

Post Office Bar Sediment Risk Screening⁽¹⁾
4/6/2011

| | Chemical | MDC | average ⁽²⁾ | Primary SLV | | 2ndary SLV | |
|---------------------|----------------|-------|------------------------|-------------|--|------------|--|
| | | | | SLV | Source ⁽³⁾ | SLV | Source ⁽³⁾ |
| Metals (ppm) | Arsenic | 3.2 | 3.1 | 10 | Level II SLV (bird x 1) ^(4,5) | 7 | background ⁽⁸⁾ |
| | Cadmium | 0.26 | 0.23 | 6 | Level II SLV (bird x 1) ^(4,5) | 1 | background ⁽⁸⁾ |
| | Chromium | 24.7 | 24.1 | 42 | background ⁽⁸⁾ | 4 | Level II SLV (bird x 1) ^(4,5) |
| | Copper | 37 | 35 | 190 | Level II SLV (bird x 1) ^(4,5) | 36 | background ⁽⁸⁾ |
| | Lead | 14.5 | 12.4 | 17 | background ⁽⁸⁾ | 16 | Level II SLV (bird x 1) ^(4,5) |
| | Mercury | 0.075 | 0.06 | 0.5 | Level II SLV (invert x 5) ^(4,6) | 1.5 | Level II SLV (bird x 1) ^(4,5) |
| | Nickel | 21.8 | 21.3 | 150 | Level II SLV (plant x 5) ^(4,7) | 320 | Level II SLV (bird x 1) ^(4,5) |
| | Silver | 0.23 | 0.2 | 10 | Level II SLV (plant x 5) ^(4,7) | 1 | background ⁽⁸⁾ |
| | Zinc | 89 | 84.4 | 86 | background ⁽⁸⁾ | 60 | Level II SLV (bird x 1) ^(4,5) |
| Pesticides (ppb) | 4,4'-DDE | 4.4 | 3.1 | 10 | Level II SLV (bird x 1) ^(4,5) | | |
| | 4,4'-DDD | 2.3 | 1.9 | 10 | Level II SLV (bird x 1) ^(4,5) | | |
| | 4,4'-DDT | 4 | 2.4 | 10 | Level II SLV (bird x 1) ^(4,5) | | |
| | Total DDx | 9.4 | 7.4 | 10 | Level II SLV (bird x 1) ^(4,5) | | |
| TPH (ppm) | TPH-D | 58 | 51.5 | 500 | Level II UST Matrix ⁽⁹⁾ | | |
| | TPH-R | 270 | 190 | 500 | Level II UST Matrix ⁽⁹⁾ | | |
| PCB (ppb) | Total PCBs | 56 | 27.6 | 700 | Level II SLV (bird x 1) ^(4,10) | 980 | RBC occupational ⁽¹¹⁾ |
| cPAHs (ppb) | Naphthalene | 28 | 18.3 | 23,000 | RBC occupational ⁽¹¹⁾ | 4,600 | RBC residential ⁽¹²⁾ |
| | B(a)A | 83 | 70 | 2,700 | RBC occupational ⁽¹¹⁾ | 150 | RBC residential ⁽¹²⁾ |
| | B(b)F | 130 | 110.7 | 2,700 | RBC occupational ⁽¹¹⁾ | 150 | RBC residential ⁽¹²⁾ |
| | B(k)F | 43 | 34.7 | 27,000 | RBC occupational ⁽¹¹⁾ | 1,500 | RBC residential ⁽¹²⁾ |
| | Chrysene | 100 | 84.3 | 270,000 | RBC occupational ⁽¹¹⁾ | 15,000 | RBC residential ⁽¹²⁾ |
| | B(a)P | 130 | 113 | 270 | RBC occupational ⁽¹¹⁾ | 15 | RBC residential ⁽¹²⁾ |
| | Dib(a,h)A | 22 | 17.7 | 270 | RBC occupational ⁽¹¹⁾ | 15 | RBC residential ⁽¹²⁾ |
| | Ind(cd)P | 110 | 96.7 | 2,700 | RBC occupational ⁽¹¹⁾ | 150 | RBC residential ⁽¹²⁾ |
| Phthalates (ppb) | BEHP | 47 | 30 | 4,500 | Level II SLV (bird x 1) ^(4,5) | 150,000 | RBC occupational ⁽¹¹⁾ |
| Phenols (ppb) | Phenol | 7.7 | 4.8 | 150,000 | Level II SLV (invert x 5) ^(4,6) | | |
| | 4-methylphenol | 19 | 10.3 | 250,000 | Level II SLV (plant x 5) ^(4,7) | | |
| | PCP | ND | | | | | |

Notes

- (1) Risk screening compares chemical concentration to SLV. Exceedance of SLV noted by:
- (2) Arithmetic average based on 3 samples
- (3) Literature source of SLV (e.g., DEQ Eco Risk Assessment Guidance)
- (4) SLVs are multiplied by 5 for non-T&E species, & are multiplied by 1 for T&E species.
The SLV chosen was the lower value of either the bird SLVx1 or the plant, invertebrate, or mammal SLVx5.
- (5) "Level II SLV (bird x 1)" is SLV protective of T&E species birds
- (6) "Level II SLV (invert x 5)" is SLV protective of non-T&E invertebrates
- (7) "Level II SLV (plant x 5)" is SLV protective of non-T&E plants
- (8) Background refers to the concentration of naturally occurring inorganics (i.e., metals) found in soil or sediment in the area which are not influenced by site activities or releases.
- (9) "Level II UST Matrix" refers to a cleanup-level criteria appropriate for West Hayden Island
- (10) "Level II SLV (bird x 1)" is SLV protective of T&E species birds based on the lowest Aroclor SLV. In other words, assuming total PCBs are composed of only Aroclor 1254.
- (11) "RBC occupational" refers to risk-based concentration protective of humans in an occupational exposure scenario.
- (12) "RBC residential" refers to risk-based concentration protective of humans in a residential exposure scenario.

Acronyms

- MDC- maximum detected concentration
 SLV- screening level value
 ppm- parts per million (mg/kg)
 ppb- parts per billion (ug/kg)
 TPH- total petroleum hydrocarbons
 TPH-D- total petroleum hydrocarbons- diesel range
 TPH-R- total petroleum hydrocarbons- residual range (oil)
 UST- underground storage tank
 PCBs- polychlorinated biphenyls
 cPAHs- carcinogenic polynuclear aromatic hydrocarbons
 B(a)A- benzo(a)anthracene
 B(b)F- benzo(b)fluoranthene
 B(k)F- benzo(k)fluoranthene
 B(a)P- benzo(a)pyrene
 Dib(a,h)A- dibenz(a,h)anthracene
 Ind(cd)P- indeno(1,2,3-cd)pyrene
 RBC- risk-based concentration
 BEHP- bis(2-ethylhexyl)phthalate
 PCP- pentachlorophenol
 T&E- threatened or endangered
 ND- not detected