Table B4 - 2 UCL-Related DQO Statistics for Remaining Onsite Area Soils for Shallow Soil (0 to 5 Feet)

	Toxicological Screening Levels and Background UTL				Site Characterization Statistics					Risk Statistics		DOQ Statistics		
CLASS Parameter	Industrial PRG or Industrial PRG (CA) /1	Lowest Ecological Screening Level	UTL /2	SL /3	N	Fraction of Detection (FOD) (bolded when 6% or less)	Min Detection	Max Detection	Mean /4	Exposure Point Concetration (EPC) from ProUCL	EPC basis	Estimation Uncertainty (%) 5/ Estimation Interval Percent of Mean (EI%) High When > 100%	Decision Uncertainty (Yes/No) /6 Yes (bolded) when EI spans SL	Increased Sample Size Is Effective to Reduce Decision Uncertainty (Yes/No) /7
CYANIDE (mg/kg)														
Total Cyanide	12313.10			12313.10	22	14%	0.235	0.621	0.448	0.621	Max	39	<<	<<
DIOXIN (PCDD/PCDFs) (pg/g)				*										<<
Avian Dioxin TEQ			16	16.00	11	100%	0.0006658	3.07	0.604	2.483	Use 97.5% Chebyshev(Mean, Sd) UCL	**311**	<<	<<
Mammal Dioxin TEQ	15.92		13	15.92	11	100%	0.002	2.578	0.671	2.445	Use 97.5% Chebyshev(Mean, Sd) UCL	**264**	<<	<<
HERBICIDES (mg/kg)														
2,4-Dichlorophenoxybutyric acid (2,4-DB	4924.85			4924.85	36	0%	N/A	N/A	N/A	N/A	N/A	No Detects	No Detects	No Detects
Dalapon	18468.19			18468.19	36	6%	0.014	0.018	0.016	0.018	Max	13	<<	<<
MCPA	307.80			307.80	36	6%	3.9	4.9	4.4	4.9	Max	11	<<	<<
MCPP	615.61	350		350.00	10	20%	0.68	0.92	0.8	0.92	Max	15	<<	<<
METALS (mg/kg)														
Barium	5400.00	330	174	330.00	48	100%	18	800	114.5	213	Use 95% Chebyshev (Mean, Sd) UCL	86	<<	<<
Beryllium	1940.69	10	0.91	10.00	48	100%	0.22	0.84	0.468	0.496	Use 95% Approximate Gamma UCL	6	<<	<<
Cadmium	451.41	0.36	3.2	3.20	48	100%	0.34	3.1	1.128	1.263	Use 95% Approximate Gamma UCL	12	<<	<<
Chromium	448.32	0.4	47	47.00	48	100%	12	130	27.1	31.51	or 95% Modified-t UCL	16	<<	<<
Cobalt	1921.35	13	20	20.00	48	100%	1.2	15	5.077	5.817	Use 95% Approximate Gamma UCL	15	<<	<<
Copper	40876.66	28	19	28.00	48	100%	6.4	150	15.82	21.19	or 95% Modified-t UCL	34	<<	<<
Lead	800.00	11	11.9	11.90	48	23%	7.5	37	14.17	10.4	95% KM (t) UCL	-27	<<	<<
Manganese	19458.11	220	330	330.00	48	100%	30	490	175.7	216.8	Use 95% H-UCL	23	<<	<<
Mercury	306.60	0.1	0.026	0.10	48	44%	0.013	0.088	0.0277	0.0247	95% KM (% Bootstrap) UCL	-11	<<	<<
Molybdenum	5109.95	2	10	10.00	48	48%	2	11	3.461	3.199	95% KM (% Bootstrap) UCL	-8	<<	<<
Nickel	20439.16	30	49	49.00	48	100%	10	62	30.19	32.53	Use 95% Student's-t UCL	8	<<	<<
Selenium	5109.95	1	3.3	3.30	48	21%	1.2	3.5	1.77	1.494	95% KM (% Bootstrap) UCL	-16	<<	<<
Thallium	67.45	1	0.64	1.00	48	90%	0.19	2.8	0.499	0.794	95% KM (Chebyshev) UCL	59	<<	<<
Tin	100000.00	50	65	65.00	48	67%	26	63	47.56	45.56	95% KM (BCA) UCL	-4	<<	<<
Vanadium	1022.00	2	81	81.00	48	100%	17	47	26.46	27.84	Use 95% Approximate Gamma UCL	5	<<	<<
Zinc	100000.00	50	104	104.00	48	100%	16	78	46.58	49.58	Use 95% Student's-t UCL	6	<<	<<
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) (mg/kg)														
Acenaphthene	29219.33	20		20.00	48	21%	0.0019	0.13	0.0235	0.0113	95% KM (t) UCL	-52	<<	<<
Anthracene	100000.00			100000.00	48	2%	0.0023	0.0023	0.0023	0.0023	Max	0	<<	<<
Benzo(a)anthracene	2.11			2.11	48	8%	0.0055	0.12	0.0355	0.12	Max	**238**	<<	<<
Benzo(a)pyrene	0.21			0.21	48	19%	0.0059	0.51	0.0959	0.0738	95% KM (Chebyshev) UCL	-23	<<	<<
Benzo(b)fluoranthene	2.11			2.11	48	15%	0.0048	0.017	0.00814	0.00594	95% KM (t) UCL	-27	<<	<<
Benzo(g,h,i)perylene				*	48	6%	0.0052	0.0076	0.00637	0.0076	Max	19	No SL	No SL
Benzo(k)fluoranthene	1.28			1.28	48	13%	0.0036	0.55	0.0966	0.069	95% KM (Chebyshev) UCL	-29	<<	<<
Chrysene	12.83			12.83	48	21%	0.0023	0.1	0.0182	0.00938	95% KM (t) UCL	-48	<<	<<
Fluoranthene	22000.35			22000.35	48	13%	0.0021	0.017	0.00932	0.00397	95% KM (t) UCL	-57	<<	<<
Fluorene	26281.43	30		30.00	48	19%	0.0015	0.034	0.00746	0.00453	95% KM (BCA) UCL	-39	<<	<<
Indeno(1,2,3-c,d)pyrene	2.11			2.11	48	6%	0.0024	0.0061	0.0047	0.0061	Max	30	<<	<<
Naphthalene	4.20			4.20	48	13%	0.0034	0.026	0.0113	0.0056	95% KM (t) UCL	-50	<<	<<
Pyrene	29126.20			29126.20	48	19%	0.0028	0.48	0.0634	0.0597	95% KM (Chebyshev) UCL	-6	<<	<<
POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg)														
Aroclor 1260	0.74			0.74	62	23%	0.033	8	1.528	0.631	95% KM (t) UCL	-59	<<	<<
PCB CONGENERS (pg/g)														
Sum of PCB Congeners	740000.00			740000.00	4	100%	69.68	82105	23546	82105	Max	**249**	<<	<<
Avian PCBC TEQ				*	4	100%	0.0703	161.3	41.61	161.3	Max	**288**	**No SL**	**No SL**
Mammal PCBC TEQ	15.92		12	15.92	4	100%	0.0005869	16.41	4.418	16.41	Max	**271**	**Yes**	**Yes**
PESTICIDES (mg/kg)				0.00										
4,4'-DDD	9.95			9.95	62	8%	0.0049	0.038	0.0137	0.00665	95% KM (t) UCL	-51	<<	<<
4,4'-DDE	7.02			7.02	62	**5%**	0.0039	0.031	0.017	0.031	Max	82	<<	<<
4,4'-DDT	7.02			7.02	62	23%	0.0051	0.54	0.114	0.0471	95% KM (t) UCL	-59	<<	<<
alpha-BHC	0.36			0.36	62	10%	0.0012	0.041	0.0116	0.00351	95% KM (t) UCL	-70	<<	<<
Endrin	184.68			184.68	56	11%	0.002	0.06	0.0144	0.00568	95% KM (BCA) UCL	-61	<<	<<
Heptachlor epoxide	0.19			0.19	62	**6%**	0.0011	0.11	0.0475	0.11	Max	**132**	<<	<<
Hexachlorobenzene	1.08			1.08	62	**2%**	0.0016	0.0016	0.0016	0.0016	Max	0	<<	
Methoxychlor	3078.03			3078.03	62	8%	0.00082	0.14	0.0316	0.0075	95% KM (t) UCL	-76	<<	<<
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) (mg/kg)														
Bis(2-ethylhexyl)phthalate	123.12			123.12	48	**4%**	0.068	0.26	0.164	0.26	Max	59	<<	<<
Diethylphthalate	100000.00	100		100.00	48	**6%**	0.22	0.27	0.247	0.27	Max	9	<<	
N-Nitrosodipropylamine				*	45	9%	0.04	0.062	0.0518	0.062	Max	20	No SL	No SL
N-Nitrosopyrrolidine	0.82			0.82	48	13%	0.0058	1.3	0.255	0.0864	95% KM (t) UCL	-66	<<	<<
VOLATILE ORGANIC COMPOUNDS (VOCs) (mg/kg)														
1,1,1-Trichloroethane	1200.00			1200.00	40	**0%**	N/A	N/A	N/A	N/A	N/A	no detects	no detects	no detects
1,1-Dichloroethane	6.01			6.01	40	**3%**	0.0014	0.0014	0.0014	0.0014	Max	0	<<	<<
1,1-Dichloroethylene	413.33			413.33	40	**0%**	N/A	N/A	N/A	N/A	N/A	no detects	no detects	no detects
1,2-Dichloroethene				*	40	**3%**	0.17	0.17	0.17	0.17	Max	0	No SL	No SL
Acetone	54320.99			54320.99	22	41%	0.018	0.22	0.0668	0.0558	95% KM (t) UCL	-16	<<	<<
Acetonitrile				0.00	22	**0%**	N/A	N/A	N/A	N/A	N/A	no detects	no detects	no detects
Acrolein	0.34			0.34	22	**0%**	N/A	N/A	N/A	N/A	N/A	no detects	no detects	no detects
Benzene	1.41			1.41	40	35%	0.001	0.0051	0.00228	0.00168	95% KM (t) UCL	-26	<<	<<
Carbon disulfide	720.00			720.00	40	20%	0.0038	0.017	0.00758	0.00525	95% KM (t) UCL	-31	<<	<<
Freon 113 (1,1,2-trichloro-1,2,2-trifluo	5600.00			5600.00	40	**3%**	0.0025	0.0025	0.0025	0.0025	Max	0	<<	<<
Isopropanol				*	22	18%	0.063	0.087	0.078	0.087	Max	12	No SL	No SL
Methyl ethyl ketone	113264.39			113264.39	22	23%	0.0055	0.022	0.0112	0.00838	95% KM (t) UCL	-25	<<	<<
Methylene chloride	20.53			20.53	40	8%	0.0029	0.0065	0.00503	0.0065	Max	29	<<	<<
Propanal				*	40	8%	0.019	0.36	0.138	0.36	Max	**161**	**No SL**	No SL
Tert-Butyl alcohol (TBA)	1700.00			1700.00	22	**5%**	0.036	0.036	0.036	0.036	Max	0	<<	<<
Tetrachloroethylene	1.31			1.31	40	**3%**	0.074	0.074	0.074	0.074	Max	0	<<	<<
Tetrahydrofuran	21.15			21.15	40	**5%**	0.0019	0.0031	0.0025	0.0031	Max	24	<<	<<
Toluene	520.00	200		200.00	40	15%	0.0004	0.0022	0.00104	0.00062906	95% KM (t) UCL	-40	<<	<<
Trichloroethylene	0.114737659			0.11	40	**3%**	0.25	0.25	0.25	0.25	Max	0	>>	>>

Bolded quantities contribute additional uncertainty to the estimation of EPC and its comparison to the SL.
* No SL available
N/A Not analyzed due to no detects

1/ minimum of Industrial PRG or Industrial PRG (CA)

2/ UTL = Upper Tolerance Limit of background distribution

3/ SL = Screening Level, defined as maximum of (Lowest Toxicological SL or UTL)

4/ Arithmetic mean calculated by ProUCL excluding non-detected values

5/ Estimation Uncertainty correlates to *statistical* benefit of a larger sample size.
EI % of Mean = (EPC - Mean/Mean)*100%. Estimation Uncertainty defined as EI% > 100%
Negative values for EI% indicate difference in handling ND values. EPC estimate has correct handling of ND and is always >= unbiased estimate of Mean. Decision Uncertainty cannot be calculated if EPC > SL.

6/ Decision Uncertainty indicates potential decision of tighter Estimation Interval (EI): Present when the EI spans the SL.
<< - both Mean and EPC are below the SL
>> - both Mean and EPC are above the SL
Yes - EI spans SL (Mean is below and EPC is above)
NC - Decision Uncertainty cannot be calculated with current estimate of the Mean

7/ **Increased Sample Size (Yellow Shading)**:
Yes - Compounds have Type I error (probability of false exceedance) higher than desired in DQO. That is, current EPC > SL however additional samples may lower EPC so that it is < SL.
No SL - Increased Sample Size may be warrented due to large Estimation Uncertainty depending on risk concern.
No - Decision uncertainty exists but cannot be reduced by increased sample size.
<< or >> - Decision Uncertainty is already minimized.