability and inventory status: complete
+ Restricted areas secured for day: complete

Miscellaneous
+ Radiological integrity field verifications: complete.
+ Laboratory waste packages generated / transferred for disposal to RSY bins: 0

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, and housekeeping activities. Phase out of current gamma spectroscopy hardware to newer upgrade continues; relocation to new onsite facility ongoing.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 5

Protean units available and operational for analytical analysis needs: 1

Samples analyzed:
+ Protean swipe samples – 70
+ Protean air monitoring media –11
+ Gamma spectroscopy samples – 42

Total number of gamma spectroscopy samples recounted:
+ Soil samples – 0

Total number of samples in process or awaiting analysis:
+ Gamma spectroscopy samples – 557

Other:
+ Samples sent for offsite analysis – 14 (Tetra Tech)

Note: + Samples processed for Alameda: 0
+ Samples processed for HPS:
- Shaw PD1: 33
- Shaw PCB:
- 03SCR-S0006: 6
- 03SCR-S0007: 3

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).
Excavated Soil (ES) pile #394, Pad C20-Receiving soil from work area (WA)/24 (Shaw), 3 truckloads today.
ES pile #366, Pad C28-Ready for towed array.
ES pile #371, Pad C33-Towed array completed.

RSY3

No activities planned or conducted today.

RSY4

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).
ES pile #395, Pad E07-Receiving soil from WA/33, 9 truckloads.
ES pile #392, Pad E17-Receiving soil from WA/33, 11 truckloads today.
ES pile #391, Pad E18-Receiving soil from WA/33, 11 truckloads today, pad is full.

HPS LLRW Bin Activities

Empty bins staged for active use: 0 (Tetra Tech)
Bins receiving material in support of day's activities: 3 (Tetra Tech)
Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0
Prior week's bin transfer total to EMS bin storage area in Parcel C (reported every Monday): N/A

Support to Other Contracts / Organizations

Provided radiological field coverage for:
+ CE2/Kleinfelder: Basewide groundwater sampling project.

Provided analytical laboratory services for:
+ N/A

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: January 20, 2011	RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Buildings 203, 214 and 271 and Work Area #33. Details of the work activities performed are provided in the sections below.

Building 203

The HPS Team and Sterling Environmental performed a pre-asbestos abatement walkthrough and on-site equipment inventory.

Building 214

The main entryway was relocated to the east-side of Building 214 to facilitate sewer and storm drain removal activities along Lockwood Street.

Building 271

The drying oven, which was radiologically cleared in Material and Equipment Survey #HPS-ME-B271-001, was transferred by the HPS Team to Building 413 for storage.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 372 cubic yards of soil from Work Area #33 and transferred the material to RSY4 pending survey activities. Excavation activities were performed for the following trench segments:

- 02-C33-00-2Q 16 linear feet completed
- 02-C33-00-2R 22 linear feet completed
- 02-C33-00-2S 13 linear feet completed
- 02-C33-00-8K 20 linear feet completed
- 02-C33-28-1W 42 linear feet completed
- 02-C33-28-1X 35 linear feet completed
- 02-C33-28-1Y 4 linear feet completed
- 02-C33-28-8B 30 linear feet completed.

A total of 132 linear feet of trench (including excavated soil, pipe and manholes) identified on the design drawings and 50 linear feet not identified on the design drawings was completed by the HPS Team.

Manholes MH1052 and MH1060 along with pipe excavated from trench segments 02-C33-00-2Q, -2R, -2S, -8K; 02-C33-28-1W, -1X, -1Y, and -8B were placed on plastic pending disposal activities.

Two sediment samples were collected from Manholes MH1052 (MH0010) and MH1060 (MH0011) by the HPS Team and submitted to the on-site laboratory for analysis.

Asphalt removal activities were continued by the HPS Team in Work Area #33 to facilitate upcoming fieldwork.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: January 20, 2011	EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team remediated approximately 24 cubic yards of soil from within Class 1 Survey Unit 5 and placed the material in LLRW bins GFLU001236G5 and GFLU001262G15 for disposal by the DON's radiological waste contractor.

The HPS Team performed Class 1 survey activities in Survey Unit 3. A total of 6 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 90 cpm for the FIDLER and 5,444 cpm. In addition, three post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 5. A total of 8 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 85 cpm for the FIDLER and 6,166 cpm. In addition, four post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 4 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 105 cpm for the FIDLER and 7,609 cpm. In addition, two post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 13. A total of 4 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 86 cpm for the FIDLER and 6,079 cpm. In addition, two post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 14. A total of 4 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 183 cpm for the FIDLER and 5,337 cpm. In addition, two

post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 15. A total of 18 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 193 cpm for the FIDLER and 5,822 cpm. In addition, nine post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

Compaction testing was continued on recently backfilled areas of Trench Units No. 175 and 182. Based on the test results, backfill activities were completed in Trench Unit No. 175, but continued in Trench Unit No. 182.

The HPS Team continued pumping standing water from active trench units in UC3.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: February 16, 2011	RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Buildings 203 and 271, and Work Area #33. Field activities were limited due to inclement weather. Details of the work activities performed are provided in the sections below.

Building 203

Sterling Environmental and the HPS Team continued asbestos abatement activities on furnace boilers and flooring. Approximately 40 cubic yards of firebrick was generated during the abatement activities and placed in LLRW bins DB1104D4, DB1439 and DB1443 for disposal.

Building 271

The HPS Team performed Class 1 survey activities in Survey Unit 6. A total of 228 gamma scan readings and 20 static measurements were logged with no gamma activity identified above the 3-sigma investigation level of 8,809 cpm. Twenty alpha/beta static measurements also were logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limits. In addition, 20 swipe samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Excavation of trench segments 02-C33-28-8E, -8G, and -8H were terminated due to their proximity to Building 251. A total of six swipe samples were collected from the piping remaining in place by the HPS Team and submitted to the on-site laboratory for analysis.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: February 16, 2011	EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Field activities were limited due to inclement weather. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team remediated approximately 39 cubic yards of soil from Survey Units 5 and 8 and placed the material in LLRW bins BFLU000377G14, BKRU026115G7 and GFLU001104G14 for disposal by the DON's radiological waste contractor.

The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of four characterization gamma static measurements were logged. The maximum measurements logged were 57 cpm (FIDLER) and 4,826 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

The HPS Team continued post-paving asphalt cleaning activities and continued preparation for road striping and traffic sign installation.

Additional storm water drainage was installed near Building 815 in UC3.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 8, 2011	RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Buildings 203, 214, and 241 and Work Areas #33 and #35. Details of the work activities performed are provided in the sections below.

Building 203

Sterling Environmental and the HPS Team performed additional asbestos abatement activities during the dismantlement of furnace boilers and the surrounding metal framework. A total of 3,360 feet of 3-inch-diameter boiler conduit debris was generated during the abatement activities and placed in LLRW bins BKRU026457, GFLU001164G13, GFLU001200G14, and GFLU001215G13 for disposal by the DON's radiological waste contractor.

Building 214

The HPS Team performed Class 1 survey activities in Survey Unit 1. A total of 496 alpha/beta scan readings were logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limits. The RSO is in the process of reviewing these data.

Building 241

Pre-survey activities were performed by the HPS Team including the collection of alpha, beta, and gamma static measurements on assorted concrete and wood surfaces to be utilized as background references.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 144 cubic yards of soil from Work Areas #33 and #35 and transferred the material to RSY4 pending survey activities. Excavation activities were performed for the following trench segments:

- 02-C33-00-1B 35 linear feet completed
- 02-C35-00-1A 57 linear feet completed
- 02-C35-00-1B 22 linear feet completed
- 02-C35-00-1C 4 linear feet completed
- 02-C35-00-1D 31 linear feet completed

- 02-C35-00-1E 44 linear feet completed.

A total of 193 linear feet of trench (including excavated soil, pipes and a manhole) identified on the design drawings was completed by the HPS Team.

Manhole MH1119 and pipes excavated from trench segments 02-C33-00-1B, 02-C35-00-1A, and 02-C35-00-1C were placed on plastic pending further activities.

The HPS Team investigated trench segments 02-C35-00-1B, -1D, and -1E for the presence of pipe. Although depicted in the design drawing, no pipe was found during these investigations.

The HPS Team provided the RASO with analytical results for the sediment sample collected from Manhole MH1104 (02-PCMH1104-019-01). No activity above the release criteria was identified.

The HPS Team provided the RASO with analytical results of the sediment sample collected from Manhole MH1105 (02-PCMH1105-018-01). This manhole will be disposed as LLRW due to ^{226}Ra activity (2.4670 pCi/g) above the release criteria.

In preparation for trench excavations, Work Area #33 asphalt was removed. In addition, rail lines were removed and cut to size by the HPS Team. The generated debris was staged pending transfer to the recycling stockpiles.

Work Area #33 perimeter fencing was reconfigured to facilitate upcoming excavation activities.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: March 8, 2011	EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team performed survey activities in Survey Unit 9. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 81 cpm (FIDLER) and 8,136 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed survey activities in Survey Unit 17. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 202 cpm (FIDLER) and 7,675 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Survey Unit 21. Because no activity above the release criteria was identified, systematic sample collection will be performed.

The HPS Team issued drawings to identify systematic sample collection locations in Survey Unit 21.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Area Storm Drain and Sanitary Sewer Removal Action

Report Date: March 8, 2011	RMAC – CTO 07

Overview

The HPS Team continued field activities for the Parcel E Building 500 Series area and Work Area #36. Details of the activities performed are provided in the sections below.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPS Team resumed radiological surface scans, soil grading, and vegetation removal in the northeast corner of Work Area #36 in preparation for upcoming survey activities.

A variety of housekeeping activities were performed throughout the Building 500 Series area by the HPS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 5, 2011	RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Building 203 and Work Areas #33, #34, and #35. Details of the work activities performed are provided in the sections below.

Building 203

The HPS Team and Sterling resumed asbestos abatement activities in the former office workspaces and restrooms.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 84 cubic yards of soil from Work Areas #33 and #34 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:

- 02-C33-28-3U 12 linear feet completed
- 02-C34-28-1X 2 linear feet completed
- 02-C34-28-1Z 32 linear feet completed

A total of 46 linear feet of trench (including excavated soil, pipes, and manholes) identified on the design drawings was completed by the HPS Team.

Manholes MH1022, MH1042, MH1110, MH1134, and MH1137 and pipes excavated from trench segments 02-C33-28-3U, 02-C34-28-1X, and 02-C34-28-1Z were placed on plastic pending further activities.

A total of two sediment samples were collected from excavated Manholes MH1022 (MH0050) and MH1134 (MH0051) by the HPS Team and submitted to the on-site laboratory for analysis.

The HPS Team completed backfilling activities for Trench Unit No. 191.

The HPS Team initiated backfilling activities for Trench Unit No. 193.

The HPS Team provided the RASO with analytical results for the sediment sample collected from a pipe section excavated from trench segment 02-C34-28-2C (PI0005); No activity above the release criteria was identified.

The HPS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Survey Units No. 196, 202, and 203.

Catch basins and associated piping was installed in Work Area #35 as a component of Trench Unit No. 193.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: May 5, 2011	EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

Approximately 31 cubic yards of soil was remediated from Survey Units 9 and 17 by the HPS Team and placed in LLRW bins GFLU001016G14, GFLU001221G8, GFLU001237G16, MHFU001109G15, and MHFU001653G12.

Following remediation, the HPS Team logged eight post-remediation gamma static measurements in Survey Unit 9. The maximum measurements logged were 83 cpm (FIDLER) and 6,694 cpm. In addition, four soil samples were collected and submitted to the off-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team issued drawings to identify locations for investigative sample collection in Survey Unit 19.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

The HPS Team resumed site restoration activities for Parcel UC3 including paving along Crisp Road.

A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Shipyard Basewide Radiological Support

Report Date: May 5, 2011	RMAC – CTO 004

Overview

The HPS Team continued radiological Basewide functions including support activities, radiological screening yard (RSY) processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPS Team performed the following RSY2 processing activities:

Completed towed array of ES Unit 0498.

No field activities were conducted at RSY3.

The HPS Team performed the following RSY4 processing activities:

Received a total of 7 truckloads of material for processing.

Completed towed array of ES Units 0488 and 0491.

Collected biased and systematic samples at ES Units 0487 and 0490.

Collected systematic samples at ES Unit 0091.

With RASO concurrence, cleared ES Units 0474, 0392, and 0460 pending offsite analytical results.

The HPS Team continued radiological monitoring and control activities for RSY2, RSY3, and RSY4 including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring.

The HPS Team submitted the offsite data for RASO evaluation for concurrence to dispose of ES Units 0339, 0373, 0382, and 0403 as non-LLRW.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate 12 gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 112

Samples analyzed by gamma spectroscopy: 110

Gamma spectroscopy samples recounted: 5

Protean swipe samples counted: 103

Protean air samples counted: 15

A total of 67 samples are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 5, 2011	RMAC – CTO 07

Overview

The HPS Team continued field activities for Building 521 and the Building 500 Series Area. Details of the activities performed are provided in the sections below.

Building 521

The HPS Team and Sterling Environmental continued asbestos abatement activities on the metal boiler framing.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout the Building 500 Series area by the HPS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: June 8, 2011	RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities in Building 272 and Work Areas #31 and #33. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 105 cubic yards of soil from Work Area #33 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 02-272-00-8A 10 linear feet completed
- 02-272-00-8H 60 linear feet completed
- 02-272-00-8I 4 linear feet completed
- 02-272-00-8J 4 linear feet completed
- 02-272-00-8K 4 linear feet completed

A total of 82 linear feet of trench (including excavated soil and pipes) not identified on the design drawings was completed by the HPS Team.

Pipes excavated from trench segments 02-272-00-8A, -8H, -8I, -8J and -8K were placed on plastic pending further activities

The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 205. No activity above the release criteria was identified.

The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 209.

Pre-survey activities including asphalt removal and staging were performed by the HPNS Team in Work Area #33

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: June 8, 2011	EMAC – CTO 03

Overview

The HPNS Team continued field activities in the Building 707 Triangle Area and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPNS Team performed survey activities in Survey Unit 9. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 88 cpm (FIDLER) and 6,758 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data

The HPNS Team performed survey activities in Survey Unit 17. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 180 cpm (FIDLER) and 6,993 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Base-wide Radiological Support

Report Date: June 08, 2011	RMAC – CTO 004

Overview

The HPNS Team continued radiological base-wide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

A total of six truckloads of material was received at RSY3 for processing.

A total of three truckloads of material was received at RSY4 for processing.

The HPNS Team continued radiological monitoring and control activities for RSY2, RSY3, and RSY4 including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate 12 gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 212

Swipe samples received for Protean counts: 132

Air samples received: 14

Samples analyzed by gamma spectroscopy: 94

Gamma spectroscopy samples recounted: 14

Protean swipe samples counted: 60

Protean air samples counted: 13

A total of 415 samples are awaiting gamma spectroscopy analysis in the on-site laboratory.

TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: June 8, 2011	RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Buildings 503 Site, Building 521, and the Building 500 Series Area. Details of the activities performed are provided in the sections below.

Building 503 Site

The HPNS Team performed gamma scan surveys utilizing the towed array over Survey Unit 6.

The HPNS Team performed Class 1 survey activities for the Building 503 site as follows:

Survey Unit 2 A total of 20 gamma static measurements were logged. The maximum measurement logged was at 5,340 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 3 !A total of 20 gamma static measurements were logged. The maximum measurement logged was at 6,188 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 4 !A total of 20 gamma static measurements were logged. The maximum measurement logged was at 5,174 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 5 !A total of 20 gamma static measurements were logged. The maximum measurement logged was at 5,859 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 6 !A total of 20 gamma static measurements were logged. The maximum measurement logged was at 6,376 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey results for Survey Units 2 through 6.

Building 521

Residual fuel oil from pipes inside building floor channels was drained into drums by the HPNS Team. The drained oil pipes were removed and staged pending survey activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A total of six truckloads of vegetation generated during Work Area #36 soil grading and other activities were manually scanned followed by screening through the HPNS portal monitor with no alarms.

Surveyed and released concrete debris (Survey #HPS-A-500SA-005) was transferred to the recycling stockpiles.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
707	9	1	Systematic	03707-S0009-F001-01	22-Nov-10	Jeff Rolfe
707	9	2	Systematic	03707-S0009-F002-01	22-Nov-10	Jeff Rolfe
707	9	3	Systematic	03707-S0009-F003-01	22-Nov-10	Jeff Rolfe
707	9	4	Systematic	03707-S0009-F004-01	22-Nov-10	Jeff Rolfe
707	9	5	Systematic	03707-S0009-F005-01	22-Nov-10	Jeff Rolfe
707	9	6	Systematic	03707-S0009-F006-01	22-Nov-10	Jeff Rolfe
707	9	7	Systematic	03707-S0009-F007-01	22-Nov-10	Jeff Rolfe
707	9	8	Systematic	03707-S0009-F008-01	22-Nov-10	Jeff Rolfe
707	9	9	Systematic	03707-S0009-F009-01	22-Nov-10	Jeff Rolfe
707	9	10	Systematic	03707-S0009-F010-01	22-Nov-10	Jeff Rolfe
707	9	11	Systematic	03707-S0009-F011-01	22-Nov-10	Jeff Rolfe
707	9	12	Systematic	03707-S0009-F012-01	22-Nov-10	Jeff Rolfe
707	9	13	Systematic	03707-S0009-F013-01	22-Nov-10	Jeff Rolfe
707	9	14	Systematic	03707-S0009-F014-01	22-Nov-10	Jeff Rolfe
707	9	15	Systematic	03707-S0009-F015-01	22-Nov-10	Jeff Rolfe
707	9	16	Systematic	03707-S0009-F016-01	22-Nov-10	Jeff Rolfe
707	9	17	Systematic	03707-S0009-F017-01	22-Nov-10	Jeff Rolfe
707	9	18	Systematic	03707-S0009-F018-01	22-Nov-10	Jeff Rolfe
707	9	19	Systematic	03707-S0009-F019-01	22-Nov-10	Jeff Rolfe
707	9	20	Systematic	03707-S0009-F020-01	22-Nov-10	Jeff Rolfe
707	9	21	Biased	03707-S0009-F021-01	30-Nov-10	Jeff Rolfe
707	9	22	Biased	03707-S0009-F022-01	30-Nov-10	Jeff Rolfe
707	9	23	Biased	03707-S0009-F023-01	30-Nov-10	Jeff Rolfe
707	9	24	Biased	03707-S0009-F024-01	30-Nov-10	Jeff Rolfe
707	9	25	Biased	03707-S0009-F025-01	30-Nov-10	Jeff Rolfe
707	9	26	Biased	03707-S0009-F026-01	30-Nov-10	Jeff Rolfe
707	9	27	Biased	03707-S0009-F027-01	30-Nov-10	Jeff Rolfe
707	9	28	Characterization	03707-S0009-F028-01	07-Jan-11	Rick Zahensky
707	9	29	Characterization	03707-S0009-F029-01	07-Jan-11	Rick Zahensky
707	9	30	Characterization	03707-S0009-F030-01	07-Jan-11	Rick Zahensky
707	9	31	Post-Remediation	03707-S0009-F031-01	20-Jan-11	Anthony Smith
707	9	32	Post-Remediation	03707-S0009-F032-01	20-Jan-11	Anthony Smith
707	9	33	Post-Remediation	03707-S0009-F033-01	16-Feb-11	Rick Zahensky
707	9	34	Post-Remediation	03707-S0009-F034-01	16-Feb-11	Rick Zahensky
707	9	35	Systematic	03707-S0009-F035-01	08-Mar-11	Rick Zahensky
707	9	36	Systematic	03707-S0009-F036-01	08-Mar-11	Rick Zahensky
707	9	37	Systematic	03707-S0009-F037-01	08-Mar-11	Rick Zahensky
707	9	38	Systematic	03707-S0009-F038-01	08-Mar-11	Rick Zahensky
707	9	39	Systematic	03707-S0009-F039-01	08-Mar-11	Rick Zahensky
707	9	40	Systematic	03707-S0009-F040-01	08-Mar-11	Rick Zahensky
707	9	41	Systematic	03707-S0009-F041-01	08-Mar-11	Rick Zahensky
707	9	42	Systematic	03707-S0009-F042-01	08-Mar-11	Rick Zahensky
707	9	43	Systematic	03707-S0009-F043-01	08-Mar-11	Rick Zahensky
707	9	44	Systematic	03707-S0009-F044-01	08-Mar-11	Rick Zahensky
707	9	45	Systematic	03707-S0009-F045-01	08-Mar-11	Rick Zahensky
707	9	46	Systematic	03707-S0009-F046-01	08-Mar-11	Rick Zahensky
707	9	47	Systematic	03707-S0009-F047-01	08-Mar-11	Rick Zahensky
707	9	48	Systematic	03707-S0009-F048-01	08-Mar-11	Rick Zahensky
707	9	49	Systematic	03707-S0009-F049-01	08-Mar-11	Rick Zahensky
707	9	50	Systematic	03707-S0009-F050-01	08-Mar-11	Rick Zahensky
707	9	51	Systematic	03707-S0009-F051-01	08-Mar-11	Rick Zahensky
707	9	52	Systematic	03707-S0009-F052-01	08-Mar-11	Rick Zahensky
707	9	53	Systematic	03707-S0009-F053-01	08-Mar-11	Rick Zahensky

On-Site Laboratory (pCi/g)

K-40	Cs-137	Bi-214	Pb-214
15.825	0.79058	0.090392	0.66971	0.48601
10.906	0.60437	0.072327	0.39988	0.38924
14.752	0.19637	0.21316	0.48314	0.53697
20.035	0.83018	-0.0059882	0.99726	0.63873
8.7188	-0.074708	0.0060262	0.4103	0.4576
19.222	0.8318	0.024056	0.65834	0.54361
15.248	0.75108	0.022489	0.63814	0.49596
10.18	0.40552	0.091476	0.44765	0.36308
10.884	0.38056	0.015119	0.52188	0.35568
14.501	1.08	0.038536	0.72925	0.59949
12.471	0.30632	0.17542	0.41799	0.34118
11.666	0.70081	-0.0055894	0.42054	0.38589
15.48	0.72217	-0.013376	0.6705	0.71667
16.543	-0.21	0.021763	0.7285	0.81491
10.246	0.45378	0.088195	0.30406	0.32252
12.361	-0.32205	0.02658	0.46394	0.44226
21.735	0.9406	0.045461	0.79742	0.86345
27.149	0.11558	0.024619	0.83868	0.80633
16.787	0.46849	0.024241	0.72761	0.87069
15.538	0.9379	-0.0057145	0.63528	0.69002
18.669	1.0514	0.0042414	0.99396	0.9429
20.789	0.41153	0.0073687	0.79471	0.69483
22.467	1.4286	0.01483	0.755	0.70264
19.648	0.32767	0.034626	0.59908	0.59955
17.57	0.3929	0.016687	0.59948	0.56172
20.393	0.97089	0.061099	0.67943	0.68352
13.861	0.98948	0.021291	0.46325	0.50986
13.64	0.5886	0.087	0.544	0.5539
12.2	0.6208	0.02073	0.3816	0.4148
23.9	1.171	-0.004451	0.8318	0.8927
20.02	0.596	0.0005613	0.7344	0.8253
10.72	0.6733	-0.0004529	0.5496	0.6207
25.57	0.5911	-0.01018	0.7626	0.7789
24.24	0.9391	0.0002108	0.6381	0.6045
10.5	0.6161	0.009099	0.3395	0.4877
10.03	0.8014	0	0.3697	0.4256
9.848	0.3778	0.02176	0.2651	0.3141
11.94	0.3058	0.009321	0.2717	0.3578
11.21	0.6075	0.0149	0.3989	0.3861
10.05	0.8666	0.0124	0.4057	0.3671
10.77	0.8525	0	0.3994	0.4902
11.46	0.1428	-0.001279	0.4663	0.393
9.663	0.7324	-0.001499	0.4177	0.4028
9.468	0.6251	-0.002792	0.2912	0.2965
11.09	0.4159	-0.0004437	0.3503	0.3351
8.909	0.2633	0.01277	0.1766	0.2859
11.27	0.6715	-0.000487	0.3509	0.3854
10.83	1.012	0.001519	0.4029	0.4358
10.2	0.5191	0.01228	0.3132	0.4318
11.22	0.31	-0.006724	0.3508	0.4601
10.55	0.5601	0	0.3454	0.4317
9.506	0.607	0.002631	0.3769	0.5008
11.51	0.5865	0.004301	0.4425	0.3883

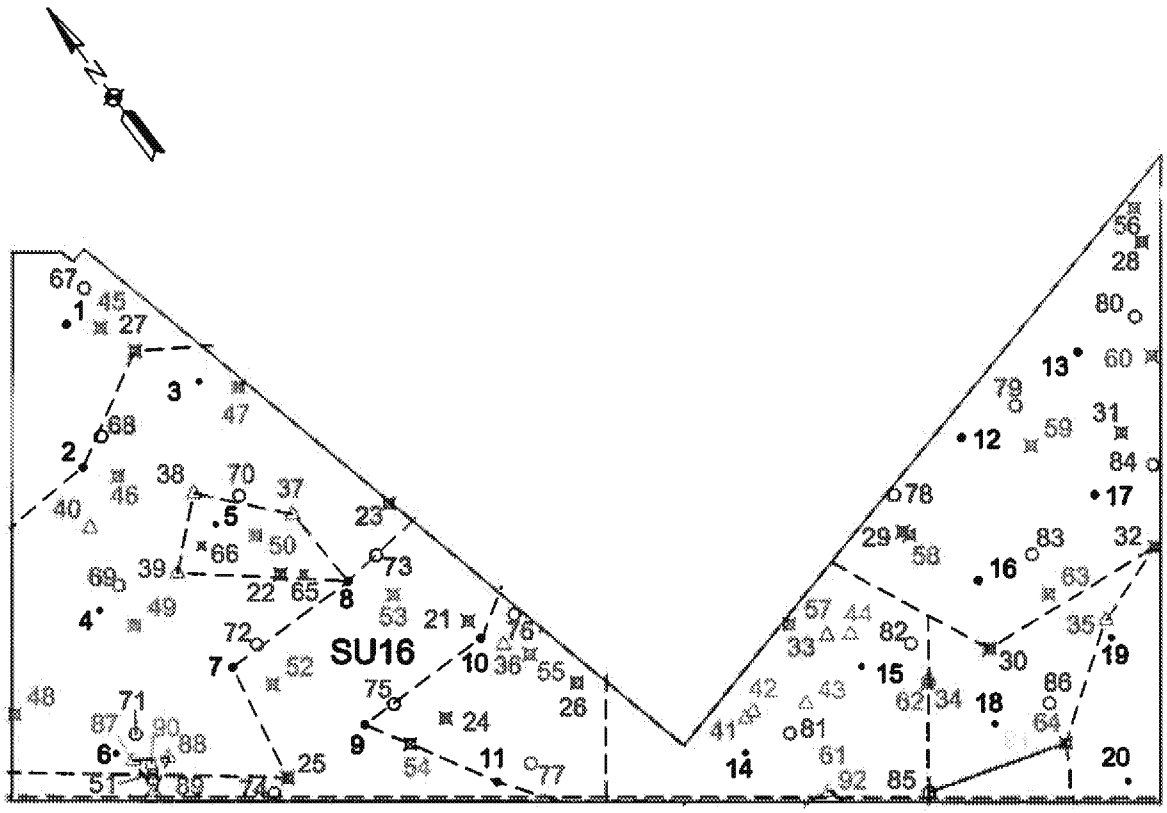
Off-Site Laboratory (pCi/g)

K-40	Cs-137	Bi-214	Pb-214
10.2	0.391	0.00453	0.391	0.53
9.27	0.499	0.0278	0.499	0.482
10.6	0.499	0	0.499	0.571
9.5	0.505	0.015	0.505	0.497
7.06	0.39	-0.00813	0.39	0.555
7.3	0.364	-0.0162	0.364	0.423
10.5	0.634	-0.00525	0.634	0.65
10	0.573	-0.0177	0.573	0.696
9.2	0.638	-0.000506	0.638	0.625
7.36	0.57	-0.031	0.57	0.424
10.2	0.421	0.0224	0.421	0.791
9.87	0.401	0.00999	0.401	0.443
9.91	0.48	-0.0154	0.48	0.635
9.2	0.59	-0.00712	0.59	0.553
9.1	0.512	0	0.512	0.526
10.7	0.533	0.00959	0.533	0.508
9.34	0.431	-0.00467	0.431	0.571
9.29	0.444	-0.0321	0.444	0.579
9.1	0.44	0.0164	0.44	0.458

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician	On-Site Laboratory (pCi/g)					Off-Site Laboratory (pCi/g)				
							Ra-226	Ra-226	Cs-137	Bi-214	Pb-214	Ra-226	Ra-226	Cs-137	Bi-214	Pb-214
707	9	54	Systematic	03707-S0009-F054-01	08-Mar-11	Rick Zahensky	9.446	0.1302	0	0.4124	0.4137	10.5	0.555	0.00193	0.555	0.546
707	9	55	Sr90 Remediation	03707-S0009-F055-01	05-May-11	Rick Zahensky										
707	9	56	Sr90 Remediation	03707-S0009-F056-01	05-May-11	Rick Zahensky										
707	9	57	Sr90 Remediation	03707-S0009-F057-01	05-May-11	Rick Zahensky										
707	9	58	Sr90 Remediation	03707-S0009-F058-01	05-May-11	Rick Zahensky										
707	9	59	Systematic	03707-S0009-F059-01	08-Jun-11	Jeff Rolfe	0.2748	0.21	0.00849	-0.008036	-0.03504	0.381	0.0564	0.00671	0.0564	0.174
707	9	60	Systematic	03707-S0009-F060-01	08-Jun-11	Jeff Rolfe	0.1427	0.3812	0.0003483	0.02075	0.003156	0.441	0.0213	0.0164	0.0213	-0.0161
707	9	61	Systematic	03707-S0009-F061-01	08-Jun-11	Jeff Rolfe	0.4596	0.2062	0	-0.009608	0.003167	0.706	-0.00548	0.00996	-0.00548	0.0138
707	9	62	Systematic	03707-S0009-F062-01	08-Jun-11	Jeff Rolfe	0.4908	0.1793	0.004782	0.04719	-0.00925	1	0.0783	0.00793	0.0783	0.174
707	9	63	Systematic	03707-S0009-F063-01	08-Jun-11	Jeff Rolfe	1.376	0	0	0.04795	0.001895	1.27	0.0611	0	0.0611	0.104
707	9	64	Systematic	03707-S0009-F064-01	08-Jun-11	Jeff Rolfe	0.9757	0.145	0.0002872	-0.01059	0.04842	0.305	-0.00512	0.0000896	-0.00512	0.2
707	9	65	Systematic	03707-S0009-F065-01	08-Jun-11	Jeff Rolfe	0.4746	0.09491	0.0004212	0.03414	-0.009579	1.22	-0.0104	0	-0.0104	0.0655
707	9	66	Systematic	03707-S0009-F066-01	08-Jun-11	Jeff Rolfe	0.8478	-0.008074	0.00087	0.003286	0.009988	0.679	0.0334	0.00248	0.0334	0.0455
707	9	67	Systematic	03707-S0009-F067-01	08-Jun-11	Jeff Rolfe	1.202	0.01622	-0.001686	-0.002968	0.02754	0.483	0.015	0	0.015	0.0279
707	9	68	Systematic	03707-S0009-F068-01	08-Jun-11	Jeff Rolfe	1.027	0.1761	0	0.04829	0.03009	0.59	-0.0495	0.0252	-0.0495	0.0582
707	9	69	Systematic	03707-S0009-F069-01	08-Jun-11	Jeff Rolfe	1.462	-0.04433	-0.00009218	0.03846	0.01206	1.46	0.0234	0.00757	0.0234	0.208
707	9	70	Systematic	03707-S0009-F070-01	08-Jun-11	Jeff Rolfe	0.6561	0.03258	0.00008814	0.04474	0.03558	0.958	-0.0114	-0.00717	-0.0114	0.0453
707	9	71	Systematic	03707-S0009-F071-01	08-Jun-11	Jeff Rolfe	0.8179	0.07481	0.002885	-0.009769	0.01084	1.44	0.0643	-0.000218	0.0643	0.0943
707	9	72	Systematic	03707-S0009-F072-01	08-Jun-11	Jeff Rolfe	0.5939	-0.1118	0	-0.01725	0.02058	0.902	0.0458	-0.00829	0.0458	0.0261
707	9	73	Systematic	03707-S0009-F073-01	08-Jun-11	Jeff Rolfe	1.329	0.2135	0	-0.01831	0.02499	1.31	-0.00403	0.0000891	-0.00403	0.0595
707	9	74	Systematic	03707-S0009-F074-01	08-Jun-11	Jeff Rolfe	1.048	-0.05275	0.00467	-0.019	0.08097	0.322	0.0153	-0.000994	0.0153	0.111
707	9	75	Systematic	03707-S0009-F075-01	08-Jun-11	Jeff Rolfe	0.7567	-0.1179	0.01064	-0.005697	0.00141	0.81	0.144	0.00111	0.144	0.0607
707	9	76	Systematic	03707-S0009-F076-01	08-Jun-11	Jeff Rolfe	0.6125	0.0171	-0.0006382	0.01198	0.002024	1.23	0.0703	0.0218	0.0703	0.106
707	9	77	Systematic	03707-S0009-F077-01	08-Jun-11	Jeff Rolfe	0.5315	0.1663	0.007838	-0.01427	0.009163	0.829	0.0475	0.00846	0.0475	-0.0229
707	9	78	Systematic	03707-S0009-F078-01	08-Jun-11	Jeff Rolfe	1.041	0.06527	0.02016	0.02616	-0.001491	0.508	0.0342	0.000035	0.0342	-0.016

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)

SU05
SU07
SU06
SU08
SU09
SU14
SU10
SU11
SU15
SU16
SU17
SU18
IR-39
INSET
IR-01/21
IR-12
IR-05
IR-36
IR-02
IR-39
IR-13
1ST STREET
6TH AVENUE
J STREET
B STREET
0 200 400
Feet
LEGEND
GAMMA TOTAL, <1 SIGMA
GAMMA TOTAL, ≥1 AND <2 SIGMA
GAMMA TOTAL, ≥2 AND <3 SIGMA
GAMMA TOTAL, ≥3 AND <4 SIGMA
GAMMA TOTAL, ≥4 AND <5 SIGMA
GAMMA TOTAL, ≥5 AND <6 SIGMA
GAMMA TOTAL, ≥6 SIGMA
BIAS SAMPLE
SYSTEMATIC SAMPLE
ROAD
BUILDING
SCREENING PAD
WATER
10 0 10 20
Feet
Scale: 1" = 20'
N
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA
REPORT TITLE
BUILDING 707
SURVEY UNIT 09, SURVEY 329
HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA
REVIEW: 0
AUTHOR: GFG
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: su09_329.mxd
TETRA TECH EC INC.
Printing Date: Monday, November 15, 2010 1:30 PM



LEGEND:

• 1	SYSTEMATIC 1 SAMPLES 1–20
⊠ 21	BIASED SAMPLES 21–32
△ 33	POST REMEDIATION 1 SAMPLES 33–41
△ 42	POST REMEDIATION 2 SAMPLES 42–44
⊠ 45	SYSTEMATIC 2 SAMPLES 45–64
⊠ 65	Sr–90 REMEDIATION 1 SAMPLES 65–66
○ 67	SYSTEMATIC 3 SAMPLES 67–86
△ 87	Sr–90 REMEDIATION 2 SAMPLES 87–90
	POST REMEDIATION 3 SAMPLES 91
△ 92	CHARACTERIZATION SAMPLES 92
– – – –	PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
PLOT/UPDATE: OCT 18 2012 13:21:05

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 16

TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 10:03	7085	5817	1268	479-BKGDS1A	7378	
2	11/22/2010 10:05	6079	5817	262	479-BKGDS1A	7378	
3	11/22/2010 10:06	6763	5817	946	479-BKGDS1A	7378	
4	11/22/2010 10:07	7188	5817	1371	479-BKGDS1A	7378	
5	11/22/2010 10:28	6581	5817	764	479-BKGDS1A	7378	
6	11/22/2010 10:29	4524	5817	-1293	479-BKGDS1A	7378	
7	11/22/2010 10:30	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
8	11/22/2010 10:32	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
9	11/22/2010 10:33	5837	5817	20	479-BKGDS1A	7378	
10	11/22/2010 10:35	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
11	11/22/2010 10:36	4153	5817	-1664	479-BKGDS1A	7378	
12	11/22/2010 10:38	6626	5817	809	479-BKGDS1A	7378	
13	11/22/2010 10:39	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
14	11/22/2010 10:41	4585	5817	-1232	479-BKGDS1A	7378	
15	11/22/2010 10:42	5829	5817	12	479-BKGDS1A	7378	
16	11/22/2010 10:43	6930	5817	1113	479-BKGDS1A	7378	
17	11/22/2010 10:45	7312	5817	1495	479-BKGDS1A	7378	
18	11/22/2010 10:46	5313	5817	-504	479-BKGDS1A	7378	
19	11/22/2010 10:48	6993	5817	1176	479-BKGDS1A	7378	
20	11/22/2010 10:49	5067	5817	-750	479-BKGDS1A	7378	
21	12/1/2010 11:35	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
22	12/1/2010 11:37	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
23	12/1/2010 11:38	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
24	12/1/2010 11:41	5606	5817	-211	479-BKGDS1A	7378	
25	12/1/2010 11:42	7175	5817	1358	479-BKGDS1A	7378	
26	12/1/2010 11:44	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
27	12/1/2010 11:45	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
28	12/1/2010 11:47	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
29	12/1/2010 11:48	7335	5817	1518	479-BKGDS1A	7378	
30	12/1/2010 11:49	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
31	12/1/2010 11:51	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
32	12/1/2010 11:52	[illegible]	5817	[illegible]	479-BKGDS1A	7378	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	1/17/2011 12:55	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
34	1/17/2011 12:56	5475	5817	-342	479-BKGDS1A	7378	
35	1/17/2011 12:57	6207	5817	390	479-BKGDS1A	7378	
36	1/17/2011 12:58	7097	5817	1280	479-BKGDS1A	7378	
37	1/17/2011 13:31	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
38	1/17/2011 13:34	[illegible]	5817	[illegible]	479-BKGDS1A	7378	
39	1/17/2011 13:35	5518	5817	-299	479-BKGDS1A	7378	
40	1/17/2011 13:37	5582	5817	-235	479-BKGDS1A	7378	
41	1/17/2011 13:38	5458	5817	-359	479-BKGDS1A	7378	
42	2/15/2011 13:30	4468	5817	-1349	479-BKGDS1A	7378	
43	2/15/2011 13:31	4068	5817	-1749	479-BKGDS1A	7378	
44	2/15/2011 13:33	4389	5817	-1428	479-BKGDS1A	7378	
45	3/4/2011 13:24	6582	5817	765	479-BKGDS1A	7378	
46	3/4/2011 13:25	4625	5817	-1192	479-BKGDS1A	7378	
47	3/4/2011 13:27	4602	5817	-1215	479-BKGDS1A	7378	
48	3/4/2011 13:28	4255	5817	-1562	479-BKGDS1A	7378	
49	3/4/2011 13:29	5058	5817	-759	479-BKGDS1A	7378	
50	3/4/2011 13:31	5728	5817	-89	479-BKGDS1A	7378	
51	3/4/2011 13:32	4575	5817	-1242	479-BKGDS1A	7378	
52	3/4/2011 13:33	6462	5817	645	479-BKGDS1A	7378	
53	3/4/2011 13:34	6598	5817	781	479-BKGDS1A	7378	
54	3/4/2011 13:36	4836	5817	-981	479-BKGDS1A	7378	
55	3/4/2011 13:37	6885	5817	1068	479-BKGDS1A	7378	
56	3/4/2011 13:38	4266	5817	-1551	479-BKGDS1A	7378	
57	3/4/2011 13:40	4291	5817	-1526	479-BKGDS1A	7378	
58	3/4/2011 13:41	6628	5817	811	479-BKGDS1A	7378	
59	3/4/2011 13:42	6493	5817	676	479-BKGDS1A	7378	
60	3/4/2011 13:44	6347	5817	530	479-BKGDS1A	7378	
61	3/4/2011 13:45	5895	5817	78	479-BKGDS1A	7378	
62	3/4/2011 13:46	4538	5817	-1279	479-BKGDS1A	7378	
63	3/4/2011 13:47	6903	5817	1086	479-BKGDS1A	7378	
64	3/4/2011 13:49	6963	5817	1146	479-BKGDS1A	7378	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	5/6/2011 11:39	5500	5817	-317	479-BKGDS1A	7378	
66	5/6/2011 11:40	4943	5817	-874	479-BKGDS1A	7378	
67	6/7/2011 12:50	5849	5873	-24	518-BKGDS1B	7049	
68	6/7/2011 12:51	5203	5873	-670	518-BKGDS1B	7049	
69	6/7/2011 12:52	5503	5873	-370	518-BKGDS1B	7049	
70	6/7/2011 12:54	5251	5873	-622	518-BKGDS1B	7049	
71	6/7/2011 12:55	4026	5873	-1847	518-BKGDS1B	7049	
72	6/7/2011 12:57	6356	5873	483	518-BKGDS1B	7049	
73	6/7/2011 12:59	7074	5873	1201	518-BKGDS1B	7049	
74	6/7/2011 13:00	6925	5873	1052	518-BKGDS1B	7049	
75	6/7/2011 13:02	5165	5873	-708	518-BKGDS1B	7049	
76	6/7/2011 13:03	6309	5873	436	518-BKGDS1B	7049	
77	6/7/2011 13:05	4257	5873	-1616	518-BKGDS1B	7049	
78	6/7/2011 13:07	6537	5873	664	518-BKGDS1B	7049	
79	6/7/2011 13:09	7156	5873	1283	518-BKGDS1B	7049	
80	6/7/2011 13:12	7067	5873	1194	518-BKGDS1B	7049	
81	6/7/2011 13:14	4017	5873	-1856	518-BKGDS1B	7049	
82	6/7/2011 13:15	4383	5873	-1490	518-BKGDS1B	7049	
83	6/7/2011 13:17	7074	5873	1201	518-BKGDS1B	7049	
84	6/7/2011 13:18	7012	5873	1139	518-BKGDS1B	7049	
85	6/7/2011 13:20	5153	5873	-720	518-BKGDS1B	7049	
86	6/7/2011 13:21	4363	5873	-1510	518-BKGDS1B	7049	
87	5/4/2012 12:48	4185	5845	-1660	622-BKGDS1A	7004	
88	5/4/2012 12:50	3883	5845	-1962	622-BKGDS1A	7004	
89	5/4/2012 12:51	4768	5845	-1077	622-BKGDS1A	7004	
90	5/4/2012 15:08	5960	5845	115	622-BKGDS1A	7004	
91	6/29/2012 13:36	3858	5845	-1987	622-BKGDS1A	7004	
92	8/7/2012 11:13	6812	5845	967	622-BKGDS1A	7004	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments

Net Gamma cpm Summary

Min: -1987
Avg: 289
Max: 3274
St Dev: 1387

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 479 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430 Probe Serial #: 012176

Calibration Due Date: 5/12/2011

Reference Area Background Identification #: 479-8KGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	07/29/2010 10:01	5432
2	07/29/2010 10:05	6064
3	07/29/2010 10:06	5667
4	07/29/2010 10:07	5647
5	07/29/2010 10:08	6956
6	07/29/2010 10:09	6120
7	07/29/2010 10:11	5199
8	07/29/2010 10:12	5083
9	07/29/2010 10:14	5880
10	07/29/2010 10:15	5567
11	07/29/2010 10:17	6268
12	07/29/2010 10:18	5786
13	07/29/2010 10:19	5405
14	07/29/2010 10:21	5984
15	07/29/2010 10:22	7018
16	07/29/2010 10:23	5521
17	07/29/2010 10:24	5872
18	07/29/2010 10:26	5464
19	07/29/2010 10:27	6157
20	07/29/2010 10:28	5241

Gamma Mean Background (cpm):	5817
Standard Deviation:	520
Gamma 3σ Investigation Level (cpm):	7378

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 518 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 126182 Probe Serial #: 230161

Calibration Due Date: 11/17/2011

Reference Area Background Identification #: 518-8KGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	03/01/2011 10:24	5734
2	03/01/2011 10:26	6197
3	03/01/2011 10:27	5923
4	03/01/2011 10:28	5458
5	03/01/2011 10:29	6885
6	03/01/2011 10:30	5930
7	03/01/2011 10:31	5459
8	03/01/2011 10:32	5899
9	03/01/2011 10:34	5865
10	03/01/2011 10:35	5347
11	03/01/2011 10:36	5470
12	03/01/2011 10:37	5852
13	03/01/2011 10:38	6022
14	03/01/2011 10:40	6222
15	03/01/2011 10:41	5742
16	03/01/2011 10:42	5119
17	03/01/2011 10:43	5970
18	03/01/2011 10:44	5959
19	03/01/2011 10:45	6120
20	03/01/2011 10:46	6291

Gamma Mean Background (cpm):	5873
Standard Deviation:	392
Gamma 3σ Investigation Level (cpm):	7049

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 622 Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430 Probe Serial #: 230163

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 622-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	5811
2	10/13/2011 15:13	5788
3	10/13/2011 15:14	5839
4	10/13/2011 15:15	5848
5	10/13/2011 15:16	5775
6	10/13/2011 15:17	5780
7	10/13/2011 15:18	5977
8	10/13/2011 15:20	5831
9	10/13/2011 15:21	5998
10	10/13/2011 15:22	5240
11	10/13/2011 15:23	5892
12	10/13/2011 15:24	5899
13	10/13/2011 15:25	5001
14	10/13/2011 15:27	5852
15	10/13/2011 15:28	5894
16	10/13/2011 15:29	5075
17	10/13/2011 15:31	6115
18	10/13/2011 15:32	6400
19	10/13/2011 15:33	6490
20	10/13/2011 15:35	6396

Gamma Mean Background (cpm):	5845
Standard Deviation:	386
Gamma 3σ Investigation Level (cpm):	7004

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 8:08	66	72	-6	513-BKGDS1A	133	
2	11/22/2010 8:09	65	72	-7	513-BKGDS1A	133	
3	11/22/2010 8:10	73	72	1	513-BKGDS1A	133	
4	11/22/2010 8:12	78	72	6	513-BKGDS1A	133	
5	11/22/2010 8:13	100	72	28	513-BKGDS1A	133	
6	11/22/2010 8:15	68	72	-4	513-BKGDS1A	133	
7	11/22/2010 8:16	83	72	11	513-BKGDS1A	133	
8	11/22/2010 8:18	109	72	37	513-BKGDS1A	133	
9	11/22/2010 8:19	77	72	5	513-BKGDS1A	133	
10	11/22/2010 8:21	73	72	1	513-BKGDS1A	133	
11	11/22/2010 8:22	44	72	-28	513-BKGDS1A	133	
12	11/22/2010 8:25	72	72	0	513-BKGDS1A	133	
13	11/22/2010 8:27	78	72	6	513-BKGDS1A	133	
14	11/22/2010 8:28	49	72	-23	513-BKGDS1A	133	
15	11/22/2010 8:29	71	72	-1	513-BKGDS1A	133	
16	11/22/2010 8:31	89	72	17	513-BKGDS1A	133	
17	11/22/2010 8:32	85	72	13	513-BKGDS1A	133	
18	11/22/2010 8:33	75	72	3	513-BKGDS1A	133	
19	11/22/2010 8:34	83	72	11	513-BKGDS1A	133	
20	11/22/2010 8:36	54	72	-18	513-BKGDS1A	133	
21	12/1/2010 8:18	72	72	0	513-BKGDS1A	133	
22	12/1/2010 8:19	75	72	3	513-BKGDS1A	133	
23	12/1/2010 8:21	82	72	10	513-BKGDS1A	133	
24	12/1/2010 8:22	60	72	-12	513-BKGDS1A	133	
25	12/1/2010 8:24	75	72	3	513-BKGDS1A	133	
26	12/1/2010 8:25	75	72	3	513-BKGDS1A	133	
27	12/1/2010 8:26	83	72	11	513-BKGDS1A	133	
28	12/1/2010 8:29	87	72	15	513-BKGDS1A	133	
29	12/1/2010 8:30	86	72	14	513-BKGDS1A	133	
30	12/1/2010 8:32	75	72	3	513-BKGDS1A	133	
31	12/1/2010 8:35	81	72	9	513-BKGDS1A	133	
32	12/1/2010 8:36	85	72	13	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	1/17/2011 13:43	73	72	1	513-BKGDS1A	133	
34	1/17/2011 13:45	58	72	-14	513-BKGDS1A	133	
35	1/17/2011 13:46	55	72	-17	513-BKGDS1A	133	
36	1/17/2011 13:47	70	72	-2	513-BKGDS1A	133	
37	1/17/2011 13:48	65	72	-7	513-BKGDS1A	133	
38	1/17/2011 13:50	70	72	-2	513-BKGDS1A	133	
39	1/17/2011 13:51	67	72	-5	513-BKGDS1A	133	
40	1/17/2011 13:52	60	72	-12	513-BKGDS1A	133	
41	1/17/2011 13:53	70	72	-2	513-BKGDS1A	133	
42	2/15/2011 13:53	48	72	-24	513-BKGDS1A	133	
43	2/15/2011 13:56	56	72	-16	513-BKGDS1A	133	
44	2/15/2011 13:57	43	72	-29	513-BKGDS1A	133	
45	3/4/2011 13:21	65	72	-7	513-BKGDS1A	133	
46	3/4/2011 13:22	62	72	-10	513-BKGDS1A	133	
47	3/4/2011 13:23	40	72	-32	513-BKGDS1A	133	
48	3/4/2011 13:25	49	72	-23	513-BKGDS1A	133	
49	3/4/2011 13:26	82	72	10	513-BKGDS1A	133	
50	3/4/2011 13:27	71	72	-1	513-BKGDS1A	133	
51	3/4/2011 13:29	42	72	-30	513-BKGDS1A	133	
52	3/4/2011 13:30	73	72	1	513-BKGDS1A	133	
53	3/4/2011 13:32	62	72	-10	513-BKGDS1A	133	
54	3/4/2011 13:33	58	72	-14	513-BKGDS1A	133	
55	3/4/2011 13:34	53	72	-19	513-BKGDS1A	133	
56	3/4/2011 13:36	40	72	-32	513-BKGDS1A	133	
57	3/4/2011 13:37	61	72	-11	513-BKGDS1A	133	
58	3/4/2011 13:39	70	72	-2	513-BKGDS1A	133	
59	3/4/2011 13:40	50	72	-22	513-BKGDS1A	133	
60	3/4/2011 13:42	53	72	-19	513-BKGDS1A	133	
61	3/4/2011 13:43	44	72	-28	513-BKGDS1A	133	
62	3/4/2011 13:45	75	72	3	513-BKGDS1A	133	
63	3/4/2011 13:46	78	72	6	513-BKGDS1A	133	
64	3/4/2011 13:48	62	72	-10	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	5/6/2011 11:36	83	72	11	513-BKGDS1A	133	
66	5/6/2011 11:37	82	72	10	513-BKGDS1A	133	
67	6/7/2011 13:25	83	72	11	513-BKGDS1A	133	
68	6/7/2011 13:26	95	72	23	513-BKGDS1A	133	
69	6/7/2011 13:27	59	72	-13	513-BKGDS1A	133	
70	6/7/2011 13:29	60	72	-12	513-BKGDS1A	133	
71	6/7/2011 13:30	80	72	8	513-BKGDS1A	133	
72	6/7/2011 13:31	92	72	20	513-BKGDS1A	133	
73	6/7/2011 13:32	67	72	-5	513-BKGDS1A	133	
74	6/7/2011 13:34	95	72	23	513-BKGDS1A	133	
75	6/7/2011 13:35	83	72	11	513-BKGDS1A	133	
76	6/7/2011 13:36	76	72	4	513-BKGDS1A	133	
77	6/7/2011 13:38	63	72	-9	513-BKGDS1A	133	
78	6/7/2011 13:39	54	72	-18	513-BKGDS1A	133	
79	6/7/2011 13:41	57	72	-15	513-BKGDS1A	133	
80	6/7/2011 13:42	80	72	8	513-BKGDS1A	133	
81	6/7/2011 13:45	73	72	1	513-BKGDS1A	133	
82	6/7/2011 13:46	59	72	-13	513-BKGDS1A	133	
83	6/7/2011 13:48	57	72	-15	513-BKGDS1A	133	
84	6/7/2011 13:49	89	72	17	513-BKGDS1A	133	
85	6/7/2011 13:50	84	72	12	513-BKGDS1A	133	
86	6/7/2011 13:51	65	72	-7	513-BKGDS1A	133	
87	5/4/2012 12:46	167	199	-32	620-BKGDS1A	344	
88	5/4/2012 12:47	139	199	-60	620-BKGDS1A	344	
89	5/4/2012 12:48	174	199	-25	620-BKGDS1A	344	
90	5/4/2012 15:07	192	199	-7	620-BKGDS1A	344	
91	6/29/2012 13:37	143	199	-56	620-BKGDS1A	344	
92	8/7/2012 14:32	226	199	27	620-BKGDS1A	344	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments

Net Gamma cpm Summary

Min: -60
Avg: -4
Max: 37
St Dev: 17

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 16** **Class: 1** **Area: 989.60 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/9/2010 7:30	38	72	-34	513-BKGDS1A	133	
2	11/9/2010 7:31	69	72	-3	513-BKGDS1A	133	
3	11/9/2010 7:31	83	72	11	513-BKGDS1A	133	
4	11/9/2010 7:31	56	72	-16	513-BKGDS1A	133	
5	11/9/2010 7:31	60	72	-12	513-BKGDS1A	133	
6	11/9/2010 7:31	85	72	13	513-BKGDS1A	133	
7	11/9/2010 7:31	55	72	-17	513-BKGDS1A	133	
8	11/9/2010 7:31	38	72	-34	513-BKGDS1A	133	
9	11/9/2010 7:31	67	72	-5	513-BKGDS1A	133	
10	11/9/2010 7:32	105	72	33	513-BKGDS1A	133	
11	11/9/2010 7:32	103	72	31	513-BKGDS1A	133	
12	11/9/2010 7:32	63	72	-9	513-BKGDS1A	133	
13	11/9/2010 7:32	58	72	-14	513-BKGDS1A	133	
14	11/9/2010 7:32	93	72	21	513-BKGDS1A	133	
15	11/9/2010 7:32	71	72	-1	513-BKGDS1A	133	
16	11/9/2010 7:32	52	72	-20	513-BKGDS1A	133	
17	11/9/2010 7:32	52	72	-20	513-BKGDS1A	133	
18	11/9/2010 7:32	88	72	16	513-BKGDS1A	133	
19	11/9/2010 7:33	67	72	-5	513-BKGDS1A	133	
20	11/9/2010 7:33	37	72	-35	513-BKGDS1A	133	
21	11/9/2010 7:33	33	72	-39	513-BKGDS1A	133	
22	11/9/2010 7:33	75	72	3	513-BKGDS1A	133	
23	11/9/2010 7:33	55	72	-17	513-BKGDS1A	133	
24	11/9/2010 7:33	59	72	-13	513-BKGDS1A	133	
25	11/9/2010 7:33	55	72	-17	513-BKGDS1A	133	
26	11/9/2010 7:33	78	72	6	513-BKGDS1A	133	
27	11/9/2010 7:34	60	72	-12	513-BKGDS1A	133	
28	11/9/2010 7:34	25	72	-47	513-BKGDS1A	133	
29	11/9/2010 7:34	41	72	-31	513-BKGDS1A	133	
30	11/9/2010 7:34	43	72	-29	513-BKGDS1A	133	
31	11/9/2010 7:34	70	72	-2	513-BKGDS1A	133	
32	11/9/2010 7:35	73	72	1	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	11/9/2010 7:35	72	72	0	513-BKGDS1A	133	
34	11/9/2010 7:35	73	72	1	513-BKGDS1A	133	
35	11/9/2010 7:35	96	72	24	513-BKGDS1A	133	
36	11/9/2010 7:35	106	72	34	513-BKGDS1A	133	
37	11/9/2010 7:35	77	72	5	513-BKGDS1A	133	
38	11/9/2010 7:35	75	72	3	513-BKGDS1A	133	
39	11/9/2010 7:35	56	72	-16	513-BKGDS1A	133	
40	11/9/2010 7:36	95	72	23	513-BKGDS1A	133	
41	11/9/2010 7:36	92	72	20	513-BKGDS1A	133	
42	11/9/2010 7:36	67	72	-5	513-BKGDS1A	133	
43	11/9/2010 7:36	76	72	4	513-BKGDS1A	133	
44	11/9/2010 7:36	61	72	-11	513-BKGDS1A	133	
45	11/9/2010 7:36	67	72	-5	513-BKGDS1A	133	
46	11/9/2010 7:36	52	72	-20	513-BKGDS1A	133	
47	11/9/2010 7:36	54	72	-18	513-BKGDS1A	133	
48	11/9/2010 7:36	71	72	-1	513-BKGDS1A	133	
49	11/9/2010 7:37	66	72	-6	513-BKGDS1A	133	
50	11/9/2010 7:37	68	72	-4	513-BKGDS1A	133	
51	11/9/2010 7:37	64	72	-8	513-BKGDS1A	133	
52	11/9/2010 7:37	46	72	-26	513-BKGDS1A	133	
53	11/9/2010 7:38	46	72	-26	513-BKGDS1A	133	
54	11/9/2010 7:38	42	72	-30	513-BKGDS1A	133	
55	11/9/2010 7:38	61	72	-11	513-BKGDS1A	133	
56	11/9/2010 7:38	67	72	-5	513-BKGDS1A	133	
57	11/9/2010 7:38	65	72	-7	513-BKGDS1A	133	
58	11/9/2010 7:38	75	72	3	513-BKGDS1A	133	
59	11/9/2010 7:38	70	72	-2	513-BKGDS1A	133	
60	11/9/2010 7:38	69	72	-3	513-BKGDS1A	133	
61	11/9/2010 7:39	59	72	-13	513-BKGDS1A	133	
62	11/9/2010 7:39	44	72	-28	513-BKGDS1A	133	
63	11/9/2010 7:39	41	72	-31	513-BKGDS1A	133	
64	11/9/2010 7:39	29	72	-43	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	11/9/2010 7:39	42	72	-30	513-BKGDS1A	133	
66	11/9/2010 7:39	76	72	4	513-BKGDS1A	133	
67	11/9/2010 7:39	57	72	-15	513-BKGDS1A	133	
68	11/9/2010 7:39	76	72	4	513-BKGDS1A	133	
69	11/9/2010 7:39	61	72	-11	513-BKGDS1A	133	
70	11/9/2010 7:40	78	72	6	513-BKGDS1A	133	
71	11/9/2010 7:40	91	72	19	513-BKGDS1A	133	
72	11/9/2010 7:40	55	72	-17	513-BKGDS1A	133	
73	11/9/2010 7:40	69	72	-3	513-BKGDS1A	133	
74	11/9/2010 7:40	76	72	4	513-BKGDS1A	133	
75	11/9/2010 7:40	52	72	-20	513-BKGDS1A	133	
76	11/9/2010 7:40	38	72	-34	513-BKGDS1A	133	
77	11/9/2010 7:40	36	72	-36	513-BKGDS1A	133	
78	11/9/2010 7:41	43	72	-29	513-BKGDS1A	133	
79	11/9/2010 7:41	36	72	-36	513-BKGDS1A	133	
80	11/9/2010 7:41	49	72	-23	513-BKGDS1A	133	
81	11/9/2010 7:41	55	72	-17	513-BKGDS1A	133	
82	11/9/2010 7:42	46	72	-26	513-BKGDS1A	133	
83	11/9/2010 7:42	46	72	-26	513-BKGDS1A	133	
84	11/9/2010 7:42	65	72	-7	513-BKGDS1A	133	
85	11/9/2010 7:42	40	72	-32	513-BKGDS1A	133	
86	11/9/2010 7:42	61	72	-11	513-BKGDS1A	133	
87	11/9/2010 7:42	79	72	7	513-BKGDS1A	133	
88	11/9/2010 7:42	79	72	7	513-BKGDS1A	133	
89	11/9/2010 7:42	72	72	0	513-BKGDS1A	133	
90	11/9/2010 7:43	100	72	28	513-BKGDS1A	133	
91	11/9/2010 7:43	126	72	54	513-BKGDS1A	133	
92	11/9/2010 7:43	71	72	-1	513-BKGDS1A	133	
93	11/9/2010 7:43	49	72	-23	513-BKGDS1A	133	
94	11/9/2010 7:43	75	72	3	513-BKGDS1A	133	
95	11/9/2010 7:43	63	72	-9	513-BKGDS1A	133	
96	11/9/2010 7:43	43	72	-29	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	11/9/2010 7:43	58	72	-14	513-BKGDS1A	133	
98	11/9/2010 7:43	74	72	2	513-BKGDS1A	133	
99	11/9/2010 7:44	77	72	5	513-BKGDS1A	133	
100	11/9/2010 7:44	72	72	0	513-BKGDS1A	133	
101	11/9/2010 7:44	55	72	-17	513-BKGDS1A	133	
102	11/9/2010 7:44	61	72	-11	513-BKGDS1A	133	
103	11/9/2010 7:44	49	72	-23	513-BKGDS1A	133	
104	11/9/2010 7:44	70	72	-2	513-BKGDS1A	133	
105	11/9/2010 7:45	42	72	-30	513-BKGDS1A	133	
106	11/9/2010 7:45	24	72	-48	513-BKGDS1A	133	
107	11/9/2010 7:45	39	72	-33	513-BKGDS1A	133	
108	11/9/2010 7:45	48	72	-24	513-BKGDS1A	133	
109	11/9/2010 7:45	40	72	-32	513-BKGDS1A	133	
110	11/9/2010 7:46	56	72	-16	513-BKGDS1A	133	
111	11/9/2010 7:46	59	72	-13	513-BKGDS1A	133	
112	11/9/2010 7:46	95	72	23	513-BKGDS1A	133	
113	11/9/2010 7:46	125	72	53	513-BKGDS1A	133	
114	11/9/2010 7:46	110	72	38	513-BKGDS1A	133	
115	11/9/2010 7:46	70	72	-2	513-BKGDS1A	133	
116	11/9/2010 7:46	40	72	-32	513-BKGDS1A	133	
117	11/9/2010 7:46	63	72	-9	513-BKGDS1A	133	
118	11/9/2010 7:47	99	72	27	513-BKGDS1A	133	
119	11/9/2010 7:47	83	72	11	513-BKGDS1A	133	
120	11/9/2010 7:47	74	72	2	513-BKGDS1A	133	
121	11/9/2010 7:47	61	72	-11	513-BKGDS1A	133	
122	11/9/2010 7:47	76	72	4	513-BKGDS1A	133	
123	11/9/2010 7:47	58	72	-14	513-BKGDS1A	133	
124	11/9/2010 7:47	47	72	-25	513-BKGDS1A	133	
125	11/9/2010 7:47	50	72	-22	513-BKGDS1A	133	
126	11/9/2010 7:47	48	72	-24	513-BKGDS1A	133	
127	11/9/2010 7:48	102	72	30	513-BKGDS1A	133	
128	11/9/2010 7:48	121	72	49	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
129	11/9/2010 7:48	112	72	40	513-BKGDS1A	133	
130	11/9/2010 7:48	75	72	3	513-BKGDS1A	133	
131	11/9/2010 7:49	32	72	-40	513-BKGDS1A	133	
132	11/9/2010 7:50	53	72	-19	513-BKGDS1A	133	
133	11/9/2010 7:50	73	72	1	513-BKGDS1A	133	
134	11/9/2010 7:50	57	72	-15	513-BKGDS1A	133	
135	11/9/2010 7:50	59	72	-13	513-BKGDS1A	133	
136	11/9/2010 7:50	61	72	-11	513-BKGDS1A	133	
137	11/9/2010 7:50	79	72	7	513-BKGDS1A	133	
138	11/9/2010 7:50	65	72	-7	513-BKGDS1A	133	
139	11/9/2010 7:50	62	72	-10	513-BKGDS1A	133	
140	11/9/2010 7:51	52	72	-20	513-BKGDS1A	133	
141	11/9/2010 7:51	73	72	1	513-BKGDS1A	133	
142	11/9/2010 7:51	68	72	-4	513-BKGDS1A	133	
143	11/9/2010 7:51	75	72	3	513-BKGDS1A	133	
144	11/9/2010 7:51	68	72	-4	513-BKGDS1A	133	
145	11/9/2010 7:51	59	72	-13	513-BKGDS1A	133	
146	11/9/2010 7:51	55	72	-17	513-BKGDS1A	133	
147	11/9/2010 7:51	76	72	4	513-BKGDS1A	133	
148	11/9/2010 7:51	66	72	-6	513-BKGDS1A	133	
149	11/9/2010 7:52	53	72	-19	513-BKGDS1A	133	
150	11/9/2010 7:52	56	72	-16	513-BKGDS1A	133	
151	11/9/2010 7:52	105	72	33	513-BKGDS1A	133	
152	11/9/2010 7:52	62	72	-10	513-BKGDS1A	133	
153	11/9/2010 7:52	70	72	-2	513-BKGDS1A	133	
154	11/9/2010 7:52	68	72	-4	513-BKGDS1A	133	
155	11/9/2010 7:52	66	72	-6	513-BKGDS1A	133	
156	11/9/2010 7:53	65	72	-7	513-BKGDS1A	133	
157	11/9/2010 7:53	60	72	-12	513-BKGDS1A	133	
158	11/9/2010 7:53	60	72	-12	513-BKGDS1A	133	
159	11/9/2010 7:53	85	72	13	513-BKGDS1A	133	
160	11/9/2010 7:54	73	72	1	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
161	11/9/2010 7:54	100	72	28	513-BKGDS1A	133	
162	11/9/2010 7:54	94	72	22	513-BKGDS1A	133	
163	11/9/2010 7:54	102	72	30	513-BKGDS1A	133	
164	11/9/2010 7:54	79	72	7	513-BKGDS1A	133	
165	11/9/2010 7:54	66	72	-6	513-BKGDS1A	133	
166	11/9/2010 7:54	56	72	-16	513-BKGDS1A	133	
167	11/9/2010 7:54	58	72	-14	513-BKGDS1A	133	
168	11/9/2010 7:54	53	72	-19	513-BKGDS1A	133	
169	11/9/2010 7:55	64	72	-8	513-BKGDS1A	133	
170	11/9/2010 7:55	72	72	0	513-BKGDS1A	133	
171	11/9/2010 7:55	62	72	-10	513-BKGDS1A	133	
172	11/9/2010 7:55	57	72	-15	513-BKGDS1A	133	
173	11/9/2010 7:55	57	72	-15	513-BKGDS1A	133	
174	11/9/2010 7:55	45	72	-27	513-BKGDS1A	133	
175	11/9/2010 7:55	65	72	-7	513-BKGDS1A	133	
176	11/9/2010 7:55	78	72	6	513-BKGDS1A	133	
177	11/9/2010 7:56	63	72	-9	513-BKGDS1A	133	
178	11/9/2010 7:56	76	72	4	513-BKGDS1A	133	
179	11/9/2010 7:56	98	72	26	513-BKGDS1A	133	
180	11/9/2010 7:57	34	72	-38	513-BKGDS1A	133	
181	11/9/2010 7:57	54	72	-18	513-BKGDS1A	133	
182	11/9/2010 7:57	69	72	-3	513-BKGDS1A	133	
183	11/9/2010 7:57	58	72	-14	513-BKGDS1A	133	
184	11/9/2010 7:57	68	72	-4	513-BKGDS1A	133	
185	11/9/2010 7:57	56	72	-16	513-BKGDS1A	133	
186	11/9/2010 7:57	50	72	-22	513-BKGDS1A	133	
187	11/9/2010 7:58	54	72	-18	513-BKGDS1A	133	
188	11/9/2010 7:58	49	72	-23	513-BKGDS1A	133	
189	11/9/2010 7:58	46	72	-26	513-BKGDS1A	133	
190	11/9/2010 7:58	42	72	-30	513-BKGDS1A	133	
191	11/9/2010 7:58	46	72	-26	513-BKGDS1A	133	
192	11/9/2010 7:58	47	72	-25	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
193	11/9/2010 7:58	45	72	-27	513-BKGDS1A	133	
194	11/9/2010 7:58	60	72	-12	513-BKGDS1A	133	
195	11/9/2010 7:58	56	72	-16	513-BKGDS1A	133	
196	11/9/2010 7:59	52	72	-20	513-BKGDS1A	133	
197	11/9/2010 7:59	55	72	-17	513-BKGDS1A	133	
198	11/9/2010 7:59	46	72	-26	513-BKGDS1A	133	
199	11/9/2010 7:59	75	72	3	513-BKGDS1A	133	
200	11/9/2010 7:59	57	72	-15	513-BKGDS1A	133	
201	11/9/2010 7:59	76	72	4	513-BKGDS1A	133	
202	11/9/2010 7:59	51	72	-21	513-BKGDS1A	133	
203	11/9/2010 8:00	21	72	-51	513-BKGDS1A	133	
204	11/9/2010 8:00	44	72	-28	513-BKGDS1A	133	
205	11/9/2010 8:00	68	72	-4	513-BKGDS1A	133	
206	11/9/2010 8:00	75	72	3	513-BKGDS1A	133	
207	11/9/2010 8:00	63	72	-9	513-BKGDS1A	133	
208	11/9/2010 8:01	60	72	-12	513-BKGDS1A	133	
209	11/9/2010 8:01	69	72	-3	513-BKGDS1A	133	
210	11/9/2010 8:01	61	72	-11	513-BKGDS1A	133	
211	11/9/2010 8:01	50	72	-22	513-BKGDS1A	133	
212	11/9/2010 8:01	53	72	-19	513-BKGDS1A	133	
213	11/9/2010 8:01	29	72	-43	513-BKGDS1A	133	
214	11/9/2010 8:01	55	72	-17	513-BKGDS1A	133	
215	11/9/2010 8:01	51	72	-21	513-BKGDS1A	133	
216	11/9/2010 8:01	52	72	-20	513-BKGDS1A	133	
217	11/9/2010 8:02	44	72	-28	513-BKGDS1A	133	
218	11/9/2010 8:02	50	72	-22	513-BKGDS1A	133	
219	11/9/2010 8:02	57	72	-15	513-BKGDS1A	133	
220	11/9/2010 8:02	50	72	-22	513-BKGDS1A	133	
221	11/9/2010 8:02	53	72	-19	513-BKGDS1A	133	
222	11/9/2010 8:02	74	72	2	513-BKGDS1A	133	
223	11/9/2010 8:02	64	72	-8	513-BKGDS1A	133	
224	11/9/2010 8:02	80	72	8	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
225	11/9/2010 8:04	46	72	-26	513-BKGDS1A	133	
226	11/9/2010 8:04	30	72	-42	513-BKGDS1A	133	
227	11/9/2010 8:04	65	72	-7	513-BKGDS1A	133	
228	11/9/2010 8:04	50	72	-22	513-BKGDS1A	133	
229	11/9/2010 8:04	66	72	-6	513-BKGDS1A	133	
230	11/9/2010 8:04	66	72	-6	513-BKGDS1A	133	
231	11/9/2010 8:04	80	72	8	513-BKGDS1A	133	
232	11/9/2010 8:04	62	72	-10	513-BKGDS1A	133	
233	11/9/2010 8:05	61	72	-11	513-BKGDS1A	133	
234	11/9/2010 8:05	52	72	-20	513-BKGDS1A	133	
235	11/9/2010 8:05	55	72	-17	513-BKGDS1A	133	
236	11/9/2010 8:05	72	72	0	513-BKGDS1A	133	
237	11/9/2010 8:05	61	72	-11	513-BKGDS1A	133	
238	11/9/2010 8:05	50	72	-22	513-BKGDS1A	133	
239	11/9/2010 8:05	47	72	-25	513-BKGDS1A	133	
240	11/9/2010 8:05	61	72	-11	513-BKGDS1A	133	
241	11/9/2010 8:05	56	72	-16	513-BKGDS1A	133	
242	11/9/2010 8:06	67	72	-5	513-BKGDS1A	133	
243	11/9/2010 8:06	79	72	7	513-BKGDS1A	133	
244	11/9/2010 8:06	93	72	21	513-BKGDS1A	133	
245	11/9/2010 8:06	81	72	9	513-BKGDS1A	133	
246	11/9/2010 8:07	25	72	-47	513-BKGDS1A	133	
247	11/9/2010 8:07	35	72	-37	513-BKGDS1A	133	
248	11/9/2010 8:07	45	72	-27	513-BKGDS1A	133	
249	11/9/2010 8:07	38	72	-34	513-BKGDS1A	133	
250	11/9/2010 8:07	65	72	-7	513-BKGDS1A	133	
251	11/9/2010 8:07	68	72	-4	513-BKGDS1A	133	
252	11/9/2010 8:07	86	72	14	513-BKGDS1A	133	
253	11/9/2010 8:08	111	72	39	513-BKGDS1A	133	
254	11/9/2010 8:08	95	72	23	513-BKGDS1A	133	
255	11/9/2010 8:08	110	72	38	513-BKGDS1A	133	
256	11/9/2010 8:08	83	72	11	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
257	11/9/2010 8:08	53	72	-19	513-BKGDS1A	133	
258	11/9/2010 8:08	81	72	9	513-BKGDS1A	133	
259	11/9/2010 8:08	75	72	3	513-BKGDS1A	133	
260	11/9/2010 8:08	67	72	-5	513-BKGDS1A	133	
261	11/9/2010 8:08	74	72	2	513-BKGDS1A	133	
262	11/9/2010 8:09	76	72	4	513-BKGDS1A	133	
263	11/9/2010 8:09	52	72	-20	513-BKGDS1A	133	
264	11/9/2010 8:09	55	72	-17	513-BKGDS1A	133	
265	11/9/2010 8:09	40	72	-32	513-BKGDS1A	133	
266	11/9/2010 8:09	62	72	-10	513-BKGDS1A	133	
267	11/9/2010 8:11	52	72	-20	513-BKGDS1A	133	
268	11/9/2010 8:11	29	72	-43	513-BKGDS1A	133	
269	11/9/2010 8:11	40	72	-32	513-BKGDS1A	133	
270	11/9/2010 8:11	69	72	-3	513-BKGDS1A	133	
271	11/9/2010 8:11	128	72	56	513-BKGDS1A	133	
272	11/9/2010 8:11	89	72	17	513-BKGDS1A	133	
273	11/9/2010 8:12	72	72	0	513-BKGDS1A	133	
274	11/9/2010 8:12	77	72	5	513-BKGDS1A	133	
275	11/9/2010 8:12	60	72	-12	513-BKGDS1A	133	
276	11/9/2010 8:12	85	72	13	513-BKGDS1A	133	
277	11/9/2010 8:12	107	72	35	513-BKGDS1A	133	
278	11/9/2010 8:12	82	72	10	513-BKGDS1A	133	
279	11/9/2010 8:12	93	72	21	513-BKGDS1A	133	
280	11/9/2010 8:12	79	72	7	513-BKGDS1A	133	
281	11/9/2010 8:12	60	72	-12	513-BKGDS1A	133	
282	11/9/2010 8:13	72	72	0	513-BKGDS1A	133	
283	11/9/2010 8:13	54	72	-18	513-BKGDS1A	133	
284	11/9/2010 8:13	53	72	-19	513-BKGDS1A	133	
285	11/9/2010 8:13	60	72	-12	513-BKGDS1A	133	
286	11/9/2010 8:13	85	72	13	513-BKGDS1A	133	
287	11/9/2010 8:14	40	72	-32	513-BKGDS1A	133	
288	11/9/2010 8:14	78	72	6	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
289	11/9/2010 8:14	73	72	1	513-BKGDS1A	133	
290	11/9/2010 8:14	86	72	14	513-BKGDS1A	133	
291	11/9/2010 8:14	108	72	36	513-BKGDS1A	133	
292	11/9/2010 8:14	85	72	13	513-BKGDS1A	133	
293	11/9/2010 8:14	63	72	-9	513-BKGDS1A	133	
294	11/9/2010 8:15	66	72	-6	513-BKGDS1A	133	
295	11/9/2010 8:15	77	72	5	513-BKGDS1A	133	
296	11/9/2010 8:15	70	72	-2	513-BKGDS1A	133	
297	11/9/2010 8:15	87	72	15	513-BKGDS1A	133	
298	11/9/2010 8:15	56	72	-16	513-BKGDS1A	133	
299	11/9/2010 8:15	64	72	-8	513-BKGDS1A	133	
300	11/9/2010 8:15	66	72	-6	513-BKGDS1A	133	
301	11/9/2010 8:15	85	72	13	513-BKGDS1A	133	
302	11/9/2010 8:15	83	72	11	513-BKGDS1A	133	
303	11/9/2010 8:16	68	72	-4	513-BKGDS1A	133	
304	11/9/2010 8:16	72	72	0	513-BKGDS1A	133	
305	11/9/2010 8:16	77	72	5	513-BKGDS1A	133	
306	11/9/2010 8:16	94	72	22	513-BKGDS1A	133	
307	11/9/2010 8:17	38	72	-34	513-BKGDS1A	133	
308	11/9/2010 8:17	39	72	-33	513-BKGDS1A	133	
309	11/9/2010 8:17	49	72	-23	513-BKGDS1A	133	
310	11/9/2010 8:17	69	72	-3	513-BKGDS1A	133	
311	11/9/2010 8:17	60	72	-12	513-BKGDS1A	133	
312	11/9/2010 8:17	92	72	20	513-BKGDS1A	133	
313	11/9/2010 8:17	63	72	-9	513-BKGDS1A	133	
314	11/9/2010 8:18	64	72	-8	513-BKGDS1A	133	
315	11/9/2010 8:18	94	72	22	513-BKGDS1A	133	
316	11/9/2010 8:18	81	72	9	513-BKGDS1A	133	
317	11/9/2010 8:18	73	72	1	513-BKGDS1A	133	
318	11/9/2010 8:18	78	72	6	513-BKGDS1A	133	
319	11/9/2010 8:18	78	72	6	513-BKGDS1A	133	
320	11/9/2010 8:18	87	72	15	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
321	11/9/2010 8:18	87	72	15	513-BKGDS1A	133	
322	11/9/2010 8:19	63	72	-9	513-BKGDS1A	133	
323	11/9/2010 8:19	66	72	-6	513-BKGDS1A	133	
324	11/9/2010 8:19	75	72	3	513-BKGDS1A	133	
325	11/9/2010 8:19	75	72	3	513-BKGDS1A	133	
326	11/9/2010 8:19	68	72	-4	513-BKGDS1A	133	
327	11/9/2010 8:20	67	72	-5	513-BKGDS1A	133	
328	11/9/2010 8:20	24	72	-48	513-BKGDS1A	133	
329	11/9/2010 8:20	50	72	-22	513-BKGDS1A	133	
330	11/9/2010 8:20	90	72	18	513-BKGDS1A	133	
331	11/9/2010 8:20	73	72	1	513-BKGDS1A	133	
332	11/9/2010 8:20	81	72	9	513-BKGDS1A	133	
333	11/9/2010 8:20	98	72	26	513-BKGDS1A	133	
334	11/9/2010 8:21	83	72	11	513-BKGDS1A	133	
335	11/9/2010 8:21	82	72	10	513-BKGDS1A	133	
336	11/9/2010 8:21	59	72	-13	513-BKGDS1A	133	
337	11/9/2010 8:21	63	72	-9	513-BKGDS1A	133	
338	11/9/2010 8:21	45	72	-27	513-BKGDS1A	133	
339	11/9/2010 8:21	53	72	-19	513-BKGDS1A	133	
340	11/9/2010 8:21	73	72	1	513-BKGDS1A	133	
341	11/9/2010 8:21	68	72	-4	513-BKGDS1A	133	
342	11/9/2010 8:21	61	72	-11	513-BKGDS1A	133	
343	11/9/2010 8:22	65	72	-7	513-BKGDS1A	133	
344	11/9/2010 8:22	54	72	-18	513-BKGDS1A	133	
345	11/9/2010 8:22	72	72	0	513-BKGDS1A	133	
346	11/9/2010 8:23	21	72	-51	513-BKGDS1A	133	
347	11/9/2010 8:23	47	72	-25	513-BKGDS1A	133	
348	11/9/2010 8:23	30	72	-42	513-BKGDS1A	133	
349	11/9/2010 8:23	40	72	-32	513-BKGDS1A	133	
350	11/9/2010 8:23	31	72	-41	513-BKGDS1A	133	
351	11/9/2010 8:23	38	72	-34	513-BKGDS1A	133	
352	11/9/2010 8:23	34	72	-38	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
353	11/9/2010 8:23	44	72	-28	513-BKGDS1A	133	
354	11/9/2010 8:24	49	72	-23	513-BKGDS1A	133	
355	11/9/2010 8:24	86	72	14	513-BKGDS1A	133	
356	11/9/2010 8:24	75	72	3	513-BKGDS1A	133	
357	11/9/2010 8:24	117	72	45	513-BKGDS1A	133	
358	11/9/2010 8:24	86	72	14	513-BKGDS1A	133	
359	11/9/2010 8:24	75	72	3	513-BKGDS1A	133	
360	11/9/2010 8:24	68	72	-4	513-BKGDS1A	133	
361	11/9/2010 8:24	57	72	-15	513-BKGDS1A	133	
362	11/9/2010 8:24	64	72	-8	513-BKGDS1A	133	
363	11/9/2010 8:25	75	72	3	513-BKGDS1A	133	
364	11/9/2010 8:25	73	72	1	513-BKGDS1A	133	
365	11/9/2010 8:25	32	72	-40	513-BKGDS1A	133	
366	11/9/2010 8:25	50	72	-22	513-BKGDS1A	133	
367	11/9/2010 8:26	63	72	-9	513-BKGDS1A	133	
368	11/9/2010 8:26	78	72	6	513-BKGDS1A	133	
369	11/9/2010 8:26	53	72	-19	513-BKGDS1A	133	
370	11/9/2010 8:26	56	72	-16	513-BKGDS1A	133	
371	11/9/2010 8:26	58	72	-14	513-BKGDS1A	133	
372	11/9/2010 8:26	51	72	-21	513-BKGDS1A	133	
373	11/9/2010 8:26	51	72	-21	513-BKGDS1A	133	
374	11/9/2010 8:26	63	72	-9	513-BKGDS1A	133	
375	11/9/2010 8:27	51	72	-21	513-BKGDS1A	133	
376	11/9/2010 8:27	60	72	-12	513-BKGDS1A	133	
377	11/9/2010 8:27	50	72	-22	513-BKGDS1A	133	
378	11/9/2010 8:27	88	72	16	513-BKGDS1A	133	
379	11/9/2010 8:27	79	72	7	513-BKGDS1A	133	
380	11/9/2010 8:27	77	72	5	513-BKGDS1A	133	
381	11/9/2010 8:27	51	72	-21	513-BKGDS1A	133	
382	11/9/2010 8:27	46	72	-26	513-BKGDS1A	133	
383	11/9/2010 8:27	68	72	-4	513-BKGDS1A	133	
384	11/9/2010 8:28	53	72	-19	513-BKGDS1A	133	

TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
385	11/9/2010 8:28	54	72	-18	513-BKGDS1A	133	
386	11/9/2010 8:29	49	72	-23	513-BKGDS1A	133	
387	11/9/2010 8:29	34	72	-38	513-BKGDS1A	133	
388	11/9/2010 8:29	54	72	-18	513-BKGDS1A	133	
389	11/9/2010 8:29	47	72	-25	513-BKGDS1A	133	
390	11/9/2010 8:29	49	72	-23	513-BKGDS1A	133	
391	11/9/2010 8:29	68	72	-4	513-BKGDS1A	133	
392	11/9/2010 8:29	72	72	0	513-BKGDS1A	133	
393	11/9/2010 8:29	90	72	18	513-BKGDS1A	133	
394	11/9/2010 8:30	103	72	31	513-BKGDS1A	133	
395	11/9/2010 8:30	71	72	-1	513-BKGDS1A	133	
396	11/9/2010 8:30	81	72	9	513-BKGDS1A	133	
397	11/9/2010 8:30	105	72	33	513-BKGDS1A	133	
398	11/9/2010 8:30	74	72	2	513-BKGDS1A	133	
399	11/9/2010 8:30	90	72	18	513-BKGDS1A	133	
400	11/9/2010 8:30	82	72	10	513-BKGDS1A	133	
401	11/9/2010 8:30	73	72	1	513-BKGDS1A	133	
402	11/9/2010 8:30	49	72	-23	513-BKGDS1A	133	
403	11/9/2010 8:31	22	72	-50	513-BKGDS1A	133	
404	11/9/2010 8:31	44	72	-28	513-BKGDS1A	133	
405	11/9/2010 8:31	50	72	-22	513-BKGDS1A	133	
406	11/9/2010 8:31	81	72	9	513-BKGDS1A	133	
407	11/9/2010 8:32	74	72	2	513-BKGDS1A	133	
408	11/9/2010 8:32	69	72	-3	513-BKGDS1A	133	
409	11/9/2010 8:32	55	72	-17	513-BKGDS1A	133	
410	11/9/2010 8:32	83	72	11	513-BKGDS1A	133	
411	11/9/2010 8:32	77	72	5	513-BKGDS1A	133	
412	11/9/2010 8:32	60	72	-12	513-BKGDS1A	133	
413	11/9/2010 8:32	58	72	-14	513-BKGDS1A	133	
414	11/9/2010 8:32	70	72	-2	513-BKGDS1A	133	
415	11/9/2010 8:33	86	72	14	513-BKGDS1A	133	
416	11/9/2010 8:33	64	72	-8	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (com)	Comments
417	11/9/2010 8:33	48	72	-24	513-BKGDS1A	133	
418	11/9/2010 8:33	55	72	-17	513-BKGDS1A	133	
419	11/9/2010 8:33	49	72	-23	513-BKGDS1A	133	
420	11/9/2010 8:33	59	72	-13	513-BKGDS1A	133	
421	11/9/2010 8:34	62	72	-10	513-BKGDS1A	133	
422	11/9/2010 8:34	57	72	-15	513-BKGDS1A	133	
423	11/9/2010 8:34	48	72	-24	513-BKGDS1A	133	
424	11/9/2010 8:35	50	72	-22	513-BKGDS1A	133	
425	11/9/2010 8:35	53	72	-19	513-BKGDS1A	133	
426	11/9/2010 8:35	57	72	-15	513-BKGDS1A	133	
427	11/9/2010 8:35	70	72	-2	513-BKGDS1A	133	
428	11/9/2010 8:35	96	72	24	513-BKGDS1A	133	
429	11/9/2010 8:35	101	72	29	513-BKGDS1A	133	
430	11/9/2010 8:35	117	72	45	513-BKGDS1A	133	
431	11/9/2010 8:35	109	72	37	513-BKGDS1A	133	
432	11/9/2010 8:35	108	72	36	513-BKGDS1A	133	
433	11/9/2010 8:36	115	72	43	513-BKGDS1A	133	
434	11/9/2010 8:36	62	72	-10	513-BKGDS1A	133	
435	11/9/2010 8:36	90	72	18	513-BKGDS1A	133	
436	11/9/2010 8:36	83	72	11	513-BKGDS1A	133	
437	11/9/2010 8:36	79	72	7	513-BKGDS1A	133	
438	11/9/2010 8:36	77	72	5	513-BKGDS1A	133	
439	11/9/2010 9:22	44	72	-28	513-BKGDS1A	133	
440	11/9/2010 9:22	55	72	-17	513-BKGDS1A	133	
441	11/9/2010 9:22	87	72	15	513-BKGDS1A	133	
442	11/9/2010 9:22	94	72	22	513-BKGDS1A	133	
443	11/9/2010 9:22	62	72	-10	513-BKGDS1A	133	
444	11/9/2010 9:22	69	72	-3	513-BKGDS1A	133	
445	11/9/2010 9:22	68	72	-4	513-BKGDS1A	133	
446	11/9/2010 9:23	64	72	-8	513-BKGDS1A	133	
447	11/9/2010 9:23	72	72	0	513-BKGDS1A	133	
448	11/9/2010 9:23	85	72	13	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
449	11/9/2010 9:23	66	72	-6	513-BKGDS1A	133	
450	11/9/2010 9:23	86	72	14	513-BKGDS1A	133	
451	11/9/2010 9:23	132	72	60	513-BKGDS1A	133	
452	11/9/2010 9:23	105	72	33	513-BKGDS1A	133	
453	11/9/2010 9:23	74	72	2	513-BKGDS1A	133	
454	11/9/2010 9:23	78	72	6	513-BKGDS1A	133	
455	11/9/2010 9:24	60	72	-12	513-BKGDS1A	133	
456	11/9/2010 9:24	80	72	8	513-BKGDS1A	133	
457	11/9/2010 9:24	40	72	-32	513-BKGDS1A	133	
458	11/9/2010 9:25	53	72	-19	513-BKGDS1A	133	
459	11/9/2010 9:25	51	72	-21	513-BKGDS1A	133	
460	11/9/2010 9:25	50	72	-22	513-BKGDS1A	133	
461	11/9/2010 9:25	61	72	-11	513-BKGDS1A	133	
462	11/9/2010 9:25	57	72	-15	513-BKGDS1A	133	
463	11/9/2010 9:25	67	72	-5	513-BKGDS1A	133	
464	11/9/2010 9:25	69	72	-3	513-BKGDS1A	133	
465	11/9/2010 9:25	71	72	-1	513-BKGDS1A	133	
466	11/9/2010 9:25	49	72	-23	513-BKGDS1A	133	
467	11/9/2010 9:26	53	72	-19	513-BKGDS1A	133	
468	11/9/2010 9:26	79	72	7	513-BKGDS1A	133	
469	11/9/2010 9:26	51	72	-21	513-BKGDS1A	133	
470	11/9/2010 9:26	80	72	8	513-BKGDS1A	133	
471	11/9/2010 9:26	98	72	26	513-BKGDS1A	133	
472	11/9/2010 9:26	119	72	47	513-BKGDS1A	133	
473	11/9/2010 9:26	106	72	34	513-BKGDS1A	133	
474	11/9/2010 9:26	107	72	35	513-BKGDS1A	133	
475	11/9/2010 9:30	40	72	-32	513-BKGDS1A	133	
476	11/9/2010 9:30	78	72	6	513-BKGDS1A	133	
477	11/9/2010 9:30	86	72	14	513-BKGDS1A	133	
478	11/9/2010 9:30	64	72	-8	513-BKGDS1A	133	
479	11/9/2010 9:30	89	72	17	513-BKGDS1A	133	
480	11/9/2010 9:30	93	72	21	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
481	11/9/2010 9:31	51	72	-21	513-BKGDS1A	133	
482	11/9/2010 9:31	64	72	-8	513-BKGDS1A	133	
483	11/9/2010 9:31	97	72	25	513-BKGDS1A	133	
484	11/9/2010 9:31	110	72	38	513-BKGDS1A	133	
485	11/9/2010 9:31	84	72	12	513-BKGDS1A	133	
486	11/9/2010 9:31	79	72	7	513-BKGDS1A	133	
487	11/9/2010 9:31	67	72	-5	513-BKGDS1A	133	
488	11/9/2010 9:31	57	72	-15	513-BKGDS1A	133	
489	11/9/2010 9:31	55	72	-17	513-BKGDS1A	133	
490	11/9/2010 9:32	81	72	9	513-BKGDS1A	133	
491	11/9/2010 9:32	87	72	15	513-BKGDS1A	133	
492	11/9/2010 9:32	76	72	4	513-BKGDS1A	133	
493	11/9/2010 9:33	32	72	-40	513-BKGDS1A	133	
494	11/9/2010 9:34	56	72	-16	513-BKGDS1A	133	
495	11/9/2010 9:34	67	72	-5	513-BKGDS1A	133	
496	11/9/2010 9:34	64	72	-8	513-BKGDS1A	133	
497	11/9/2010 9:34	52	72	-20	513-BKGDS1A	133	
498	11/9/2010 9:34	35	72	-37	513-BKGDS1A	133	
499	11/9/2010 9:34	50	72	-22	513-BKGDS1A	133	
500	11/9/2010 9:34	67	72	-5	513-BKGDS1A	133	
501	11/9/2010 9:34	65	72	-7	513-BKGDS1A	133	
502	11/9/2010 9:34	77	72	5	513-BKGDS1A	133	
503	11/9/2010 9:35	66	72	-6	513-BKGDS1A	133	
504	11/9/2010 9:35	104	72	32	513-BKGDS1A	133	
505	11/9/2010 9:35	112	72	40	513-BKGDS1A	133	
506	11/9/2010 9:35	101	72	29	513-BKGDS1A	133	
507	11/9/2010 9:35	95	72	23	513-BKGDS1A	133	
508	11/9/2010 9:35	86	72	14	513-BKGDS1A	133	
509	11/9/2010 9:35	76	72	4	513-BKGDS1A	133	
510	11/9/2010 9:36	67	72	-5	513-BKGDS1A	133	
511	11/9/2010 9:36	39	72	-33	513-BKGDS1A	133	
512	11/9/2010 9:36	48	72	-24	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
513	11/9/2010 9:36	56	72	-16	513-BKGDS1A	133	
514	11/9/2010 9:36	83	72	11	513-BKGDS1A	133	
515	11/9/2010 9:37	91	72	19	513-BKGDS1A	133	
516	11/9/2010 9:37	87	72	15	513-BKGDS1A	133	
517	11/9/2010 9:37	80	72	8	513-BKGDS1A	133	
518	11/9/2010 9:37	71	72	-1	513-BKGDS1A	133	
519	11/9/2010 9:37	53	72	-19	513-BKGDS1A	133	
520	11/9/2010 9:37	48	72	-24	513-BKGDS1A	133	
521	11/9/2010 9:37	48	72	-24	513-BKGDS1A	133	
522	11/9/2010 9:37	83	72	11	513-BKGDS1A	133	
523	11/9/2010 9:37	72	72	0	513-BKGDS1A	133	
524	11/9/2010 9:38	66	72	-6	513-BKGDS1A	133	
525	11/9/2010 9:38	98	72	26	513-BKGDS1A	133	
526	11/9/2010 9:38	95	72	23	513-BKGDS1A	133	
527	11/9/2010 9:39	52	72	-20	513-BKGDS1A	133	
528	11/9/2010 9:39	63	72	-9	513-BKGDS1A	133	
529	11/9/2010 9:39	78	72	6	513-BKGDS1A	133	
530	11/9/2010 9:39	63	72	-9	513-BKGDS1A	133	
531	11/9/2010 9:39	70	72	-2	513-BKGDS1A	133	
532	11/9/2010 9:39	69	72	-3	513-BKGDS1A	133	
533	11/9/2010 9:39	94	72	22	513-BKGDS1A	133	
534	11/9/2010 9:39	76	72	4	513-BKGDS1A	133	
535	11/9/2010 9:40	73	72	1	513-BKGDS1A	133	
536	11/9/2010 9:40	60	72	-12	513-BKGDS1A	133	
537	11/9/2010 9:40	50	72	-22	513-BKGDS1A	133	
538	11/9/2010 9:40	75	72	3	513-BKGDS1A	133	
539	11/9/2010 9:40	60	72	-12	513-BKGDS1A	133	
540	11/9/2010 9:40	60	72	-12	513-BKGDS1A	133	
541	11/9/2010 9:40	68	72	-4	513-BKGDS1A	133	
542	11/9/2010 9:40	76	72	4	513-BKGDS1A	133	
543	11/9/2010 9:42	50	72	-22	513-BKGDS1A	133	
544	11/9/2010 9:42	79	72	7	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
545	11/9/2010 9:42	54	72	-18	513-BKGDS1A	133	
546	11/9/2010 9:42	73	72	1	513-BKGDS1A	133	
547	11/9/2010 9:43	57	72	-15	513-BKGDS1A	133	
548	11/9/2010 9:43	61	72	-11	513-BKGDS1A	133	
549	11/9/2010 9:43	85	72	13	513-BKGDS1A	133	
550	11/9/2010 9:43	92	72	20	513-BKGDS1A	133	
551	11/9/2010 9:43	81	72	9	513-BKGDS1A	133	
552	11/9/2010 9:43	69	72	-3	513-BKGDS1A	133	
553	11/9/2010 9:43	66	72	-6	513-BKGDS1A	133	
554	11/9/2010 9:43	86	72	14	513-BKGDS1A	133	
555	11/9/2010 9:43	118	72	46	513-BKGDS1A	133	
556	11/9/2010 9:44	102	72	30	513-BKGDS1A	133	
557	11/9/2010 9:44	92	72	20	513-BKGDS1A	133	
558	11/9/2010 9:44	60	72	-12	513-BKGDS1A	133	
559	11/9/2010 9:45	46	72	-26	513-BKGDS1A	133	
560	11/9/2010 9:45	62	72	-10	513-BKGDS1A	133	
561	11/9/2010 9:45	91	72	19	513-BKGDS1A	133	
562	11/9/2010 9:45	82	72	10	513-BKGDS1A	133	
563	11/9/2010 9:45	73	72	1	513-BKGDS1A	133	
564	11/9/2010 9:46	94	72	22	513-BKGDS1A	133	
565	11/9/2010 9:46	94	72	22	513-BKGDS1A	133	
566	11/9/2010 9:46	88	72	16	513-BKGDS1A	133	
567	11/9/2010 9:46	98	72	26	513-BKGDS1A	133	
568	11/9/2010 9:46	84	72	12	513-BKGDS1A	133	
569	11/9/2010 9:46	108	72	36	513-BKGDS1A	133	
570	11/9/2010 9:46	98	72	26	513-BKGDS1A	133	
571	11/9/2010 9:46	102	72	30	513-BKGDS1A	133	
572	11/9/2010 9:46	84	72	12	513-BKGDS1A	133	
573	11/9/2010 9:47	83	72	11	513-BKGDS1A	133	
574	11/9/2010 9:47	87	72	15	513-BKGDS1A	133	
575	11/9/2010 9:48	36	72	-36	513-BKGDS1A	133	
576	11/9/2010 9:48	43	72	-29	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
577	11/9/2010 9:48	77	72	5	513-BKGDS1A	133	
578	11/9/2010 9:48	67	72	-5	513-BKGDS1A	133	
579	11/9/2010 9:48	54	72	-18	513-BKGDS1A	133	
580	11/9/2010 9:48	72	72	0	513-BKGDS1A	133	
581	11/9/2010 9:48	87	72	15	513-BKGDS1A	133	
582	11/9/2010 9:49	105	72	33	513-BKGDS1A	133	
583	11/9/2010 9:49	83	72	11	513-BKGDS1A	133	
584	11/9/2010 9:49	83	72	11	513-BKGDS1A	133	
585	11/9/2010 9:49	81	72	9	513-BKGDS1A	133	
586	11/9/2010 9:49	68	72	-4	513-BKGDS1A	133	
587	11/9/2010 9:49	64	72	-8	513-BKGDS1A	133	
588	11/9/2010 9:49	75	72	3	513-BKGDS1A	133	
589	11/9/2010 9:49	82	72	10	513-BKGDS1A	133	
590	11/9/2010 9:49	101	72	29	513-BKGDS1A	133	
591	11/9/2010 9:50	49	72	-23	513-BKGDS1A	133	
592	11/9/2010 9:51	80	72	8	513-BKGDS1A	133	
593	11/9/2010 9:51	86	72	14	513-BKGDS1A	133	
594	11/9/2010 9:51	62	72	-10	513-BKGDS1A	133	
595	11/9/2010 9:51	72	72	0	513-BKGDS1A	133	
596	11/9/2010 9:51	100	72	28	513-BKGDS1A	133	
597	11/9/2010 9:51	83	72	11	513-BKGDS1A	133	
598	11/9/2010 9:51	91	72	19	513-BKGDS1A	133	
599	11/9/2010 9:51	73	72	1	513-BKGDS1A	133	
600	11/9/2010 9:52	68	72	-4	513-BKGDS1A	133	
601	11/9/2010 9:52	80	72	8	513-BKGDS1A	133	
602	11/9/2010 9:52	79	72	7	513-BKGDS1A	133	
603	11/9/2010 9:52	72	72	0	513-BKGDS1A	133	
604	11/9/2010 9:52	79	72	7	513-BKGDS1A	133	
605	11/9/2010 9:52	88	72	16	513-BKGDS1A	133	
606	11/9/2010 9:53	22	72	-50	513-BKGDS1A	133	
607	11/9/2010 9:53	38	72	-34	513-BKGDS1A	133	
608	11/9/2010 9:53	96	72	24	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
609	11/9/2010 9:53	66	72	-6	513-BKGDS1A	133	
610	11/9/2010 9:53	76	72	4	513-BKGDS1A	133	
611	11/9/2010 9:53	93	72	21	513-BKGDS1A	133	
612	11/9/2010 9:54	104	72	32	513-BKGDS1A	133	
613	11/9/2010 9:54	117	72	45	513-BKGDS1A	133	
614	11/9/2010 9:54	110	72	38	513-BKGDS1A	133	
615	11/9/2010 9:54	86	72	14	513-BKGDS1A	133	
616	11/9/2010 9:54	73	72	1	513-BKGDS1A	133	
617	11/9/2010 9:54	87	72	15	513-BKGDS1A	133	
618	11/9/2010 9:54	116	72	44	513-BKGDS1A	133	
619	11/9/2010 9:54	72	72	0	513-BKGDS1A	133	
620	11/9/2010 9:54	73	72	1	513-BKGDS1A	133	
621	11/9/2010 9:56	26	72	-46	513-BKGDS1A	133	
622	11/9/2010 9:56	28	72	-44	513-BKGDS1A	133	
623	11/9/2010 9:56	58	72	-14	513-BKGDS1A	133	
624	11/9/2010 9:56	86	72	14	513-BKGDS1A	133	
625	11/9/2010 9:56	112	72	40	513-BKGDS1A	133	
626	11/9/2010 9:56	64	72	-8	513-BKGDS1A	133	
627	11/9/2010 9:56	61	72	-11	513-BKGDS1A	133	
628	11/9/2010 9:56	70	72	-2	513-BKGDS1A	133	
629	11/9/2010 9:57	78	72	6	513-BKGDS1A	133	
630	11/9/2010 9:57	85	72	13	513-BKGDS1A	133	
631	11/9/2010 9:57	82	72	10	513-BKGDS1A	133	
632	11/9/2010 9:57	88	72	16	513-BKGDS1A	133	
633	11/9/2010 9:57	67	72	-5	513-BKGDS1A	133	
634	11/9/2010 9:57	100	72	28	513-BKGDS1A	133	
635	11/9/2010 9:57	75	72	3	513-BKGDS1A	133	
636	11/9/2010 10:02	45	72	-27	513-BKGDS1A	133	
637	11/9/2010 10:02	51	72	-21	513-BKGDS1A	133	
638	11/9/2010 10:02	69	72	-3	513-BKGDS1A	133	
639	11/9/2010 10:02	80	72	8	513-BKGDS1A	133	
640	11/9/2010 10:02	90	72	18	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 16** **Class: 1** **Area: 989.60 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (ccm)	Comments
641	11/9/2010 10:02	70	72	-2	513-BKGDS1A	133	
642	11/9/2010 10:02	61	72	-11	513-BKGDS1A	133	
643	11/9/2010 10:02	44	72	-28	513-BKGDS1A	133	
644	11/9/2010 10:02	41	72	-31	513-BKGDS1A	133	
645	11/9/2010 10:03	35	72	-37	513-BKGDS1A	133	
646	11/9/2010 10:03	59	72	-13	513-BKGDS1A	133	
647	11/9/2010 10:03	81	72	9	513-BKGDS1A	133	
648	11/9/2010 10:03	96	72	24	513-BKGDS1A	133	
649	11/9/2010 10:03	97	72	25	513-BKGDS1A	133	
650	11/9/2010 10:04	28	72	-44	513-BKGDS1A	133	
651	11/9/2010 10:04	38	72	-34	513-BKGDS1A	133	
652	11/9/2010 10:04	57	72	-15	513-BKGDS1A	133	
653	11/9/2010 10:04	95	72	23	513-BKGDS1A	133	
654	11/9/2010 10:04	76	72	4	513-BKGDS1A	133	
655	11/9/2010 10:04	56	72	-16	513-BKGDS1A	133	
656	11/9/2010 10:05	81	72	9	513-BKGDS1A	133	
657	11/9/2010 10:05	60	72	-12	513-BKGDS1A	133	
658	11/9/2010 10:05	66	72	-6	513-BKGDS1A	133	
659	11/9/2010 10:05	88	72	16	513-BKGDS1A	133	
660	11/9/2010 10:05	84	72	12	513-BKGDS1A	133	
661	11/9/2010 10:05	105	72	33	513-BKGDS1A	133	
662	11/9/2010 10:05	80	72	8	513-BKGDS1A	133	
663	11/9/2010 10:05	68	72	-4	513-BKGDS1A	133	
664	11/9/2010 10:07	33	72	-39	513-BKGDS1A	133	
665	11/9/2010 10:07	35	72	-37	513-BKGDS1A	133	
666	11/9/2010 10:07	46	72	-26	513-BKGDS1A	133	
667	11/9/2010 10:07	25	72	-47	$13-BKGDS1A	133	
668	11/9/2010 10:07	24	72	-48	$13-BKGDS1A	133	
669	11/9/2010 10:07	78	72	6	$13-BKGDS1A	133	
670	11/9/2010 10:07	74	72	2	$13-BKGDS1A	133	
671	11/9/2010 10:07	70	72	-2	513-BKGDS1A	133	
672	11/9/2010 10:07	87	72	15	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
673	11/9/2010 10:08	66	72	-6	513-BKGDS1A	133	
674	11/9/2010 10:08	55	72	-17	513-BKGDS1A	133	
675	11/9/2010 10:08	61	72	-11	513-BKGDS1A	133	
676	11/9/2010 10:08	61	72	-11	513-BKGDS1A	133	
677	11/9/2010 10:09	25	72	-47	513-BKGDS1A	133	
678	11/9/2010 10:09	46	72	-26	513-BKGDS1A	133	
679	11/9/2010 10:09	79	72	7	513-BKGDS1A	133	
680	11/9/2010 10:09	77	72	5	513-BKGDS1A	133	
681	11/9/2010 10:09	92	72	20	513-BKGDS1A	133	
682	11/9/2010 10:10	84	72	12	513-BKGDS1A	133	
683	11/9/2010 10:10	108	72	36	513-BKGDS1A	133	
684	11/9/2010 10:10	94	72	22	513-BKGDS1A	133	
685	11/9/2010 10:10	68	72	-4	513-BKGDS1A	133	
686	11/9/2010 10:10	89	72	17	513-BKGDS1A	133	
687	11/9/2010 10:10	114	72	42	513-BKGDS1A	133	
688	11/9/2010 10:10	80	72	8	513-BKGDS1A	133	
689	11/9/2010 10:10	60	72	-12	513-BKGDS1A	133	
690	11/9/2010 10:11	75	72	3	513-BKGDS1A	133	
691	11/9/2010 10:11	40	72	-32	513-BKGDS1A	133	
692	11/9/2010 10:11	70	72	-2	513-BKGDS1A	133	
693	11/9/2010 10:11	75	72	3	513-BKGDS1A	133	
694	11/9/2010 10:11	76	72	4	513-BKGDS1A	133	
695	11/9/2010 10:12	63	72	-9	513-BKGDS1A	133	
696	11/9/2010 10:12	65	72	-7	513-BKGDS1A	133	
697	11/9/2010 10:12	86	72	14	513-BKGDS1A	133	
698	11/9/2010 10:12	123	72	51	513-BKGDS1A	133	
699	11/9/2010 10:12	102	72	30	513-BKGDS1A	133	
700	11/9/2010 10:13	27	72	-45	513-BKGDS1A	133	
701	11/9/2010 10:13	49	72	-23	513-BKGDS1A	133	
702	11/9/2010 10:13	62	72	-10	513-BKGDS1A	133	
703	11/9/2010 10:13	83	72	11	513-BKGDS1A	133	
704	11/9/2010 10:13	70	72	-2	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
705	11/9/2010 10:14	81	72	9	513-BKGDS1A	133	
706	11/9/2010 10:14	72	72	0	513-BKGDS1A	133	
707	11/9/2010 10:14	88	72	16	513-BKGDS1A	133	
708	11/9/2010 10:14	89	72	17	513-BKGDS1A	133	
709	11/9/2010 10:14	87	72	15	513-BKGDS1A	133	
710	11/9/2010 10:14	80	72	8	513-BKGDS1A	133	
711	11/9/2010 10:14	63	72	-9	513-BKGDS1A	133	
712	11/9/2010 10:14	61	72	-11	513-BKGDS1A	133	
713	11/9/2010 10:15	56	72	-16	513-BKGDS1A	133	
714	11/9/2010 10:15	47	72	-25	513-BKGDS1A	133	
715	11/9/2010 10:15	58	72	-14	513-BKGDS1A	133	
716	11/9/2010 10:16	99	72	27	513-BKGDS1A	133	
717	11/9/2010 10:16	85	72	13	513-BKGDS1A	133	
718	11/9/2010 10:16	67	72	-5	513-BKGDS1A	133	
719	11/9/2010 10:16	53	72	-19	513-BKGDS1A	133	
720	11/9/2010 10:16	62	72	-10	513-BKGDS1A	133	
721	11/9/2010 10:16	48	72	-24	513-BKGDS1A	133	
722	11/9/2010 10:16	60	72	-12	513-BKGDS1A	133	
723	11/9/2010 10:16	66	72	-6	513-BKGDS1A	133	
724	11/9/2010 10:17	81	72	9	513-BKGDS1A	133	
725	11/9/2010 10:17	70	72	-2	513-BKGDS1A	133	
726	11/9/2010 10:19	57	72	-15	513-BKGDS1A	133	
727	11/9/2010 10:19	28	72	-44	513-BKGDS1A	133	
728	11/9/2010 10:19	57	72	-15	513-BKGDS1A	133	
729	11/9/2010 10:19	46	72	-26	513-BKGDS1A	133	
730	11/9/2010 10:19	66	72	-6	513-BKGDS1A	133	
731	11/9/2010 10:20	40	72	-32	513-BKGDS1A	133	
732	11/9/2010 10:20	57	72	-15	513-BKGDS1A	133	
733	11/9/2010 10:20	79	72	7	513-BKGDS1A	133	
734	11/9/2010 10:32	36	72	-36	513-BKGDS1A	133	
735	11/9/2010 10:32	48	72	-24	513-BKGDS1A	133	
736	11/9/2010 10:32	82	72	10	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
737	11/9/2010 10:32	75	72	3	513-BKGDS1A	133	
738	11/9/2010 10:33	23	72	-49	513-BKGDS1A	133	
739	11/9/2010 10:33	66	72	-6	513-BKGDS1A	133	
740	11/9/2010 10:33	79	72	7	513-BKGDS1A	133	
741	11/9/2010 10:33	94	72	22	513-BKGDS1A	133	
742	11/9/2010 10:34	108	72	36	513-BKGDS1A	133	
743	11/9/2010 10:34	87	72	15	513-BKGDS1A	133	
744	11/9/2010 10:34	72	72	0	513-BKGDS1A	133	
745	11/9/2010 10:34	83	72	11	513-BKGDS1A	133	
746	11/9/2010 10:34	97	72	25	513-BKGDS1A	133	
747	11/9/2010 10:34	113	72	41	513-BKGDS1A	133	
748	11/9/2010 10:34	86	72	14	513-BKGDS1A	133	
749	11/9/2010 10:35	24	72	-48	513-BKGDS1A	133	
750	11/9/2010 10:36	56	72	-16	513-BKGDS1A	133	
751	11/9/2010 10:36	79	72	7	513-BKGDS1A	133	
752	11/9/2010 10:36	66	72	-6	513-BKGDS1A	133	
753	11/9/2010 10:36	75	72	3	513-BKGDS1A	133	
754	11/9/2010 10:36	103	72	31	513-BKGDS1A	133	
755	11/9/2010 10:36	118	72	46	513-BKGDS1A	133	
756	11/9/2010 10:36	110	72	38	513-BKGDS1A	133	
757	11/9/2010 10:36	85	72	13	513-BKGDS1A	133	
758	11/9/2010 10:36	105	72	33	513-BKGDS1A	133	
759	11/9/2010 10:37	92	72	20	513-BKGDS1A	133	
760	11/9/2010 10:37	83	72	11	513-BKGDS1A	133	
761	11/9/2010 10:37	71	72	-1	513-BKGDS1A	133	
762	11/9/2010 10:41	65	72	-7	513-BKGDS1A	133	
763	11/9/2010 10:41	49	72	-23	513-BKGDS1A	133	
764	11/9/2010 10:42	57	72	-15	513-BKGDS1A	133	
765	11/9/2010 10:42	83	72	11	513-BKGDS1A	133	
766	11/9/2010 10:42	67	72	-5	513-BKGDS1A	133	
767	11/9/2010 10:42	70	72	-2	513-BKGDS1A	133	
768	11/9/2010 10:42	72	72	0	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
769	11/9/2010 10:42	71	72	-1	513-BKGDS1A	133	
770	11/9/2010 10:42	49	72	-23	513-BKGDS1A	133	
771	11/9/2010 10:42	65	72	-7	513-BKGDS1A	133	
772	11/9/2010 10:43	46	72	-26	513-BKGDS1A	133	
773	11/9/2010 10:43	58	72	-14	513-BKGDS1A	133	
774	11/9/2010 10:43	94	72	22	513-BKGDS1A	133	
775	11/9/2010 10:44	105	72	33	513-BKGDS1A	133	
776	11/9/2010 10:44	77	72	5	513-BKGDS1A	133	
777	11/9/2010 10:44	64	72	-8	513-BKGDS1A	133	
778	11/9/2010 10:44	88	72	16	513-BKGDS1A	133	
779	11/9/2010 10:44	100	72	28	513-BKGDS1A	133	
780	11/9/2010 10:44	107	72	35	513-BKGDS1A	133	
781	11/9/2010 10:44	106	72	34	513-BKGDS1A	133	
782	11/9/2010 10:44	89	72	17	513-BKGDS1A	133	
783	11/9/2010 10:45	112	72	40	513-BKGDS1A	133	
784	11/9/2010 10:45	26	72	-46	513-BKGDS1A	133	
785	11/9/2010 10:45	48	72	-24	513-BKGDS1A	133	
786	11/9/2010 10:46	64	72	-8	513-BKGDS1A	133	
787	11/9/2010 10:46	81	72	9	513-BKGDS1A	133	
788	11/9/2010 10:46	76	72	4	513-BKGDS1A	133	
789	11/9/2010 10:46	71	72	-1	513-BKGDS1A	133	
790	11/9/2010 10:46	80	72	8	513-BKGDS1A	133	
791	11/9/2010 10:46	99	72	27	513-BKGDS1A	133	
792	11/9/2010 10:46	93	72	21	513-BKGDS1A	133	
793	11/9/2010 10:47	32	72	-40	513-BKGDS1A	133	
794	11/9/2010 10:47	75	72	3	513-BKGDS1A	133	
795	11/9/2010 10:47	70	72	-2	513-BKGDS1A	133	
796	11/9/2010 10:47	60	72	-12	513-BKGDS1A	133	
797	11/9/2010 10:47	81	72	9	513-BKGDS1A	133	
798	11/9/2010 10:47	73	72	1	513-BKGDS1A	133	
799	11/9/2010 10:48	101	72	29	513-BKGDS1A	133	
800	11/9/2010 10:48	98	72	26	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
801	11/9/2010 10:48	75	72	3	513-BKGDS1A	133	
802	11/9/2010 10:48	67	72	-5	513-BKGDS1A	133	
803	11/9/2010 10:49	50	72	-22	513-BKGDS1A	133	
804	11/9/2010 10:49	72	72	0	513-BKGDS1A	133	
805	11/9/2010 10:49	70	72	-2	513-BKGDS1A	133	
806	11/9/2010 10:49	67	72	-5	513-BKGDS1A	133	
807	11/9/2010 10:49	78	72	6	513-BKGDS1A	133	
808	11/9/2010 10:49	103	72	31	513-BKGDS1A	133	
809	11/9/2010 10:55	86	72	14	513-BKGDS1A	133	
810	11/9/2010 10:55	52	72	-20	513-BKGDS1A	133	
811	11/9/2010 10:55	72	72	0	513-BKGDS1A	133	
812	11/9/2010 10:56	69	72	-3	513-BKGDS1A	133	
813	11/9/2010 10:56	72	72	0	513-BKGDS1A	133	
814	11/9/2010 10:56	83	72	11	513-BKGDS1A	133	
815	11/9/2010 10:56	99	72	27	513-BKGDS1A	133	
816	11/9/2010 11:00	38	72	-34	513-BKGDS1A	133	
817	11/9/2010 11:00	66	72	-6	513-BKGDS1A	133	
818	11/9/2010 11:00	86	72	14	513-BKGDS1A	133	
819	11/9/2010 11:01	69	72	-3	513-BKGDS1A	133	
820	11/9/2010 11:01	80	72	8	513-BKGDS1A	133	
821	11/9/2010 11:01	20	72	-52	513-BKGDS1A	133	
822	11/9/2010 11:02	38	72	-34	513-BKGDS1A	133	
823	11/9/2010 11:02	67	72	-5	513-BKGDS1A	133	
824	11/9/2010 11:02	56	72	-16	513-BKGDS1A	133	
825	11/9/2010 11:02	78	72	6	513-BKGDS1A	133	
826	11/9/2010 11:03	29	72	-43	513-BKGDS1A	133	
827	11/9/2010 11:03	60	72	-12	513-BKGDS1A	133	
828	11/9/2010 11:03	64	72	-8	513-BKGDS1A	133	
829	11/9/2010 11:03	63	72	-9	513-BKGDS1A	133	
830	11/9/2010 11:03	31	72	-41	513-BKGDS1A	133	
831	11/9/2010 11:04	48	72	-24	513-BKGDS1A	133	
832	11/9/2010 11:04	50	72	-22	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
833	11/9/2010 11:04	68	72	-4	513-BKGDS1A	133	
834	11/9/2010 11:04	63	72	-9	513-BKGDS1A	133	
835	11/9/2010 11:06	57	72	-15	513-BKGDS1A	133	
836	11/9/2010 11:06	41	72	-31	513-BKGDS1A	133	
837	11/9/2010 11:07	54	72	-18	513-BKGDS1A	133	
838	11/9/2010 11:07	69	72	-3	513-BKGDS1A	133	
839	11/9/2010 11:24	56	72	-16	513-BKGDS1A	133	
840	11/9/2010 11:25	49	72	-23	513-BKGDS1A	133	
841	11/9/2010 11:25	33	72	-39	513-BKGDS1A	133	
842	11/9/2010 11:25	44	72	-28	513-BKGDS1A	133	
843	11/9/2010 11:25	37	72	-35	513-BKGDS1A	133	
844	11/9/2010 11:25	44	72	-28	513-BKGDS1A	133	
845	11/9/2010 11:25	38	72	-34	513-BKGDS1A	133	
846	11/9/2010 11:25	47	72	-25	513-BKGDS1A	133	
847	11/9/2010 11:25	68	72	-4	513-BKGDS1A	133	
848	11/9/2010 11:25	56	72	-16	513-BKGDS1A	133	
849	11/9/2010 11:27	35	72	-37	513-BKGDS1A	133	
850	11/9/2010 11:27	33	72	-39	513-BKGDS1A	133	
851	11/9/2010 11:27	34	72	-38	513-BKGDS1A	133	
852	11/9/2010 11:28	43	72	-29	513-BKGDS1A	133	
853	11/9/2010 11:28	43	72	-29	513-BKGDS1A	133	
854	11/9/2010 11:28	53	72	-19	513-BKGDS1A	133	
855	11/9/2010 11:28	65	72	-7	513-BKGDS1A	133	
856	11/9/2010 11:28	81	72	9	513-BKGDS1A	133	
857	11/9/2010 11:28	106	72	34	513-BKGDS1A	133	
858	11/9/2010 11:28	72	72	0	513-BKGDS1A	133	
859	11/9/2010 11:28	92	72	20	513-BKGDS1A	133	
860	11/9/2010 11:29	41	72	-31	513-BKGDS1A	133	
861	11/9/2010 11:29	62	72	-10	513-BKGDS1A	133	
862	11/9/2010 11:29	83	72	11	513-BKGDS1A	133	
863	11/9/2010 11:29	98	72	26	513-BKGDS1A	133	
864	11/9/2010 11:29	73	72	1	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
865	11/9/2010 11:29	66	72	-6	513-BKGDS1A	133	
866	11/9/2010 11:29	67	72	-5	513-BKGDS1A	133	
867	11/9/2010 11:29	58	72	-14	513-BKGDS1A	133	
868	11/9/2010 11:29	70	72	-2	513-BKGDS1A	133	
869	11/9/2010 11:30	73	72	1	513-BKGDS1A	133	
870	11/9/2010 11:30	82	72	10	513-BKGDS1A	133	
871	11/9/2010 11:30	82	72	10	513-BKGDS1A	133	
872	11/9/2010 11:30	62	72	-10	513-BKGDS1A	133	
873	11/9/2010 11:30	83	72	11	513-BKGDS1A	133	
874	11/9/2010 11:30	58	72	-14	513-BKGDS1A	133	
875	11/9/2010 11:30	86	72	14	513-BKGDS1A	133	
876	11/9/2010 11:30	73	72	1	513-BKGDS1A	133	
877	11/9/2010 11:30	59	72	-13	513-BKGDS1A	133	
878	11/9/2010 11:31	71	72	-1	513-BKGDS1A	133	
879	11/9/2010 11:32	71	72	-1	513-BKGDS1A	133	
880	11/9/2010 11:32	66	72	-6	513-BKGDS1A	133	
881	11/9/2010 11:32	61	72	-11	513-BKGDS1A	133	
882	11/9/2010 11:32	61	72	-11	513-BKGDS1A	133	
883	11/9/2010 11:32	46	72	-26	513-BKGDS1A	133	
884	11/9/2010 11:32	32	72	-40	513-BKGDS1A	133	
885	11/9/2010 11:33	35	72	-37	513-BKGDS1A	133	
886	11/9/2010 11:33	27	72	-45	513-BKGDS1A	133	
887	11/9/2010 11:33	35	72	-37	513-BKGDS1A	133	
888	11/9/2010 11:33	47	72	-25	513-BKGDS1A	133	
889	11/9/2010 11:33	47	72	-25	513-BKGDS1A	133	
890	11/9/2010 11:33	68	72	-4	513-BKGDS1A	133	
891	11/9/2010 11:33	49	72	-23	513-BKGDS1A	133	
892	11/9/2010 11:33	43	72	-29	513-BKGDS1A	133	
893	11/9/2010 11:34	52	72	-20	513-BKGDS1A	133	
894	11/9/2010 11:34	63	72	-9	513-BKGDS1A	133	
895	11/9/2010 11:34	72	72	0	513-BKGDS1A	133	
896	11/9/2010 11:34	55	72	-17	513-BKGDS1A	133	

TETRA TECH EC, INC
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
897	11/9/2010 11:34	57	72	-15	513-BKGDS1A	133	
898	11/9/2010 11:34	52	72	-20	513-BKGDS1A	133	
899	11/9/2010 11:34	64	72	-8	513-BKGDS1A	133	
900	11/9/2010 11:34	59	72	-13	513-BKGDS1A	133	
901	11/9/2010 11:34	74	72	2	513-BKGDS1A	133	
902	11/9/2010 11:35	68	72	-4	513-BKGDS1A	133	
903	11/9/2010 11:35	60	72	-12	513-BKGDS1A	133	
904	11/9/2010 11:35	41	72	-31	513-BKGDS1A	133	
905	11/9/2010 11:35	57	72	-15	513-BKGDS1A	133	
906	11/9/2010 11:35	96	72	24	513-BKGDS1A	133	
907	11/9/2010 11:35	66	72	-6	513-BKGDS1A	133	
908	11/9/2010 11:35	46	72	-26	513-BKGDS1A	133	
909	11/9/2010 11:35	71	72	-1	513-BKGDS1A	133	
910	11/9/2010 11:36	55	72	-17	513-BKGDS1A	133	
911	11/9/2010 11:36	45	72	-27	513-BKGDS1A	133	
912	11/9/2010 11:36	48	72	-24	513-BKGDS1A	133	
913	11/9/2010 11:36	38	72	-34	513-BKGDS1A	133	
914	11/9/2010 11:36	39	72	-33	513-BKGDS1A	133	
915	11/9/2010 11:36	41	72	-31	513-BKGDS1A	133	
916	11/9/2010 11:36	76	72	4	513-BKGDS1A	133	
917	11/9/2010 11:36	65	72	-7	513-BKGDS1A	133	
918	11/9/2010 11:36	48	72	-24	513-BKGDS1A	133	
919	11/9/2010 11:37	41	72	-31	513-BKGDS1A	133	
920	11/9/2010 11:37	48	72	-24	513-BKGDS1A	133	
921	11/9/2010 11:37	39	72	-33	513-BKGDS1A	133	
922	11/9/2010 11:38	53	72	-19	513-BKGDS1A	133	
923	11/9/2010 11:38	42	72	-30	513-BKGDS1A	133	
924	11/9/2010 11:38	41	72	-31	513-BKGDS1A	133	
925	11/9/2010 11:38	52	72	-20	513-BKGDS1A	133	
926	11/9/2010 11:38	55	72	-17	513-BKGDS1A	133	
927	11/9/2010 11:38	33	72	-39	513-BKGDS1A	133	
928	11/9/2010 11:38	50	72	-22	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
929	11/9/2010 11:38	40	72	-32	513-BKGDS1A	133	
930	11/9/2010 11:39	40	72	-32	513-BKGDS1A	133	
931	11/9/2010 11:39	50	72	-22	513-BKGDS1A	133	
932	11/9/2010 11:39	100	72	28	513-BKGDS1A	133	
933	11/9/2010 11:39	78	72	6	513-BKGDS1A	133	
934	11/9/2010 11:39	90	72	18	513-BKGDS1A	133	
935	11/9/2010 11:39	115	72	43	513-BKGDS1A	133	
936	11/9/2010 11:39	103	72	31	513-BKGDS1A	133	
937	11/9/2010 11:39	98	72	26	513-BKGDS1A	133	
938	11/9/2010 11:39	84	72	12	513-BKGDS1A	133	
939	11/9/2010 11:40	95	72	23	513-BKGDS1A	133	
940	11/9/2010 11:40	74	72	2	513-BKGDS1A	133	
941	11/9/2010 11:40	77	72	5	513-BKGDS1A	133	
942	11/9/2010 11:40	85	72	13	513-BKGDS1A	133	
943	11/9/2010 11:40	67	72	-5	513-BKGDS1A	133	
944	11/9/2010 11:40	54	72	-18	513-BKGDS1A	133	
945	11/9/2010 11:40	43	72	-29	513-BKGDS1A	133	
946	11/9/2010 11:40	88	72	16	513-BKGDS1A	133	
947	11/9/2010 11:41	63	72	-9	513-BKGDS1A	133	
948	11/9/2010 11:41	62	72	-10	513-BKGDS1A	133	
949	11/9/2010 11:41	57	72	-15	513-BKGDS1A	133	
950	11/9/2010 11:41	48	72	-24	513-BKGDS1A	133	
951	11/9/2010 11:41	62	72	-10	513-BKGDS1A	133	
952	11/9/2010 11:41	50	72	-22	513-BKGDS1A	133	
953	11/9/2010 11:41	49	72	-23	513-BKGDS1A	133	
954	11/9/2010 11:41	49	72	-23	513-BKGDS1A	133	
955	11/9/2010 11:41	65	72	-7	513-BKGDS1A	133	
956	11/9/2010 11:42	87	72	15	513-BKGDS1A	133	
957	11/9/2010 11:42	90	72	18	513-BKGDS1A	133	
958	11/9/2010 11:42	66	72	-6	513-BKGDS1A	133	
959	11/9/2010 11:43	22	72	-50	513-BKGDS1A	133	
960	11/9/2010 11:43	31	72	-41	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 16** **Class: 1** **Area: 989.60 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
961	11/9/2010 11:43	58	72	-14	513-BKGDS1A	133	
962	11/9/2010 11:43	34	72	-38	513-BKGDS1A	133	
963	11/9/2010 11:43	35	72	-37	513-BKGDS1A	133	
964	11/9/2010 11:43	42	72	-30	513-BKGDS1A	133	
965	11/9/2010 11:43	54	72	-18	513-BKGDS1A	133	
966	11/9/2010 11:44	60	72	-12	513-BKGDS1A	133	
967	11/9/2010 11:44	67	72	-5	513-BKGDS1A	133	
968	11/9/2010 11:44	81	72	9	513-BKGDS1A	133	
969	11/9/2010 11:44	79	72	7	513-BKGDS1A	133	
970	11/9/2010 11:44	74	72	2	513-BKGDS1A	133	
971	11/9/2010 11:44	52	72	-20	513-BKGDS1A	133	
972	11/9/2010 11:44	51	72	-21	513-BKGDS1A	133	
973	11/9/2010 11:44	42	72	-30	513-BKGDS1A	133	
974	11/9/2010 11:44	35	72	-37	513-BKGDS1A	133	
975	11/9/2010 11:45	50	72	-22	513-BKGDS1A	133	
976	11/9/2010 11:45	63	72	-9	513-BKGDS1A	133	
977	11/9/2010 11:45	49	72	-23	513-BKGDS1A	133	
978	11/9/2010 11:45	50	72	-22	513-BKGDS1A	133	
979	11/9/2010 11:45	65	72	-7	513-BKGDS1A	133	
980	11/9/2010 11:45	58	72	-14	513-BKGDS1A	133	
981	11/9/2010 11:45	50	72	-22	513-BKGDS1A	133	
982	11/9/2010 11:45	48	72	-24	513-BKGDS1A	133	
983	11/9/2010 11:46	54	72	-18	513-BKGDS1A	133	
984	11/9/2010 11:46	54	72	-18	513-BKGDS1A	133	
985	11/9/2010 11:46	57	72	-15	513-BKGDS1A	133	
986	11/9/2010 11:46	65	72	-7	513-BKGDS1A	133	
987	11/9/2010 11:46	49	72	-23	513-BKGDS1A	133	
988	11/9/2010 11:46	72	72	0	513-BKGDS1A	133	
989	11/9/2010 11:46	85	72	13	513-BKGDS1A	133	
990	11/9/2010 11:46	95	72	23	513-BKGDS1A	133	
991	11/9/2010 11:46	60	72	-12	513-BKGDS1A	133	
992	11/9/2010 11:47	66	72	-6	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
993	11/9/2010 11:47	64	72	-8	513-BKGDS1A	133	
994	11/9/2010 11:47	60	72	-12	513-BKGDS1A	133	
995	11/9/2010 11:47	64	72	-8	513-BKGDS1A	133	
996	11/9/2010 11:47	67	72	-5	513-BKGDS1A	133	
997	11/9/2010 11:47	54	72	-18	513-BKGDS1A	133	
998	11/9/2010 11:47	41	72	-31	513-BKGDS1A	133	
999	11/9/2010 12:38	45	72	-27	513-BKGDS1A	133	
1000	11/9/2010 12:38	58	72	-14	513-BKGDS1A	133	
1001	11/9/2010 12:38	65	72	-7	513-BKGDS1A	133	
1002	11/9/2010 12:38	40	72	-32	513-BKGDS1A	133	
1003	11/9/2010 12:38	50	72	-22	513-BKGDS1A	133	
1004	11/9/2010 12:38	75	72	3	513-BKGDS1A	133	
1005	11/9/2010 12:38	85	72	13	513-BKGDS1A	133	
1006	11/9/2010 12:38	58	72	-14	513-BKGDS1A	133	
1007	11/9/2010 12:39	53	72	-19	513-BKGDS1A	133	
1008	11/9/2010 12:39	45	72	-27	513-BKGDS1A	133	
1009	11/9/2010 12:39	55	72	-17	513-BKGDS1A	133	
1010	11/9/2010 12:39	53	72	-19	513-BKGDS1A	133	
1011	11/9/2010 12:39	66	72	-6	513-BKGDS1A	133	
1012	11/9/2010 12:39	51	72	-21	513-BKGDS1A	133	
1013	11/9/2010 12:39	60	72	-12	513-BKGDS1A	133	
1014	11/9/2010 12:39	46	72	-26	513-BKGDS1A	133	
1015	11/9/2010 12:39	59	72	-13	513-BKGDS1A	133	
1016	11/9/2010 12:40	54	72	-18	513-BKGDS1A	133	
1017	11/9/2010 12:40	45	72	-27	513-BKGDS1A	133	
1018	11/9/2010 12:40	73	72	1	513-BKGDS1A	133	
1019	11/9/2010 12:40	66	72	-6	513-BKGDS1A	133	
1020	11/9/2010 12:40	104	72	32	513-BKGDS1A	133	
1021	11/9/2010 12:40	108	72	36	513-BKGDS1A	133	
1022	11/9/2010 12:40	99	72	27	513-BKGDS1A	133	
1023	11/9/2010 12:40	80	72	8	513-BKGDS1A	133	
1024	11/9/2010 12:41	57	72	-15	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1025	11/9/2010 12:41	47	72	-25	513-BKGDS1A	133	
1026	11/9/2010 12:41	62	72	-10	513-BKGDS1A	133	
1027	11/9/2010 12:41	63	72	-9	513-BKGDS1A	133	
1028	11/9/2010 12:41	48	72	-24	513-BKGDS1A	133	
1029	11/9/2010 12:41	68	72	-4	513-BKGDS1A	133	
1030	11/9/2010 12:41	55	72	-17	513-BKGDS1A	133	
1031	11/9/2010 12:41	61	72	-11	513-BKGDS1A	133	
1032	11/9/2010 12:41	87	72	15	513-BKGDS1A	133	
1033	11/9/2010 12:42	106	72	34	513-BKGDS1A	133	
1034	11/9/2010 12:42	54	72	-18	513-BKGDS1A	133	
1035	11/9/2010 12:42	61	72	-11	513-BKGDS1A	133	
1036	11/9/2010 12:42	65	72	-7	513-BKGDS1A	133	
1037	11/9/2010 12:42	58	72	-14	513-BKGDS1A	133	
1038	11/9/2010 12:42	31	72	-41	513-BKGDS1A	133	
1039	11/9/2010 12:43	21	72	-51	513-BKGDS1A	133	
1040	11/9/2010 12:43	52	72	-20	513-BKGDS1A	133	
1041	11/9/2010 12:43	67	72	-5	513-BKGDS1A	133	
1042	11/9/2010 12:43	109	72	37	513-BKGDS1A	133	
1043	11/9/2010 12:44	61	72	-11	513-BKGDS1A	133	
1044	11/9/2010 12:44	94	72	22	513-BKGDS1A	133	
1045	11/9/2010 12:44	107	72	35	513-BKGDS1A	133	
1046	11/9/2010 12:44	82	72	10	513-BKGDS1A	133	
1047	11/9/2010 12:44	57	72	-15	513-BKGDS1A	133	
1048	11/9/2010 12:44	70	72	-2	513-BKGDS1A	133	
1049	11/9/2010 12:44	80	72	8	513-BKGDS1A	133	
1050	11/9/2010 12:44	67	72	-5	513-BKGDS1A	133	
1051	11/9/2010 12:45	88	72	16	513-BKGDS1A	133	
1052	11/9/2010 12:45	83	72	11	513-BKGDS1A	133	
1053	11/9/2010 12:45	84	72	12	513-BKGDS1A	133	
1054	11/9/2010 12:45	74	72	2	513-BKGDS1A	133	
1055	11/9/2010 12:45	70	72	-2	513-BKGDS1A	133	
1056	11/9/2010 12:45	48	72	-24	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1057	11/9/2010 12:45	70	72	-2	513-BKGDS1A	133	
1058	11/9/2010 12:45	42	72	-30	513-BKGDS1A	133	
1059	11/9/2010 12:45	48	72	-24	513-BKGDS1A	133	
1060	11/9/2010 12:46	60	72	-12	513-BKGDS1A	133	
1061	11/9/2010 12:46	55	72	-17	513-BKGDS1A	133	
1062	11/9/2010 12:46	44	72	-28	513-BKGDS1A	133	
1063	11/9/2010 12:46	47	72	-25	513-BKGDS1A	133	
1064	11/9/2010 12:46	53	72	-19	513-BKGDS1A	133	
1065	11/9/2010 12:46	58	72	-14	513-BKGDS1A	133	
1066	11/9/2010 12:46	56	72	-16	513-BKGDS1A	133	
1067	11/9/2010 12:46	66	72	-6	513-BKGDS1A	133	
1068	11/9/2010 12:47	57	72	-15	513-BKGDS1A	133	
1069	11/9/2010 12:47	53	72	-19	513-BKGDS1A	133	
1070	11/9/2010 12:47	53	72	-19	513-BKGDS1A	133	
1071	11/9/2010 12:47	42	72	-30	513-BKGDS1A	133	
1072	11/9/2010 12:47	36	72	-36	513-BKGDS1A	133	
1073	11/9/2010 12:47	28	72	-44	513-BKGDS1A	133	
1074	11/9/2010 12:47	38	72	-34	513-BKGDS1A	133	
1075	11/9/2010 12:47	28	72	-44	513-BKGDS1A	133	
1076	11/9/2010 12:47	56	72	-16	513-BKGDS1A	133	
1077	11/9/2010 12:48	78	72	6	513-BKGDS1A	133	
1078	11/9/2010 12:48	58	72	-14	513-BKGDS1A	133	
1079	11/9/2010 12:49	68	72	-4	513-BKGDS1A	133	
1080	11/9/2010 12:49	38	72	-34	513-BKGDS1A	133	
1081	11/9/2010 12:49	49	72	-23	513-BKGDS1A	133	
1082	11/9/2010 12:49	46	72	-26	513-BKGDS1A	133	
1083	11/9/2010 12:49	29	72	-43	513-BKGDS1A	133	
1084	11/9/2010 12:49	44	72	-28	513-BKGDS1A	133	
1085	11/9/2010 12:50	48	72	-24	513-BKGDS1A	133	
1086	11/9/2010 12:50	69	72	-3	513-BKGDS1A	133	
1087	11/9/2010 12:50	53	72	-19	513-BKGDS1A	133	
1088	11/9/2010 12:50	55	72	-17	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1089	11/9/2010 12:50	30	72	-42	513-BKGDS1A	133	
1090	11/9/2010 12:50	27	72	-45	513-BKGDS1A	133	
1091	11/9/2010 12:50	49	72	-23	513-BKGDS1A	133	
1092	11/9/2010 12:50	45	72	-27	513-BKGDS1A	133	
1093	11/9/2010 12:50	43	72	-29	513-BKGDS1A	133	
1094	11/9/2010 12:51	35	72	-37	513-BKGDS1A	133	
1095	11/9/2010 12:51	53	72	-19	513-BKGDS1A	133	
1096	11/9/2010 12:51	70	72	-2	513-BKGDS1A	133	
1097	11/9/2010 12:51	69	72	-3	513-BKGDS1A	133	
1098	11/9/2010 12:51	84	72	12	513-BKGDS1A	133	
1099	11/9/2010 12:51	72	72	0	513-BKGDS1A	133	
1100	11/9/2010 12:51	77	72	5	513-BKGDS1A	133	
1101	11/9/2010 12:51	57	72	-15	513-BKGDS1A	133	
1102	11/9/2010 12:51	51	72	-21	513-BKGDS1A	133	
1103	11/9/2010 12:52	48	72	-24	513-BKGDS1A	133	
1104	11/9/2010 12:52	50	72	-22	513-BKGDS1A	133	
1105	11/9/2010 12:52	32	72	-40	513-BKGDS1A	133	
1106	11/9/2010 12:52	53	72	-19	513-BKGDS1A	133	
1107	11/9/2010 12:52	62	72	-10	513-BKGDS1A	133	
1108	11/9/2010 12:52	71	72	-1	513-BKGDS1A	133	
1109	11/9/2010 12:52	76	72	4	513-BKGDS1A	133	
1110	11/9/2010 12:52	75	72	3	513-BKGDS1A	133	
1111	11/9/2010 12:53	59	72	-13	513-BKGDS1A	133	
1112	11/9/2010 12:53	55	72	-17	513-BKGDS1A	133	
1113	11/9/2010 12:53	53	72	-19	513-BKGDS1A	133	
1114	11/9/2010 12:53	59	72	-13	513-BKGDS1A	133	
1115	11/9/2010 12:53	58	72	-14	513-BKGDS1A	133	
1116	11/9/2010 12:53	73	72	1	513-BKGDS1A	133	
1117	11/9/2010 12:54	55	72	-17	513-BKGDS1A	133	
1118	11/9/2010 12:54	51	72	-21	513-BKGDS1A	133	
1119	11/9/2010 12:54	80	72	8	513-BKGDS1A	133	
1120	11/9/2010 12:54	87	72	15	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1121	11/9/2010 12:54	90	72	18	513-BKGDS1A	133	
1122	11/9/2010 12:54	63	72	-9	513-BKGDS1A	133	
1123	11/9/2010 12:55	57	72	-15	513-BKGDS1A	133	
1124	11/9/2010 12:55	52	72	-20	513-BKGDS1A	133	
1125	11/9/2010 12:55	69	72	-3	513-BKGDS1A	133	
1126	11/9/2010 12:55	57	72	-15	513-BKGDS1A	133	
1127	11/9/2010 12:55	49	72	-23	513-BKGDS1A	133	
1128	11/9/2010 12:55	67	72	-5	513-BKGDS1A	133	
1129	11/9/2010 12:55	70	72	-2	513-BKGDS1A	133	
1130	11/9/2010 12:55	61	72	-11	513-BKGDS1A	133	
1131	11/9/2010 12:55	63	72	-9	513-BKGDS1A	133	
1132	11/9/2010 12:56	71	72	-1	513-BKGDS1A	133	
1133	11/9/2010 12:56	69	72	-3	513-BKGDS1A	133	
1134	11/9/2010 12:56	84	72	12	513-BKGDS1A	133	
1135	11/9/2010 12:56	68	72	-4	513-BKGDS1A	133	
1136	11/9/2010 12:56	82	72	10	513-BKGDS1A	133	
1137	11/9/2010 12:56	57	72	-15	513-BKGDS1A	133	
1138	11/9/2010 12:56	67	72	-5	513-BKGDS1A	133	
1139	11/9/2010 12:56	76	72	4	513-BKGDS1A	133	
1140	11/9/2010 12:57	58	72	-14	513-BKGDS1A	133	
1141	11/9/2010 12:57	69	72	-3	513-BKGDS1A	133	
1142	11/9/2010 12:57	61	72	-11	513-BKGDS1A	133	
1143	11/9/2010 12:57	65	72	-7	513-BKGDS1A	133	
1144	11/9/2010 12:57	51	72	-21	513-BKGDS1A	133	
1145	11/9/2010 12:57	64	72	-8	513-BKGDS1A	133	
1146	11/9/2010 12:57	52	72	-20	513-BKGDS1A	133	
1147	11/9/2010 12:57	43	72	-29	513-BKGDS1A	133	
1148	11/9/2010 12:57	65	72	-7	513-BKGDS1A	133	
1149	11/9/2010 12:58	71	72	-1	513-BKGDS1A	133	
1150	11/9/2010 12:58	54	72	-18	513-BKGDS1A	133	
1151	11/9/2010 12:58	44	72	-28	513-BKGDS1A	133	
1152	11/9/2010 12:58	64	72	-8	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1153	11/9/2010 12:58	86	72	14	513-BKGDS1A	133	
1154	11/9/2010 13:00	30	72	-42	513-BKGDS1A	133	
1155	11/9/2010 13:00	50	72	-22	513-BKGDS1A	133	
1156	11/9/2010 13:00	58	72	-14	513-BKGDS1A	133	
1157	11/9/2010 13:00	54	72	-18	513-BKGDS1A	133	
1158	11/9/2010 13:00	42	72	-30	513-BKGDS1A	133	
1159	11/9/2010 13:00	42	72	-30	513-BKGDS1A	133	
1160	11/9/2010 13:00	42	72	-30	513-BKGDS1A	133	
1161	11/9/2010 13:00	60	72	-12	513-BKGDS1A	133	
1162	11/9/2010 13:00	50	72	-22	513-BKGDS1A	133	
1163	11/9/2010 13:01	45	72	-27	513-BKGDS1A	133	
1164	11/9/2010 13:01	48	72	-24	513-BKGDS1A	133	
1165	11/9/2010 13:01	90	72	18	513-BKGDS1A	133	
1166	11/9/2010 13:01	99	72	27	513-BKGDS1A	133	
1167	11/9/2010 13:01	83	72	11	513-BKGDS1A	133	
1168	11/9/2010 13:01	69	72	-3	513-BKGDS1A	133	
1169	11/9/2010 13:01	70	72	-2	513-BKGDS1A	133	
1170	11/9/2010 13:01	64	72	-8	513-BKGDS1A	133	
1171	11/9/2010 13:02	69	72	-3	513-BKGDS1A	133	
1172	11/9/2010 13:02	64	72	-8	513-BKGDS1A	133	
1173	11/9/2010 13:02	63	72	-9	513-BKGDS1A	133	
1174	11/9/2010 13:02	49	72	-23	513-BKGDS1A	133	
1175	11/9/2010 13:02	77	72	5	513-BKGDS1A	133	
1176	11/9/2010 13:02	78	72	6	513-BKGDS1A	133	
1177	11/9/2010 13:02	56	72	-16	513-BKGDS1A	133	
1178	11/9/2010 13:02	56	72	-16	513-BKGDS1A	133	
1179	11/9/2010 13:02	41	72	-31	513-BKGDS1A	133	
1180	11/9/2010 13:03	51	72	-21	513-BKGDS1A	133	
1181	11/9/2010 13:03	56	72	-16	513-BKGDS1A	133	
1182	11/9/2010 13:03	54	72	-18	513-BKGDS1A	133	
1183	11/9/2010 13:03	42	72	-30	513-BKGDS1A	133	
1184	11/9/2010 13:03	45	72	-27	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1185	11/9/2010 13:03	42	72	-30	513-BKGDS1A	133	
1186	11/9/2010 13:03	35	72	-37	513-BKGDS1A	133	
1187	11/9/2010 13:03	66	72	-6	513-BKGDS1A	133	
1188	11/9/2010 13:04	56	72	-16	513-BKGDS1A	133	
1189	11/9/2010 13:04	65	72	-7	513-BKGDS1A	133	
1190	11/9/2010 13:06	27	72	-45	513-BKGDS1A	133	
1191	11/9/2010 13:06	59	72	-13	513-BKGDS1A	133	
1192	11/9/2010 13:06	58	72	-14	513-BKGDS1A	133	
1193	11/9/2010 13:06	65	72	-7	513-BKGDS1A	133	
1194	11/9/2010 13:07	71	72	-1	513-BKGDS1A	133	
1195	11/9/2010 13:07	71	72	-1	513-BKGDS1A	133	
1196	11/9/2010 13:07	48	72	-24	513-BKGDS1A	133	
1197	11/9/2010 13:07	67	72	-5	513-BKGDS1A	133	
1198	11/9/2010 13:07	61	72	-11	513-BKGDS1A	133	
1199	11/9/2010 13:07	55	72	-17	513-BKGDS1A	133	
1200	11/9/2010 13:07	35	72	-37	513-BKGDS1A	133	
1201	11/9/2010 13:07	43	72	-29	513-BKGDS1A	133	
1202	11/9/2010 13:08	49	72	-23	513-BKGDS1A	133	
1203	11/9/2010 13:08	79	72	7	513-BKGDS1A	133	
1204	11/9/2010 13:08	95	72	23	513-BKGDS1A	133	
1205	11/9/2010 13:08	65	72	-7	513-BKGDS1A	133	
1206	11/9/2010 13:08	56	72	-16	513-BKGDS1A	133	
1207	11/9/2010 13:08	69	72	-3	513-BKGDS1A	133	
1208	11/9/2010 13:08	101	72	29	513-BKGDS1A	133	
1209	11/9/2010 13:08	82	72	10	513-BKGDS1A	133	
1210	11/9/2010 13:08	64	72	-8	513-BKGDS1A	133	
1211	11/9/2010 13:09	72	72	0	513-BKGDS1A	133	
1212	11/9/2010 13:09	85	72	13	513-BKGDS1A	133	
1213	11/9/2010 13:09	59	72	-13	513-BKGDS1A	133	
1214	11/9/2010 13:09	63	72	-9	513-BKGDS1A	133	
1215	11/9/2010 13:09	61	72	-11	513-BKGDS1A	133	
1216	11/9/2010 13:09	45	72	-27	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1217	11/9/2010 13:09	70	72	-2	513-BKGDS1A	133	
1218	11/9/2010 13:09	52	72	-20	513-BKGDS1A	133	
1219	11/9/2010 13:10	85	72	13	513-BKGDS1A	133	
1220	11/9/2010 13:10	74	72	2	513-BKGDS1A	133	
1221	11/9/2010 13:10	49	72	-23	513-BKGDS1A	133	
1222	11/9/2010 13:10	30	72	-42	513-BKGDS1A	133	
1223	11/9/2010 13:10	51	72	-21	513-BKGDS1A	133	
1224	11/9/2010 13:10	31	72	-41	513-BKGDS1A	133	
1225	11/9/2010 13:11	102	72	30	513-BKGDS1A	133	
1226	11/9/2010 13:12	40	72	-32	513-BKGDS1A	133	
1227	11/9/2010 13:12	80	72	8	513-BKGDS1A	133	
1228	11/9/2010 13:12	84	72	12	513-BKGDS1A	133	
1229	11/9/2010 13:12	85	72	13	513-BKGDS1A	133	
1230	11/9/2010 13:12	89	72	17	513-BKGDS1A	133	
1231	11/9/2010 13:12	62	72	-10	513-BKGDS1A	133	
1232	11/9/2010 13:12	70	72	-2	513-BKGDS1A	133	
1233	11/9/2010 13:12	112	72	40	513-BKGDS1A	133	
1234	11/9/2010 13:12	125	72	53	513-BKGDS1A	133	
1235	11/9/2010 13:13	124	72	52	513-BKGDS1A	133	
1236	11/9/2010 13:13	105	72	33	513-BKGDS1A	133	
1237	11/9/2010 13:13	102	72	30	513-BKGDS1A	133	
1238	11/9/2010 13:13	108	72	36	513-BKGDS1A	133	
1239	11/9/2010 13:13	90	72	18	513-BKGDS1A	133	
1240	11/9/2010 13:13	79	72	7	513-BKGDS1A	133	
1241	11/9/2010 13:13	89	72	17	513-BKGDS1A	133	
1242	11/9/2010 13:13	72	72	0	513-BKGDS1A	133	
1243	11/9/2010 13:14	62	72	-10	513-BKGDS1A	133	
1244	11/9/2010 13:14	60	72	-12	513-BKGDS1A	133	
1245	11/9/2010 13:14	76	72	4	513-BKGDS1A	133	
1246	11/9/2010 13:14	67	72	-5	513-BKGDS1A	133	
1247	11/9/2010 13:14	80	72	8	513-BKGDS1A	133	
1248	11/9/2010 13:14	75	72	3	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1249	11/9/2010 13:14	62	72	-10	513-BKGDS1A	133	
1250	11/9/2010 13:14	55	72	-17	513-BKGDS1A	133	
1251	11/9/2010 13:14	54	72	-18	513-BKGDS1A	133	
1252	11/9/2010 13:15	66	72	-6	513-BKGDS1A	133	
1253	11/9/2010 13:15	70	72	-2	513-BKGDS1A	133	
1254	11/9/2010 13:15	81	72	9	513-BKGDS1A	133	
1255	11/9/2010 13:15	65	72	-7	513-BKGDS1A	133	
1256	11/9/2010 13:15	81	72	9	513-BKGDS1A	133	
1257	11/9/2010 13:15	52	72	-20	513-BKGDS1A	133	
1258	11/9/2010 13:15	47	72	-25	513-BKGDS1A	133	
1259	11/9/2010 13:16	30	72	-42	513-BKGDS1A	133	
1260	11/9/2010 13:16	52	72	-20	513-BKGDS1A	133	
1261	11/9/2010 13:16	66	72	-6	513-BKGDS1A	133	
1262	11/9/2010 13:16	62	72	-10	513-BKGDS1A	133	
1263	11/9/2010 13:16	91	72	19	513-BKGDS1A	133	
1264	11/9/2010 13:17	67	72	-5	513-BKGDS1A	133	
1265	11/9/2010 13:17	84	72	12	513-BKGDS1A	133	
1266	11/9/2010 13:17	89	72	17	513-BKGDS1A	133	
1267	11/9/2010 13:17	65	72	-7	513-BKGDS1A	133	
1268	11/9/2010 13:17	65	72	-7	513-BKGDS1A	133	
1269	11/9/2010 13:17	74	72	2	513-BKGDS1A	133	
1270	11/9/2010 13:17	92	72	20	513-BKGDS1A	133	
1271	11/9/2010 13:17	83	72	11	513-BKGDS1A	133	
1272	11/9/2010 13:18	80	72	8	513-BKGDS1A	133	
1273	11/9/2010 13:18	98	72	26	513-BKGDS1A	133	
1274	11/9/2010 13:18	83	72	11	513-BKGDS1A	133	
1275	11/9/2010 13:18	90	72	18	513-BKGDS1A	133	
1276	11/9/2010 13:18	98	72	26	513-BKGDS1A	133	
1277	11/9/2010 13:18	84	72	12	513-BKGDS1A	133	
1278	11/9/2010 13:18	87	72	15	513-BKGDS1A	133	
1279	11/9/2010 13:18	67	72	-5	513-BKGDS1A	133	
1280	11/9/2010 13:18	99	72	27	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1281	11/9/2010 13:19	68	72	-4	513-BKGDS1A	133	
1282	11/9/2010 13:19	59	72	-13	513-BKGDS1A	133	
1283	11/9/2010 13:19	61	72	-11	513-BKGDS1A	133	
1284	11/9/2010 13:19	77	72	5	513-BKGDS1A	133	
1285	11/9/2010 13:19	79	72	7	513-BKGDS1A	133	
1286	11/9/2010 13:19	69	72	-3	513-BKGDS1A	133	
1287	11/9/2010 13:19	93	72	21	513-BKGDS1A	133	
1288	11/9/2010 13:19	74	72	2	513-BKGDS1A	133	
1289	11/9/2010 13:20	77	72	5	513-BKGDS1A	133	
1290	11/9/2010 13:20	67	72	-5	513-BKGDS1A	133	
1291	11/9/2010 13:20	69	72	-3	513-BKGDS1A	133	
1292	11/9/2010 13:20	53	72	-19	513-BKGDS1A	133	
1293	11/9/2010 13:40	36	72	-36	513-BKGDS1A	133	
1294	11/9/2010 13:40	49	72	-23	513-BKGDS1A	133	
1295	11/9/2010 13:40	63	72	-9	513-BKGDS1A	133	
1296	11/9/2010 13:40	62	72	-10	513-BKGDS1A	133	
1297	11/9/2010 13:40	71	72	-1	513-BKGDS1A	133	
1298	11/9/2010 13:40	66	72	-6	513-BKGDS1A	133	
1299	11/9/2010 13:40	72	72	0	513-BKGDS1A	133	
1300	11/9/2010 13:40	95	72	23	513-BKGDS1A	133	
1301	11/9/2010 13:41	77	72	5	513-BKGDS1A	133	
1302	11/9/2010 13:41	98	72	26	513-BKGDS1A	133	
1303	11/9/2010 13:41	89	72	17	513-BKGDS1A	133	
1304	11/9/2010 13:41	60	72	-12	513-BKGDS1A	133	
1305	11/9/2010 13:41	97	72	25	513-BKGDS1A	133	
1306	11/9/2010 13:41	99	72	27	513-BKGDS1A	133	
1307	11/9/2010 13:41	98	72	26	513-BKGDS1A	133	
1308	11/9/2010 13:41	90	72	18	513-BKGDS1A	133	
1309	11/9/2010 13:41	99	72	27	513-BKGDS1A	133	
1310	11/9/2010 13:42	106	72	34	513-BKGDS1A	133	
1311	11/9/2010 13:42	79	72	7	513-BKGDS1A	133	
1312	11/9/2010 13:42	70	72	-2	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1313	11/9/2010 13:42	77	72	5	513-BKGDS1A	133	
1314	11/9/2010 13:42	63	72	-9	513-BKGDS1A	133	
1315	11/9/2010 13:42	55	72	-17	513-BKGDS1A	133	
1316	11/9/2010 13:42	55	72	-17	513-BKGDS1A	133	
1317	11/9/2010 13:42	58	72	-14	513-BKGDS1A	133	
1318	11/9/2010 13:43	60	72	-12	513-BKGDS1A	133	
1319	11/9/2010 13:43	48	72	-24	513-BKGDS1A	133	
1320	11/9/2010 13:43	30	72	-42	513-BKGDS1A	133	
1321	11/9/2010 13:43	43	72	-29	513-BKGDS1A	133	
1322	11/9/2010 13:43	31	72	-41	513-BKGDS1A	133	
1323	11/9/2010 13:43	63	72	-9	513-BKGDS1A	133	
1324	11/9/2010 13:43	70	72	-2	513-BKGDS1A	133	
1325	11/9/2010 13:43	59	72	-13	513-BKGDS1A	133	
1326	11/9/2010 13:44	39	72	-33	513-BKGDS1A	133	
1327	11/9/2010 13:44	26	72	-46	513-BKGDS1A	133	
1328	11/9/2010 13:44	53	72	-19	513-BKGDS1A	133	
1329	11/9/2010 13:45	45	72	-27	513-BKGDS1A	133	
1330	11/9/2010 13:45	79	72	7	513-BKGDS1A	133	
1331	11/9/2010 13:45	77	72	5	513-BKGDS1A	133	
1332	11/9/2010 13:45	69	72	-3	513-BKGDS1A	133	
1333	11/9/2010 13:45	71	72	-1	513-BKGDS1A	133	
1334	11/9/2010 13:45	71	72	-1	513-BKGDS1A	133	
1335	11/9/2010 13:45	53	72	-19	513-BKGDS1A	133	
1336	11/9/2010 13:45	64	72	-8	513-BKGDS1A	133	
1337	11/9/2010 13:45	87	72	15	513-BKGDS1A	133	
1338	11/9/2010 13:46	99	72	27	513-BKGDS1A	133	
1339	11/9/2010 13:46	80	72	8	513-BKGDS1A	133	
1340	11/9/2010 13:46	90	72	18	513-BKGDS1A	133	
1341	11/9/2010 13:46	95	72	23	513-BKGDS1A	133	
1342	11/9/2010 13:46	117	72	45	513-BKGDS1A	133	
1343	11/9/2010 13:46	119	72	47	513-BKGDS1A	133	
1344	11/9/2010 13:46	112	72	40	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1345	11/9/2010 13:46	91	72	19	513-BKGDS1A	133	
1346	11/9/2010 13:46	122	72	50	513-BKGDS1A	133	
1347	11/9/2010 13:47	113	72	41	513-BKGDS1A	133	
1348	11/9/2010 13:47	82	72	10	513-BKGDS1A	133	
1349	11/9/2010 13:47	100	72	28	513-BKGDS1A	133	
1350	11/9/2010 13:47	86	72	14	513-BKGDS1A	133	
1351	11/9/2010 13:47	99	72	27	513-BKGDS1A	133	
1352	11/9/2010 13:47	84	72	12	513-BKGDS1A	133	
1353	11/9/2010 13:47	98	72	26	513-BKGDS1A	133	
1354	11/9/2010 13:47	82	72	10	513-BKGDS1A	133	
1355	11/9/2010 13:48	71	72	-1	513-BKGDS1A	133	
1356	11/9/2010 13:48	56	72	-16	513-BKGDS1A	133	
1357	11/9/2010 13:48	64	72	-8	513-BKGDS1A	133	
1358	11/9/2010 13:49	57	72	-15	513-BKGDS1A	133	
1359	11/9/2010 13:49	58	72	-14	513-BKGDS1A	133	
1360	11/9/2010 13:49	83	72	11	513-BKGDS1A	133	
1361	11/9/2010 13:49	76	72	4	513-BKGDS1A	133	
1362	11/9/2010 13:49	86	72	14	513-BKGDS1A	133	
1363	11/9/2010 13:49	66	72	-6	513-BKGDS1A	133	
1364	11/9/2010 13:49	76	72	4	513-BKGDS1A	133	
1365	11/9/2010 13:49	82	72	10	513-BKGDS1A	133	
1366	11/9/2010 13:49	83	72	11	513-BKGDS1A	133	
1367	11/9/2010 13:50	109	72	37	513-BKGDS1A	133	
1368	11/9/2010 13:50	90	72	18	513-BKGDS1A	133	
1369	11/9/2010 13:50	73	72	1	513-BKGDS1A	133	
1370	11/9/2010 13:50	87	72	15	513-BKGDS1A	133	
1371	11/9/2010 13:50	97	72	25	513-BKGDS1A	133	
1372	11/9/2010 13:50	75	72	3	513-BKGDS1A	133	
1373	11/9/2010 13:50	87	72	15	513-BKGDS1A	133	
1374	11/9/2010 13:50	71	72	-1	513-BKGDS1A	133	
1375	11/9/2010 13:51	68	72	-4	513-BKGDS1A	133	
1376	11/9/2010 13:51	79	72	7	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1377	11/9/2010 13:51	93	72	21	513-BKGDS1A	133	
1378	11/9/2010 13:51	68	72	-4	513-BKGDS1A	133	
1379	11/9/2010 13:51	46	72	-26	513-BKGDS1A	133	
1380	11/9/2010 13:51	54	72	-18	513-BKGDS1A	133	
1381	11/9/2010 13:51	86	72	14	513-BKGDS1A	133	
1382	11/9/2010 13:51	66	72	-6	513-BKGDS1A	133	
1383	11/9/2010 13:51	83	72	11	513-BKGDS1A	133	
1384	11/9/2010 13:52	67	72	-5	513-BKGDS1A	133	
1385	11/9/2010 13:52	74	72	2	513-BKGDS1A	133	
1386	11/9/2010 13:52	60	72	-12	513-BKGDS1A	133	
1387	11/9/2010 13:52	50	72	-22	513-BKGDS1A	133	
1388	11/9/2010 13:52	54	72	-18	513-BKGDS1A	133	
1389	11/9/2010 13:54	36	72	-36	513-BKGDS1A	133	
1390	11/9/2010 13:54	52	72	-20	513-BKGDS1A	133	
1391	11/9/2010 13:54	61	72	-11	513-BKGDS1A	133	
1392	11/9/2010 13:54	53	72	-19	513-BKGDS1A	133	
1393	11/9/2010 13:54	52	72	-20	513-BKGDS1A	133	
1394	11/9/2010 13:55	61	72	-11	513-BKGDS1A	133	
1395	11/9/2010 13:55	58	72	-14	513-BKGDS1A	133	
1396	11/9/2010 13:55	50	72	-22	513-BKGDS1A	133	
1397	11/9/2010 13:55	54	72	-18	513-BKGDS1A	133	
1398	11/9/2010 13:55	99	72	27	513-BKGDS1A	133	
1399	11/9/2010 13:55	74	72	2	513-BKGDS1A	133	
1400	11/9/2010 13:55	62	72	-10	513-BKGDS1A	133	
1401	11/9/2010 13:55	54	72	-18	513-BKGDS1A	133	
1402	11/9/2010 13:55	105	72	33	513-BKGDS1A	133	
1403	11/9/2010 13:56	104	72	32	513-BKGDS1A	133	
1404	11/9/2010 13:56	87	72	15	513-BKGDS1A	133	
1405	11/9/2010 13:56	87	72	15	513-BKGDS1A	133	
1406	11/9/2010 13:56	106	72	34	513-BKGDS1A	133	
1407	11/9/2010 13:56	102	72	30	513-BKGDS1A	133	
1408	11/9/2010 13:56	104	72	32	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1409	11/9/2010 13:56	97	72	25	513-BKGDS1A	133	
1410	11/9/2010 13:56	99	72	27	513-BKGDS1A	133	
1411	11/9/2010 13:57	107	72	35	513-BKGDS1A	133	
1412	11/9/2010 13:57	93	72	21	513-BKGDS1A	133	
1413	11/9/2010 13:57	82	72	10	513-BKGDS1A	133	
1414	11/9/2010 13:57	72	72	0	513-BKGDS1A	133	
1415	11/9/2010 13:57	85	72	13	513-BKGDS1A	133	
1416	11/9/2010 13:57	82	72	10	513-BKGDS1A	133	
1417	11/9/2010 13:57	59	72	-13	513-BKGDS1A	133	
1418	11/9/2010 13:57	46	72	-26	513-BKGDS1A	133	
1419	11/9/2010 13:58	33	72	-39	513-BKGDS1A	133	
1420	11/9/2010 13:59	45	72	-27	513-BKGDS1A	133	
1421	11/9/2010 13:59	55	72	-17	513-BKGDS1A	133	
1422	11/9/2010 13:59	87	72	15	513-BKGDS1A	133	
1423	11/9/2010 13:59	112	72	40	513-BKGDS1A	133	
1424	11/9/2010 13:59	100	72	28	513-BKGDS1A	133	
1425	11/9/2010 13:59	101	72	29	513-BKGDS1A	133	
1426	11/9/2010 13:59	108	72	36	513-BKGDS1A	133	
1427	11/9/2010 13:59	76	72	4	513-BKGDS1A	133	
1428	11/9/2010 13:59	78	72	6	513-BKGDS1A	133	
1429	11/9/2010 14:00	62	72	-10	513-BKGDS1A	133	
1430	11/9/2010 14:00	77	72	5	513-BKGDS1A	133	
1431	11/9/2010 14:00	81	72	9	513-BKGDS1A	133	
1432	11/9/2010 14:00	50	72	-22	513-BKGDS1A	133	
1433	11/9/2010 14:00	60	72	-12	513-BKGDS1A	133	
1434	11/9/2010 14:00	75	72	3	513-BKGDS1A	133	
1435	11/9/2010 14:00	94	72	22	513-BKGDS1A	133	
1436	11/9/2010 14:00	110	72	38	513-BKGDS1A	133	
1437	11/9/2010 14:00	96	72	24	513-BKGDS1A	133	
1438	11/9/2010 14:01	69	72	-3	513-BKGDS1A	133	
1439	11/9/2010 14:01	83	72	11	513-BKGDS1A	133	
1440	11/9/2010 14:01	88	72	16	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1441	11/9/2010 14:01	65	72	-7	513-BKGDS1A	133	
1442	11/9/2010 14:01	63	72	-9	513-BKGDS1A	133	
1443	11/9/2010 14:01	59	72	-13	513-BKGDS1A	133	
1444	11/9/2010 14:01	60	72	-12	513-BKGDS1A	133	
1445	11/9/2010 14:01	59	72	-13	513-BKGDS1A	133	
1446	11/9/2010 14:02	64	72	-8	513-BKGDS1A	133	
1447	11/9/2010 14:02	58	72	-14	513-BKGDS1A	133	
1448	11/9/2010 14:07	57	72	-15	513-BKGDS1A	133	
1449	11/9/2010 14:07	50	72	-22	513-BKGDS1A	133	
1450	11/9/2010 14:07	49	72	-23	513-BKGDS1A	133	
1451	11/9/2010 14:07	59	72	-13	513-BKGDS1A	133	
1452	11/9/2010 14:07	77	72	5	513-BKGDS1A	133	
1453	11/9/2010 14:07	62	72	-10	513-BKGDS1A	133	
1454	11/9/2010 14:07	79	72	7	513-BKGDS1A	133	
1455	11/9/2010 14:07	85	72	13	513-BKGDS1A	133	
1456	11/9/2010 14:08	61	72	-11	513-BKGDS1A	133	
1457	11/9/2010 14:08	66	72	-6	513-BKGDS1A	133	
1458	11/9/2010 14:08	68	72	-4	513-BKGDS1A	133	
1459	11/9/2010 14:08	78	72	6	513-BKGDS1A	133	
1460	11/9/2010 14:08	76	72	4	513-BKGDS1A	133	
1461	11/9/2010 14:08	108	72	36	513-BKGDS1A	133	
1462	11/9/2010 14:08	96	72	24	513-BKGDS1A	133	
1463	11/9/2010 14:08	82	72	10	513-BKGDS1A	133	
1464	11/9/2010 14:08	101	72	29	513-BKGDS1A	133	
1465	11/9/2010 14:09	92	72	20	513-BKGDS1A	133	
1466	11/9/2010 14:09	79	72	7	513-BKGDS1A	133	
1467	11/9/2010 14:09	72	72	0	513-BKGDS1A	133	
1468	11/9/2010 14:09	84	72	12	513-BKGDS1A	133	
1469	11/9/2010 14:09	75	72	3	513-BKGDS1A	133	
1470	11/9/2010 14:09	92	72	20	513-BKGDS1A	133	
1471	11/9/2010 14:09	104	72	32	513-BKGDS1A	133	
1472	11/9/2010 14:09	89	72	17	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1473	11/9/2010 14:09	87	72	15	513-BKGDS1A	133	
1474	11/9/2010 14:10	84	72	12	513-BKGDS1A	133	
1475	11/9/2010 14:10	81	72	9	513-BKGDS1A	133	
1476	11/9/2010 14:10	48	72	-24	513-BKGDS1A	133	
1477	11/9/2010 14:10	58	72	-14	513-BKGDS1A	133	
1478	11/9/2010 14:10	80	72	8	513-BKGDS1A	133	
1479	11/9/2010 14:12	32	72	-40	513-BKGDS1A	133	
1480	11/9/2010 14:12	69	72	-3	513-BKGDS1A	133	
1481	11/9/2010 14:12	85	72	13	513-BKGDS1A	133	
1482	11/9/2010 14:12	83	72	11	513-BKGDS1A	133	
1483	11/9/2010 14:13	63	72	-9	513-BKGDS1A	133	
1484	11/9/2010 14:13	99	72	27	513-BKGDS1A	133	
1485	11/9/2010 14:13	84	72	12	513-BKGDS1A	133	
1486	11/9/2010 14:13	88	72	16	513-BKGDS1A	133	
1487	11/9/2010 14:13	90	72	18	513-BKGDS1A	133	
1488	11/9/2010 14:13	94	72	22	513-BKGDS1A	133	
1489	11/9/2010 14:13	79	72	7	513-BKGDS1A	133	
1490	11/9/2010 14:13	72	72	0	513-BKGDS1A	133	
1491	11/9/2010 14:14	85	72	13	513-BKGDS1A	133	
1492	11/9/2010 14:14	60	72	-12	513-BKGDS1A	133	
1493	11/9/2010 14:14	83	72	11	513-BKGDS1A	133	
1494	11/9/2010 14:14	81	72	9	513-BKGDS1A	133	
1495	11/9/2010 14:14	70	72	-2	513-BKGDS1A	133	
1496	11/9/2010 14:14	68	72	-4	513-BKGDS1A	133	
1497	11/9/2010 14:14	62	72	-10	513-BKGDS1A	133	
1498	11/9/2010 14:14	90	72	18	513-BKGDS1A	133	
1499	11/9/2010 14:14	60	72	-12	513-BKGDS1A	133	
1500	11/9/2010 14:15	62	72	-10	513-BKGDS1A	133	
1501	11/9/2010 14:15	51	72	-21	513-BKGDS1A	133	
1502	11/9/2010 14:15	68	72	-4	513-BKGDS1A	133	
1503	11/9/2010 14:15	66	72	-6	513-BKGDS1A	133	
1504	11/9/2010 14:15	60	72	-12	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1505	11/9/2010 14:15	71	72	-1	513-BKGDS1A	133	
1506	11/9/2010 14:16	24	72	-48	513-BKGDS1A	133	
1507	11/9/2010 14:16	49	72	-23	513-BKGDS1A	133	
1508	11/9/2010 14:16	56	72	-16	513-BKGDS1A	133	
1509	11/9/2010 14:16	60	72	-12	513-BKGDS1A	133	
1510	11/9/2010 14:17	60	72	-12	513-BKGDS1A	133	
1511	11/9/2010 14:17	70	72	-2	513-BKGDS1A	133	
1512	11/9/2010 14:17	62	72	-10	513-BKGDS1A	133	
1513	11/9/2010 14:17	77	72	5	513-BKGDS1A	133	
1514	11/9/2010 14:17	68	72	-4	513-BKGDS1A	133	
1515	11/9/2010 14:17	88	72	16	513-BKGDS1A	133	
1516	11/9/2010 14:17	81	72	9	513-BKGDS1A	133	
1517	11/9/2010 14:17	82	72	10	513-BKGDS1A	133	
1518	11/9/2010 14:17	73	72	1	513-BKGDS1A	133	
1519	11/9/2010 14:18	81	72	9	513-BKGDS1A	133	
1520	11/9/2010 14:18	72	72	0	513-BKGDS1A	133	
1521	11/9/2010 14:18	79	72	7	513-BKGDS1A	133	
1522	11/9/2010 14:18	68	72	-4	513-BKGDS1A	133	
1523	11/9/2010 14:18	79	72	7	513-BKGDS1A	133	
1524	11/9/2010 14:18	98	72	26	513-BKGDS1A	133	
1525	11/9/2010 14:18	99	72	27	513-BKGDS1A	133	
1526	11/9/2010 14:18	74	72	2	513-BKGDS1A	133	
1527	11/9/2010 14:19	71	72	-1	513-BKGDS1A	133	
1528	11/9/2010 14:19	80	72	8	513-BKGDS1A	133	
1529	11/9/2010 14:19	95	72	23	513-BKGDS1A	133	
1530	11/9/2010 14:19	100	72	28	513-BKGDS1A	133	
1531	11/9/2010 14:19	108	72	36	513-BKGDS1A	133	
1532	11/9/2010 14:20	44	72	-28	513-BKGDS1A	133	
1533	11/9/2010 14:20	65	72	-7	513-BKGDS1A	133	
1534	11/9/2010 14:20	47	72	-25	513-BKGDS1A	133	
1535	11/9/2010 14:20	80	72	8	513-BKGDS1A	133	
1536	11/9/2010 14:20	64	72	-8	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 16** **Class: 1** **Area: 989.60 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1537	11/9/2010 14:20	57	72	-15	513-BKGDS1A	133	
1538	11/9/2010 14:21	50	72	-22	513-BKGDS1A	133	
1539	11/9/2010 14:21	58	72	-14	513-BKGDS1A	133	
1540	11/9/2010 14:21	53	72	-19	513-BKGDS1A	133	
1541	11/9/2010 14:21	89	72	17	513-BKGDS1A	133	
1542	11/9/2010 14:21	99	72	27	513-BKGDS1A	133	
1543	11/9/2010 14:21	104	72	32	513-BKGDS1A	133	
1544	11/9/2010 14:21	81	72	9	513-BKGDS1A	133	
1545	11/9/2010 14:21	64	72	-8	513-BKGDS1A	133	
1546	11/9/2010 14:22	89	72	17	513-BKGDS1A	133	
1547	11/9/2010 14:22	66	72	-6	513-BKGDS1A	133	
1548	11/9/2010 14:22	75	72	3	513-BKGDS1A	133	
1549	11/9/2010 14:22	70	72	-2	513-BKGDS1A	133	
1550	11/9/2010 14:22	103	72	31	513-BKGDS1A	133	
1551	11/9/2010 14:22	105	72	33	513-BKGDS1A	133	
1552	11/9/2010 14:22	95	72	23	513-BKGDS1A	133	
1553	11/9/2010 14:22	78	72	6	513-BKGDS1A	133	
1554	11/9/2010 14:22	68	72	-4	513-BKGDS1A	133	
1555	11/9/2010 14:23	80	72	8	513-BKGDS1A	133	
1556	11/9/2010 14:23	74	72	2	513-BKGDS1A	133	
1557	11/9/2010 14:28	48	72	-24	513-BKGDS1A	133	
1558	11/9/2010 14:28	38	72	-34	513-BKGDS1A	133	
1559	11/9/2010 14:28	68	72	-4	513-BKGDS1A	133	
1560	11/9/2010 14:28	69	72	-3	513-BKGDS1A	133	
1561	11/9/2010 14:28	70	72	-2	513-BKGDS1A	133	
1562	11/9/2010 14:28	93	72	21	513-BKGDS1A	133	
1563	11/9/2010 14:28	90	72	18	513-BKGDS1A	133	
1564	11/9/2010 14:29	109	72	37	513-BKGDS1A	133	
1565	11/9/2010 14:29	103	72	31	513-BKGDS1A	133	
1566	11/9/2010 14:29	85	72	13	513-BKGDS1A	133	
1567	11/9/2010 14:29	98	72	26	513-BKGDS1A	133	
1568	11/9/2010 14:29	80	72	8	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1569	11/9/2010 14:29	81	72	9	513-BKGDS1A	133	
1570	11/9/2010 14:29	63	72	-9	513-BKGDS1A	133	
1571	11/9/2010 14:29	80	72	8	513-BKGDS1A	133	
1572	11/9/2010 14:30	105	72	33	513-BKGDS1A	133	
1573	11/9/2010 14:30	91	72	19	513-BKGDS1A	133	
1574	11/9/2010 14:30	88	72	16	513-BKGDS1A	133	
1575	11/9/2010 14:30	83	72	11	513-BKGDS1A	133	
1576	11/9/2010 14:30	90	72	18	513-BKGDS1A	133	
1577	11/9/2010 14:30	87	72	15	513-BKGDS1A	133	
1578	11/9/2010 14:30	101	72	29	513-BKGDS1A	133	
1579	11/9/2010 14:30	95	72	23	513-BKGDS1A	133	
1580	11/9/2010 14:30	102	72	30	513-BKGDS1A	133	
1581	11/9/2010 14:31	70	72	-2	513-BKGDS1A	133	
1582	11/9/2010 14:31	91	72	19	513-BKGDS1A	133	
1583	11/9/2010 14:32	82	72	10	513-BKGDS1A	133	
1584	11/9/2010 14:32	119	72	47	513-BKGDS1A	133	
1585	11/9/2010 14:32	89	72	17	513-BKGDS1A	133	
1586	11/9/2010 14:32	82	72	10	513-BKGDS1A	133	
1587	11/9/2010 14:32	103	72	31	513-BKGDS1A	133	
1588	11/9/2010 14:32	83	72	11	513-BKGDS1A	133	
1589	11/9/2010 14:32	63	72	-9	513-BKGDS1A	133	
1590	11/9/2010 14:32	38	72	-34	513-BKGDS1A	133	
1591	11/9/2010 14:32	57	72	-15	513-BKGDS1A	133	
1592	11/9/2010 14:33	69	72	-3	513-BKGDS1A	133	
1593	11/9/2010 14:33	69	72	-3	513-BKGDS1A	133	
1594	11/9/2010 14:33	86	72	14	513-BKGDS1A	133	
1595	11/9/2010 14:33	93	72	21	513-BKGDS1A	133	
1596	11/9/2010 14:33	111	72	39	513-BKGDS1A	133	
1597	11/9/2010 14:33	88	72	16	513-BKGDS1A	133	
1598	11/9/2010 14:33	76	72	4	513-BKGDS1A	133	
1599	11/9/2010 14:33	68	72	-4	513-BKGDS1A	133	
1600	11/9/2010 14:34	72	72	0	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1601	11/9/2010 14:34	73	72	1	513-BKGDS1A	133	
1602	11/9/2010 14:34	69	72	-3	513-BKGDS1A	133	
1603	11/9/2010 14:34	81	72	9	513-BKGDS1A	133	
1604	11/9/2010 14:35	81	72	9	513-BKGDS1A	133	
1605	11/9/2010 14:35	53	72	-19	513-BKGDS1A	133	
1606	11/9/2010 14:36	47	72	-25	513-BKGDS1A	133	
1607	11/9/2010 14:36	39	72	-33	513-BKGDS1A	133	
1608	11/9/2010 14:36	57	72	-15	513-BKGDS1A	133	
1609	11/9/2010 14:36	80	72	8	513-BKGDS1A	133	
1610	11/9/2010 14:36	89	72	17	513-BKGDS1A	133	
1611	11/9/2010 14:36	105	72	33	513-BKGDS1A	133	
1612	11/9/2010 14:36	79	72	7	513-BKGDS1A	133	
1613	11/9/2010 14:36	87	72	15	513-BKGDS1A	133	
1614	11/9/2010 14:37	107	72	35	513-BKGDS1A	133	
1615	11/9/2010 14:37	99	72	27	513-BKGDS1A	133	
1616	11/9/2010 14:37	109	72	37	513-BKGDS1A	133	
1617	11/9/2010 14:37	77	72	5	513-BKGDS1A	133	
1618	11/9/2010 14:37	88	72	16	513-BKGDS1A	133	
1619	11/9/2010 14:37	85	72	13	513-BKGDS1A	133	
1620	11/9/2010 14:37	73	72	1	513-BKGDS1A	133	
1621	11/9/2010 14:37	61	72	-11	513-BKGDS1A	133	
1622	11/9/2010 14:37	87	72	15	513-BKGDS1A	133	
1623	11/9/2010 14:38	79	72	7	513-BKGDS1A	133	
1624	11/9/2010 14:38	96	72	24	513-BKGDS1A	133	
1625	11/9/2010 14:38	71	72	-1	513-BKGDS1A	133	
1626	11/9/2010 14:38	30	72	-42	513-BKGDS1A	133	
1627	11/9/2010 14:38	71	72	-1	513-BKGDS1A	133	
1628	11/9/2010 14:39	85	72	13	513-BKGDS1A	133	
1629	11/9/2010 14:39	65	72	-7	513-BKGDS1A	133	
1630	11/9/2010 14:39	70	72	-2	513-BKGDS1A	133	
1631	11/9/2010 14:39	62	72	-10	513-BKGDS1A	133	
1632	11/9/2010 14:39	64	72	-8	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1633	11/9/2010 14:39	65	72	-7	513-BKGDS1A	133	
1634	11/9/2010 14:39	48	72	-24	513-BKGDS1A	133	
1635	11/9/2010 14:39	42	72	-30	513-BKGDS1A	133	
1636	11/9/2010 14:40	47	72	-25	513-BKGDS1A	133	
1637	11/9/2010 14:40	50	72	-22	513-BKGDS1A	133	
1638	11/9/2010 14:40	58	72	-14	513-BKGDS1A	133	
1639	11/9/2010 14:40	58	72	-14	513-BKGDS1A	133	
1640	11/9/2010 14:40	61	72	-11	513-BKGDS1A	133	
1641	11/9/2010 14:40	116	72	44	513-BKGDS1A	133	
1642	11/9/2010 14:40	106	72	34	513-BKGDS1A	133	
1643	11/9/2010 14:40	94	72	22	513-BKGDS1A	133	
1644	11/9/2010 14:40	86	72	14	513-BKGDS1A	133	
1645	11/9/2010 14:41	93	72	21	513-BKGDS1A	133	
1646	11/9/2010 14:41	84	72	12	513-BKGDS1A	133	
1647	11/9/2010 14:41	69	72	-3	513-BKGDS1A	133	
1648	11/9/2010 14:42	31	72	-41	513-BKGDS1A	133	
1649	11/9/2010 14:42	59	72	-13	513-BKGDS1A	133	
1650	11/9/2010 14:42	63	72	-9	513-BKGDS1A	133	
1651	11/9/2010 14:42	93	72	21	513-BKGDS1A	133	
1652	11/9/2010 14:43	83	72	11	513-BKGDS1A	133	
1653	11/9/2010 14:43	74	72	2	513-BKGDS1A	133	
1654	11/9/2010 14:43	100	72	28	513-BKGDS1A	133	
1655	11/9/2010 14:43	106	72	34	513-BKGDS1A	133	
1656	11/9/2010 14:43	96	72	24	513-BKGDS1A	133	
1657	11/9/2010 14:43	96	72	24	513-BKGDS1A	133	
1658	11/9/2010 14:43	86	72	14	513-BKGDS1A	133	
1659	11/9/2010 14:43	55	72	-17	513-BKGDS1A	133	
1660	11/9/2010 14:44	39	72	-33	513-BKGDS1A	133	
1661	11/9/2010 14:44	62	72	-10	513-BKGDS1A	133	
1662	11/9/2010 14:44	59	72	-13	513-BKGDS1A	133	
1663	11/9/2010 14:44	61	72	-11	513-BKGDS1A	133	
1664	11/9/2010 14:44	77	72	5	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1665	11/9/2010 14:44	61	72	-11	513-BKGDS1A	133	
1666	11/9/2010 14:44	51	72	-21	513-BKGDS1A	133	
1667	11/9/2010 14:44	62	72	-10	513-BKGDS1A	133	
1668	11/9/2010 14:45	34	72	-38	513-BKGDS1A	133	
1669	11/9/2010 14:45	62	72	-10	513-BKGDS1A	133	
1670	11/9/2010 14:46	72	72	0	513-BKGDS1A	133	
1671	11/9/2010 14:46	92	72	20	513-BKGDS1A	133	
1672	11/9/2010 14:46	94	72	22	513-BKGDS1A	133	
1673	11/9/2010 14:46	86	72	14	513-BKGDS1A	133	
1674	11/9/2010 14:46	54	72	-18	513-BKGDS1A	133	
1675	11/9/2010 14:46	64	72	-8	513-BKGDS1A	133	
1676	11/9/2010 14:46	56	72	-16	513-BKGDS1A	133	
1677	11/9/2010 14:46	49	72	-23	513-BKGDS1A	133	
1678	11/9/2010 14:46	47	72	-25	513-BKGDS1A	133	
1679	11/9/2010 14:47	32	72	-40	513-BKGDS1A	133	
1680	11/9/2010 14:47	45	72	-27	513-BKGDS1A	133	
1681	11/9/2010 14:47	62	72	-10	513-BKGDS1A	133	
1682	11/9/2010 14:47	81	72	9	513-BKGDS1A	133	
1683	11/9/2010 14:47	85	72	13	513-BKGDS1A	133	
1684	11/9/2010 14:47	88	72	16	513-BKGDS1A	133	
1685	11/9/2010 14:47	91	72	19	513-BKGDS1A	133	
1686	11/9/2010 14:47	85	72	13	513-BKGDS1A	133	
1687	11/9/2010 14:48	36	72	-36	513-BKGDS1A	133	
1688	11/9/2010 14:48	60	72	-12	513-BKGDS1A	133	
1689	11/9/2010 14:48	57	72	-15	513-BKGDS1A	133	
1690	11/9/2010 14:48	83	72	11	513-BKGDS1A	133	
1691	11/9/2010 14:49	57	72	-15	513-BKGDS1A	133	
1692	11/9/2010 14:49	72	72	0	513-BKGDS1A	133	
1693	11/9/2010 14:49	58	72	-14	513-BKGDS1A	133	
1694	11/9/2010 14:49	82	72	10	513-BKGDS1A	133	
1695	11/9/2010 14:49	89	72	17	513-BKGDS1A	133	
1696	11/9/2010 14:49	76	72	4	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1697	11/9/2010 14:49	74	72	2	513-BKGDS1A	133	
1698	11/9/2010 14:49	80	72	8	513-BKGDS1A	133	
1699	11/9/2010 14:50	57	72	-15	513-BKGDS1A	133	
1700	11/9/2010 14:50	90	72	18	513-BKGDS1A	133	
1701	11/9/2010 14:50	61	72	-11	513-BKGDS1A	133	
1702	11/9/2010 14:50	45	72	-27	513-BKGDS1A	133	
1703	11/9/2010 14:51	34	72	-38	513-BKGDS1A	133	
1704	11/9/2010 14:51	46	72	-26	513-BKGDS1A	133	
1705	11/9/2010 14:51	69	72	-3	513-BKGDS1A	133	
1706	11/9/2010 14:51	57	72	-15	513-BKGDS1A	133	
1707	11/9/2010 14:51	94	72	22	513-BKGDS1A	133	
1708	11/9/2010 14:51	106	72	34	513-BKGDS1A	133	
1709	11/9/2010 14:51	87	72	15	513-BKGDS1A	133	
1710	11/9/2010 14:51	82	72	10	513-BKGDS1A	133	
1711	11/9/2010 14:52	53	72	-19	513-BKGDS1A	133	
1712	11/9/2010 14:52	64	72	-8	513-BKGDS1A	133	
1713	11/9/2010 14:52	100	72	28	513-BKGDS1A	133	
1714	11/9/2010 14:52	90	72	18	513-BKGDS1A	133	
1715	11/9/2010 14:52	70	72	-2	513-BKGDS1A	133	
1716	11/9/2010 14:52	77	72	5	513-BKGDS1A	133	
1717	11/9/2010 14:52	97	72	25	513-BKGDS1A	133	
1718	11/9/2010 14:53	43	72	-29	513-BKGDS1A	133	
1719	11/9/2010 14:53	51	72	-21	513-BKGDS1A	133	
1720	11/9/2010 14:54	70	72	-2	513-BKGDS1A	133	
1721	11/9/2010 14:54	91	72	19	513-BKGDS1A	133	
1722	11/9/2010 14:54	78	72	6	513-BKGDS1A	133	
1723	11/9/2010 14:54	64	72	-8	513-BKGDS1A	133	
1724	11/9/2010 14:54	53	72	-19	513-BKGDS1A	133	
1725	11/9/2010 14:54	48	72	-24	513-BKGDS1A	133	
1726	11/9/2010 14:54	47	72	-25	513-BKGDS1A	133	
1727	11/9/2010 14:54	39	72	-33	513-BKGDS1A	133	
1728	11/9/2010 14:54	52	72	-20	513-BKGDS1A	133	

TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 **Survey Unit: 16** **Class: 1** **Area: 989.60 m²**

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1729	11/9/2010 14:55	78	72	6	513-BKGDS1A	133	
1730	11/9/2010 14:55	52	72	-20	513-BKGDS1A	133	
1731	11/9/2010 14:55	69	72	-3	513-BKGDS1A	133	
1732	11/9/2010 14:55	88	72	16	513-BKGDS1A	133	
1733	11/9/2010 14:56	60	72	-12	513-BKGDS1A	133	
1734	11/9/2010 14:56	85	72	13	513-BKGDS1A	133	
1735	11/9/2010 14:56	100	72	28	513-BKGDS1A	133	
1736	11/9/2010 14:56	68	72	-4	513-BKGDS1A	133	
1737	11/9/2010 14:56	87	72	15	513-BKGDS1A	133	
1738	11/9/2010 14:56	113	72	41	513-BKGDS1A	133	
1739	11/9/2010 14:56	67	72	-5	513-BKGDS1A	133	
1740	11/9/2010 14:56	73	72	1	513-BKGDS1A	133	
1741	11/9/2010 14:57	84	72	12	513-BKGDS1A	133	
1742	11/9/2010 14:57	99	72	27	513-BKGDS1A	133	
1743	11/9/2010 14:57	81	72	9	513-BKGDS1A	133	
1744	11/9/2010 14:57	106	72	34	513-BKGDS1A	133	
1745	11/9/2010 14:57	96	72	24	513-BKGDS1A	133	
1746	11/9/2010 14:57	85	72	13	513-BKGDS1A	133	
1747	11/9/2010 14:57	84	72	12	513-BKGDS1A	133	
1748	11/9/2010 15:08	37	72	-35	513-BKGDS1A	133	
1749	11/9/2010 15:09	45	72	-27	513-BKGDS1A	133	
1750	11/9/2010 15:09	41	72	-31	513-BKGDS1A	133	
1751	11/9/2010 15:09	35	72	-37	513-BKGDS1A	133	
1752	11/9/2010 15:09	69	72	-3	513-BKGDS1A	133	
1753	11/9/2010 15:09	73	72	1	513-BKGDS1A	133	
1754	11/9/2010 15:09	66	72	-6	513-BKGDS1A	133	
1755	11/9/2010 15:09	56	72	-16	513-BKGDS1A	133	
1756	11/9/2010 15:09	93	72	21	513-BKGDS1A	133	
1757	11/9/2010 15:09	124	72	52	513-BKGDS1A	133	
1758	11/9/2010 15:10	101	72	29	513-BKGDS1A	133	
1759	11/9/2010 15:10	79	72	7	513-BKGDS1A	133	
1760	11/9/2010 15:10	61	72	-11	513-BKGDS1A	133	