Compound	ODEQ Background (2002) (mg/kg)	PEC (mg/kg)	TEC (mg/kg)	WDOE Marine SQS (mg/kg)	WDOE LAET[7] (mg/kg)	EPA ECOTOX Ecological Soil Screening Values[8] (mg/kg)	ODEQ 2007 Bioaccumulative Sediment SLVs[8] (mg/kg)	ODEQ 2001 Level II Eco Risk Assessment (ERA) Soil SLVs[8] (mg/kg)	ODEQ 2001 Level II Eco Risk Assessment (ERA) Sediment SLVs (mg/kg)	NOAA UEC (mg/kg)	EPA Residential Soil RSL (2009) (mg/kg)	EPA Industrial Soil RSL (2009) (mg/kg)	Portland Harbor Clean Fill Requirement [1] (mg/kg)
Inorganics													
Antimony	4	NA	NA	64	150	NA	NA	5	3	NA	31	410	4
Arsenic	7.9	33	9.79	57	57	18	7	10[9]	6[9]	NA	0.39	1.6	7.9
Cadmium	0.5	4.98	0.99	5.1	5.1	0.36	1	4	0.6	NA	70	800	0.5
Chromium	30	111	43.4	260	260	26[12]	NA	0.4[10]	37	NA	120000[13]	NA	30
Copper	12	149	31.6	390	390	28	NA	50	36	NA	3100	41000	12
Lead	2	128	35.8	450	450	11	17	16	35	NA	400	800	2
Manganese	NA	NA	NA	NA	NA	220	NA	100	1100	1100	1800	23000	100
Mercury	0.2	1.06	0.18	0.41	0.59	NA	0.07	0.1	0.2	NA	5.6	34	0.2
Nickel	20	48.6	22.7	6.1	140	38	NA	30	18	NA	1500	20000	20
Selenium	0.4	5	NA	NA	NA	0.52	2	1	NA	NA	390	5100	0.4
Silver	0.4	5	NA	NA	0.56	4.2	NA	2	4.5	NA	390	5100	0.4
Zinc	53	459	121	410	410	46	NA	50	123	NA	23000	310000	53
Tributyltin	NA	NA	NA	NA	NA	NA	0.0023	28[11]	NA	NA	18	180	0.0023
PAHs													
2-Methylnapthalene	NA	0.2	NA	38[6]	0.67	NA	NA	NA	NA	NA	310	4100	0.2
Acenaphthene	NA	0.3	NA	16[6]	0.5	NA	NA	20	0.29	NA	3400	33000	0.29
Acenaphthylene	NA	0.2	NA	66[6]	0.56	NA	NA	NA	0.16	NA	NA	NA	0.16
Anthracene	NA	0.845	0.0572	220[6]	0.96	NA	NA	NA	0.057	NA	17000	170000	0.057
Benzo(a)anthracene	NA	1.05	0.108	110[6]	1.6	NA	NA	NA	0.032	NA	0.15	2.1	0.032
Benzo(a)pyrene	NA	1.45	0.15	99[6]	1.6	NA	NA	125	0.032	NA	0.015	0.21	0.015
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.15	2.1	0.15
Benzo(k)fluoranthene	NA	13	NA	NA	NA	NA	NA	NA	0.027	NA	1.5	21	0.027
Chrysene	NA	1.29	0.166	110[6]	2.8	NA	NA	NA	0.057	NA	15	210	0.057
Dibenzo(a,h)anthracene	NA	NA	0.033	12[6]	0.23	NA	NA	NA	0.033	NA	0.015	0.21	0.015
Fluoranthene	NA	2.23	0.423	160[6]	2.5	NA	37	NA	0.111	NA	2300	22000	0.111
Fluorene	NA	0.536	0.0774	23[6]	0.54	NA	NA	30	0.077	NA	2300	22000	0.077
HPAHs	NA	NA	NA	960[6]	17	1.1	NA	NA	0.193	NA	NA	NA	0.193
Indeno(1,2,3-cd)pyrene	NA	0.1	NA	34[6]	0.69	NA	NA	NA	0.017	NA	0.15	2.1	0.017
LPAHs	NA	NA	NA	370[6]	5.2	29	NA	NA	0.076	NA	NA	NA	0.076
Napthalene	NA	0.561	0.176	99[6]	2.1	NA	NA	10	0.176	NA	3.6	18	0.176
Phenanthrene	NA	1.17	0.204	100[6]	1.5	NA	NA	NA	0.042	NA	NA	NA	0.042
Pyrene	NA	1.52	0.195	1000[6]	3.3	NA	1.9	NA	0.053	NA	1700	17000	0.053
Total Benzofluoranthenes	NA	NA	NA	230[6]	3.6	NA	NA	NA	NA	NA	NA	NA	3.6
Total CPAHs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PAHs	NA	22.8	1.61	NA	NA	NA	NA	NA	1.61	NA	NA	NA	1.61
SVOCs													
Benzoic acid	NA	NA	NA	0.65	0.65	NA	NA	NA	NA	NA	240000	2500000	0.65
Benzyl alcohol	NA	NA	NA	0.057	0.073	NA	NA	NA	NA	NA	6100	62000	0.057
Hexachlorobenzene	NA	0.1	NA	0.38[6]	0.022	NA	0.0023	1000	0.1	NA	0.3	1.1	0.0023
Phthalates													
Bis(2-ethylhexyl)phthalate	NA	0.8	NA	47[6]	1.3	NA	0.33	4.5	0.75	NA	35	120	0.33
Phenols													
2,4-Dimethylphenol	NA	NA	NA	0.029	0.029	NA	NA	20	NA	NA	1200	12000	0.029
2-Methylphenol	NA	NA	NA	0.063	0.063	NA	NA	50	NA	NA	NA	NA	0.063
4-Methylphenol	NA	NA	NA	0.67	0.67	NA	NA	NA	NA	NA	NA	NA	0.67
Pentachlorophenol	NA	1	NA	0.36	0.14	2.1	0.03	3	NA	NA	3	9	0.03
Phenol	NA	0.05	NA	0.42	0.42	NA	NA	30	0.048	NA	18000	180000	0.048
PCBs													
Total PCBs	NA	0.676	0.0598	12[6]	0.13	NA	0.000048	40	0.034	NA	0.22	0.74	0.000048
Total PCB TEQ													
Aroclor 1254	NA	0.3	NA	NA	NA	NA	NA	4	0.007	NA	0.22	0.74	0.007
Dioxins/Furans													
2,3,7,8-TCDD	NA	0.000009	NA	NA	NA	NA	9.1E-09	0.000055	0.000009	NA	0.0000045	0.000018	9.1E-09
Dioxin/Furan TEQ													
Dibenzofuran	NA	NA	NA	15[6]	0.54	NA	NA	0.002	5.1	NA	78	1000	0.002
Pesticides													
Aldrin	NA	0.04	NA	NA	NA	NA	NA	25	0.04	NA	0.029	0.1	0.029
Dieldrin	NA	0.0618	0.0019	NA	NA	0.0049	0.0000081	0.3	0.003	NA	0.003	0.11	0.0000081
Endrin	NA	0.207	0.00222	NA	NA	NA	---	0.04	0.003	NA	18	180	0.003
Endrin ketone													
Heptachlor epoxide	NA	0.016	0.00247	NA	NA	NA	NA	NA	0.0006	NA	0.053	0.19	0.0006
DDD	NA	0.028	0.00488	NA	0.016	0.021	0.00033	0.01	0.004	NA	2	7.2	0.00033
DDE	NA	0.0313	0.00316	NA	0.009	0.021	0.00033	0.01	0.0015	NA	1.4	5.1	0.00033
DDT	NA	0.0629	0.00416	NA	0.006	0.021	0.00033	0.01	0.004	NA	1.7	7	0.00033
gamma-BHC (Lindane)	NA	0.00499	0.00237	NA	NA	NA	NA	8	0.0009	NA	0.52	2.1	0.0009
Chlordane	NA	0.0176	0.00324	NA	NA	NA	0.00037	9	0.0045	NA	1.6	6.5	0.00037
Petroleum Hydrocarbons													
TPH-G	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28
TPH-D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	780	10,000	780
TPH-R													

Notes:

(1) These are requirements for Clean Fill with unrestricted placement. Project Managers may use other values in the tables as long as they substantiate in the record the rational for accepting fill with higher values and follow the ODEQ requirements discussed below:

-Fill material that was mined for the purpose of "imported fill" and meets the clean fill numbers does not need approval for use.

-Fill material that is excess use material (e.g., discarded, unused, excess material) or treated sediments or soils are solid waste under ODEQ Rules. If this material meets the clean fill numbers, not permit is necessary. However, the material may still be used as fill by obtaining a solid waste authorization letter (OAR 340-093-0050) or a beneficial use determination (OAR 340-093-0030 thru -0120). from Oregon DEQ.

(2) Fill material containing asphalt, roofing shingles, visible oils, etc. should not be accepted fill material. Fill material containing cement, ash, wood chips, organic matter (e.g., vegetation), etc. may be acceptable if they meet the analytical requirements.

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Compound	ODEQ Background (2002) (mg/kg)	PEC (mg/kg)	TEC (mg/kg)	WDOE Marine SQS (mg/kg)	WDOE LAET[7] (mg/kg)	EPA ECOTOX Ecological Soil Screening Values[8] (mg/kg)	ODEQ 2007 Bioaccumulative Sediment SLVs[8] (mg/kg)	ODEQ 2001 Level II Eco Risk Assessment (ERA) Soil SLVs[8] (mg/kg)	ODEQ 2001 Level II Eco Risk Assessment (ERA) Sediment SLVs (mg/kg)	NOAA UEC (mg/kg)	EPA Residential Soil RSL (2009) (mg/kg)	EPA Industrial Soil RSL (2009) (mg/kg)	Portland Harbor Clean Fill Requirement [1] (mg/kg)

(3) Minimum soil sampling frequency shall be as follows, based upon the estimated quantity of fill dirt:

Up to 500 cubic yards– a minimum of one increment per 50 cubic yards shall be collected.

From 500 cubic yards to 1,000 cubic yards—a minimum of one additional increment shall be collected per additional 100 cubic yards.

From 1,000 cubic yards to 5,000 cubic yards—a minimum of two additional increments shall be collected per additional 1,000 cubic yards.

A minimum of one sample comprised of 30 incremental samples shall be collected from every 5,000 cubic yards (or every 1 acre) of fill material.

(Note: Increments from a single source material may be combined into one sample for analysis.)

(4) Increments for samples for fill material must be passed through a #6 (3.350 mm) sieve. Only material that passes through the sieve shall be analyzed.

(5) Laboratory subsampling shall use the EPA Guidance for Obtaining Representative Laboratory Analytical Subsamples from Particulate Laboratory Samples (EPA/600/R-03/027, November 2003)

(6) SQS units are mg/kg organic carbon

(7) These numbers are based on dry weight normalization and are from the Puget Sound Estuary Program, Lowest Apparent Effects Thresholds.

(8) These numbers represent the lowest values for all receptors.

(9) This number applies to Arsenc III.

(10) This number applies to Chromium III. 410 mg/kg is the Chromium VI value for Mammals.

(11) These numbers apply to Tributyltin Oxide.

(12) This number applies to Chromium III. 130 mg/kg is the Chromium VI value for Mammals.

(13) This number applies to Chromium III. 0.29 mg/kg is the Chromium VI value.