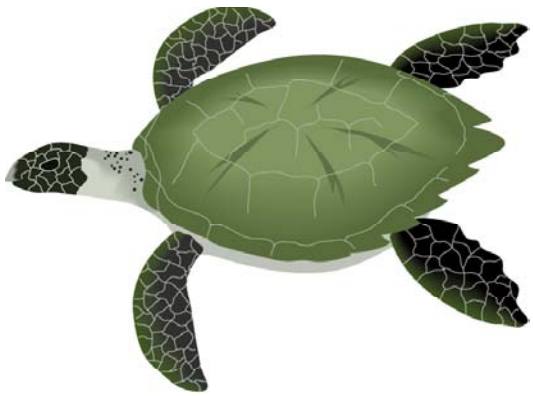
United States Air Force
15th Air Base Wing
Environmental Restoration Program

# Waimanalo Stream ITIR

## EE/CA for OU1

## Bellows Air Force Station
## Oahu, Hawaii



# Attachment F

## Comparison of Minimum and Maximum Method Detection Limits with Screening Levels

# Attachment F

# Comparison of Minimum and Maximum Method Detection Limits for Waimanalo Stream with Screening Levels

Chemicals not detected in surface water or surface sediment were not considered COPCs for the purposes of this risk screening evaluation unless the MDL exceeded a risk-based concentration.

Surface water MDLs were compared to screening levels established for the protection of aquatic life (the most stringent of the following: National Recommended Water Quality Criteria[1], criteria based on lowest observed effects levels (LOELs) or proposed criteria for the protection of aquatic organisms, or HDOH Tier 1 action levels.[2] The marine chronic ambient water quality criteria (AWQC) were used to ensure adequate protectiveness of potential aquatic receptors and only those HDOH values that were applicable to protection of aquatic resources were utilized (i.e., no human health-derived HDOH values were used). Table F-1 compares the minimum and maximum MDLs with screening levels for all undetected chemicals in surface water at Waimanalo Stream.

Sediment MDLs were compared to the EPA Region IX Preliminary Remediation Goals (PRGs) for the occupational scenario. These comparisons were performed to verify that MDLs for each medium are adequate to achieve risk-based levels. Table F-2 compares the minimum and maximum MDLs with screening levels for all undetected chemicals in sediment at Waimanalo Stream.

[1] 1998 federal AWQC; 64 FR 68357068364, December 10, 1998
[2] HDOH, 1996.

**Table F-1**

**Complete Comparision of Method Detection Limits in Surface Water to Screening Levels**

*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Group | Chemical | CAS | Units | Minimum MDL | Maximum MDL | Value | Source | MDL > Value? | MDL > Value? |
| VOC | 1,1,1,2-Tetrachloroethane | 630-20-6 | µg/L | 0.09 | 0.1 | | | | |
| VOC | 1,1,1-TCA | 71-55-6 | µg/L | 0.11 | 0.13 | 6,000 | HDOH Tier 1 | No | No |
| VOC | 1,1,2,2-Tetrachloroethane | 79-34-5 | µg/L | 0.09 | 0.13 | 9,020 | Saltwater CCC LOEL | No | No |
| VOC | 1,1,2-TCA | 79-00-5 | µg/L | 0.07 | 0.14 | | | | |
| VOC | 1,1-DCA | 75-34-3 | µg/L | 0.11 | 0.13 | | | | |
| VOC | 1,1-DCE | 75-35-4 | µg/L | 0.09 | 0.11 | 3,900 | HDOH Tier 1 | No | No |
| VOC | 1,1-Dichloropropene | 563-58-6 | µg/L | 0.09 | 0.21 | 790 | Saltwater CCC LOEL | No | No |
| VOC | 1,2,3-Trichlorobenzene | 87-61-6 | µg/L | 0.12 | 0.14 | 129 | Saltwater CCC LOEL | No | No |
| VOC | 1,2,3-Trichloropropane | 96-18-4 | µg/L | 0.15 | 0.17 | | | | |
| VOC | 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 0.08 | 0.12 | 129 | Saltwater CCC LOEL | No | No |
| VOC | 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 0.09 | 0.12 | | | | |
| VOC | 1,2-DCA | 107-06-2 | µg/L | 0.1 | 0.13 | 113,000 | Saltwater CMC LOEL | No | No |
| VOC | 1,2-DCB | 95-50-1 | µg/L | 0.09 | 0.13 | 129 | Saltwater CCC LOEL | No | No |
| VOC | 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | 0.51 | 0.64 | 129 | Saltwater CCC LOEL | No | No |
| VOC | 1,2-Dichloropropane | 78-87-5 | µg/L | 0.08 | 0.1 | 3,040 | Saltwater CCC LOEL | No | No |
| VOC | 1,2-EDB | 106-93-4 | µg/L | 0.1 | 0.13 | | | | |
| VOC | 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 0.09 | 0.09 | | | | |
| VOC | 1,3-DCB | 541-73-1 | µg/L | 0.08 | 0.1 | 129 | Saltwater CCC LOEL | No | No |
| VOC | 1,3-Dichloropropane | 142-28-9 | µg/L | 0.1 | 0.11 | 3,040 | Saltwater CCC LOEL | No | No |
| VOC | 1,4-DCB | 106-46-7 | µg/L | 0.09 | 0.11 | 129 | Saltwater CCC LOEL | No | No |
| VOC | 1-Chlorohexane | 544-10-5 | µg/L | 0.06 | 0.07 | | | | |
| VOC | 2,2-Dichloropropane | 594-20-7 | µg/L | 0.13 | 0.17 | 3,040 | Saltwater CCC LOEL | No | No |
| VOC | 2-Chlorotoluene | 95-49-8 | µg/L | 0.06 | 0.09 | | | | |
| VOC | 4-Chlorotoluene | 106-43-4 | µg/L | 0.1 | 0.1 | | | | |
| VOC | Benzene | 71-43-2 | µg/L | 0.07 | 0.11 | 700 | Saltwater CCC LOEL | No | No |
| VOC | Bromobenzene | 108-86-1 | µg/L | 0.06 | 0.07 | | | | |
| VOC | Bromochloromethane | 74-97-5 | µg/L | 0.1 | 0.13 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Bromodichloromethane | 75-27-4 | µg/L | 0.09 | 0.12 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Bromoform | 75-25-2 | µg/L | 0.09 | 0.09 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Carbon tetrachloride | 56-23-5 | µg/L | 0.12 | 0.18 | 12,000 | HDOH Tier 1 | No | No |
| VOC | Chlorobenzene | 108-90-7 | µg/L | 0.06 | 0.09 | 129 | Saltwater CCC LOEL, exclude MCL-based HDOH Tier 1 | No | No |
| VOC | Chloroethane | 75-00-3 | µg/L | 0.09 | 0.15 | | | | |
| VOC | Chloroform | 67-66-3 | µg/L | 0.1 | 0.14 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Chloromethane | 74-87-3 | µg/L | 0.13 | 0.39 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Cis-1,2-DCE | 156-59-2 | µg/L | 0.12 | 0.21 | 224,000 | Saltwater CMC LOEL | No | No |
| VOC | Cis-1,3-Dichloropropene | 10061-01-5 | µg/L | 0.09 | 0.1 | | | | |
| VOC | Dibromochloromethane | 124-48-1 | µg/L | 0.08 | 0.13 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Dibromomethane | 74-95-3 | µg/L | 0.11 | 0.12 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Dichlorodifluoromethane | 75-71-8 | µg/L | 0.07 | 0.08 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Ethylbenzene | 100-41-4 | µg/L | 0.07 | 0.09 | 30 | Saltwater CMC LOEL | No | No |
| VOC | Hexachlorobutadiene | 87-68-3 | µg/L | 0.09 | 0.11 | 32 | Saltwater CMC LOEL | No | No |
| VOC | Isopropylbenzene | 98-82-8 | µg/L | 0.07 | 0.08 | | | | |
| VOC | Methylene chloride | 75-09-2 | µg/L | 0.05 | 0.09 | 6,400 | Saltwater CCC LOEL, exclude MCL-based HDOH Tier 1 | No | No |
| VOC | Sec-Butylbenzene | 135-98-8 | µg/L | 0.08 | 0.09 | | | | |

**Table F-1**
**Complete Comparision of Method Detection Limits in Surface Water to Screening Levels**
*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Group | Chemical | CAS | Units | Minimum MDL | Maximum MDL | Value | Source | MDL > Value? | MDL > Value? |
| VOC | Styrene | 100-42-5 | µg/L | 0.07 | 0.07 | | | | |
| VOC | TCE | 79-01-6 | µg/L | 0.09 | 0.14 | 700 | HDOH Tier 1 | No | No |
| VOC | Tert-Butylbenzene | 98-06-6 | µg/L | 0.09 | 0.09 | | | | |
| VOC | Tetrachloroethene | 127-18-4 | µg/L | 0.1 | 0.11 | 145 | HDOH Tier 1 | No | No |
| VOC | Trans-1,2-DCE | 156-60-5 | µg/L | 0.12 | 0.12 | 224,000 | Saltwater CMC LOEL | No | No |
| VOC | Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.08 | 0.14 | | | | |
| VOC | Trichlorofluoromethane | 75-69-4 | µg/L | 0.1 | 0.2 | 6,400 | Saltwater CCC LOEL | No | No |
| VOC | Vinyl chloride | 75-01-4 | µg/L | 0.08 | 0.11 | | MCL-Based HDOH excluded | No | No |
| VOC | m, p-Xylene | 108-38-3/1 | µg/L | 0.1 | 0.17 | | MCL-Based HDOH excluded | No | No |
| VOC | n-Butylbenzene | 104-51-8 | µg/L | 0.08 | 0.11 | | | | |
| VOC | n-Propylbenzene | 103-65-1 | µg/L | 0.08 | 0.09 | | | | |
| VOC | o-Xylene | 95-47-6 | µg/L | 0.07 | 0.07 | | MCL-Based HDOH excluded | No | No |
| VOC | p-Isopropyltoluene | 99-87-6 | µg/L | 0.09 | 0.1 | | | | |
| TPH | TPH-Diesel | TPH-DIESEL | mg/L | 0.01 | 0.01 | | | | |
| TPH | TPH-Gasoline | TPH-GASOLINE | mg/L | 0.01 | 0.1 | | | | |
| SVOC | 2,4,5-Trichlorophenol | 95-95-4 | µg/L | 4.32 | 4.32 | 11 | Saltwater CCC proposed criterion | No | No |
| SVOC | 2,4,6-Trichlorophenol | 88-06-2 | µg/L | 1.5 | 1.5 | | | | |
| SVOC | 2,4-DNT | 121-14-2 | µg/L | 1.36 | 1.36 | 370 | Saltwater CCC LOEL | No | No |
| SVOC | 2,4-Dichlorophenol | 120-83-2 | µg/L | 1.54 | 1.54 | | | | |
| SVOC | 2,4-Dimethylphenol | 105-67-9 | µg/L | 1.62 | 1.62 | | | | |
| SVOC | 2,4-Dinitrophenol | 51-28-5 | µg/L | 5.14 | 5.14 | | | | |
| SVOC | 2,6-DNT | 606-20-2 | µg/L | 1.2 | 1.2 | 370 | Saltwater CCC LOEL | No | No |
| SVOC | 2-Chloronaphthalene | 91-58-7 | µg/L | 1.25 | 1.25 | 7.5 | Saltwater CMC LOEL | No | No |
| SVOC | 2-Chlorophenol | 95-57-8 | µg/L | 1.88 | 1.88 | | | | |
| SVOC | 2-Methylnaphthalene | 91-57-6 | µg/L | 1.66 | 1.66 | | | | |
| SVOC | 2-Methylphenol | 95-48-7 | µg/L | 1.66 | 1.66 | | | | |
| SVOC | 2-Nitroaniline | 88-74-4 | µg/L | 4.28 | 4.28 | | | | |
| SVOC | 2-Nitrophenol | 88-75-5 | µg/L | 1.4 | 1.4 | 4,850 | Saltwater CMC LOEL | No | No |
| SVOC | 3-Nitroaniline | 99-09-2 | µg/L | 3.95 | 3.95 | | | | |
| SVOC | 4,6-Dinitro-2-methylphenol | 534-52-1 | µg/L | 4.8 | 4.8 | | | | |
| SVOC | 4-Bromophenyl phenyl ether | 101-55-3 | µg/L | 1.09 | 1.09 | | | | |
| SVOC | 4-Chloro-3-methylphenol | 59-50-7 | µg/L | 1.36 | 1.36 | | | | |
| SVOC | 4-Chloroaniline | 106-47-8 | µg/L | 1.33 | 1.33 | | | | |
| SVOC | 4-Chlorophenyl phenyl ether | 7005-72-3 | µg/L | 1.37 | 1.37 | | | | |
| SVOC | 4-Methylphenol | 106-44-5 | µg/L | 1.59 | 1.59 | | | | |
| SVOC | 4-Nitroaniline | 100-01-6 | µg/L | 4.56 | 4.56 | | | | |
| SVOC | 4-Nitrophenol | 100-02-7 | µg/L | 3.89 | 3.89 | 4,850 | Saltwater CMC LOEL | No | No |
| SVOC | Benzyl alcohol | 100-51-6 | µg/L | 1.56 | 1.56 | | | | |
| SVOC | Bis (2-chloroethoxy) methane | 111-91-1 | µg/L | 1.38 | 1.38 | 6,400 | Saltwater CCC LOEL | No | No |
| SVOC | Bis (2-chloroethyl) ether | 111-44-4 | µg/L | 1.86 | 1.86 | | | | |
| SVOC | Bis (2-chloroisopropyl) ether | 108-60-1 | µg/L | 1.7 | 1.7 | | | | |
| SVOC | Bis (2-ethylhexyl) phthalate | 117-81-7 | µg/L | 2.59 | 2.59 | 360 | Saltwater CCC proposed criterion | No | No |
| SVOC | Butyl benzylphthalate | 85-68-7 | µg/L | 1.32 | 1.32 | 3.4 | Saltwater CCC LOEL | No | No |
| SVOC | Di-n-octylphthalate | 117-84-0 | µg/L | 1.75 | 1.75 | 3.4 | Saltwater CCC LOEL | No | No |

**Table F-1**
**Complete Comparision of Method Detection Limits in Surface Water to Screening Levels**
*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Group | Chemical | CAS | Units | Minimum MDL | Maximum MDL | Value | Source | MDL > Value? | MDL > Value? |
| SVOC | Dibenzofuran | 132-64-9 | µg/L | 1.31 | 1.31 | | | | |
| SVOC | Diethyl phthalate | 84-66-2 | µg/L | 2.51 | 2.51 | 3.4 | Saltwater CCC LOEL | No | No |
| SVOC | Dimethyl phthalate | 131-11-3 | µg/L | 1.26 | 1.26 | 3.4 | Saltwater CCC LOEL | No | No |
| SVOC | Hexachlorobenzene | 118-74-1 | µg/L | 1.25 | 1.25 | 129 | Saltwater CCC LOEL | No | No |
| SVOC | Hexachlorocyclopentadiene | 77-47-4 | µg/L | 4.36 | 4.36 | 7.0 | Saltwater CMC LOEL | No | No |
| SVOC | Hexachloroethane | 67-72-1 | µg/L | 1.76 | 1.76 | 940 | Saltwater CMC LOEL | No | No |
| SVOC | Isophorone | 78-59-1 | µg/L | 1.35 | 1.35 | 12,900 | Saltwater CMC LOEL | No | No |
| SVOC | N-Nitrosodi-n-propylamine | 621-64-7 | µg/L | 1.73 | 1.73 | 3.30E+06 | Saltwater CMC LOEL | No | No |
| SVOC | N-Nitrosodiphenylamine | 86-30-6 | µg/L | 1.28 | 1.28 | 3.30E+06 | Saltwater CMC LOEL | No | No |
| SVOC | Nitrobenzene | 98-95-3 | µg/L | 1.65 | 1.65 | 6,680 | Saltwater CMC LOEL | No | No |
| SVOC | Pentachlorophenol | 87-86-5 | µg/L | 3.44 | 3.44 | 7.9 | Saltwater CCC | No | No |
| SVOC | Phenol | 108-95-2 | µg/L | 1.51 | 1.51 | 5,800 | Saltwater CMC LOEL | No | No |
| PEST | 4,4'-DDD | 72-54-8 | µg/L | 0.01 | 0.01 | 0.60 | HDOH Tier 1 | No | No |
| PEST | 4,4'-DDE | 72-55-9 | µg/L | 0.01 | 0.01 | 14 | HDOH Tier 1 | No | No |
| PEST | 4,4'-DDE/Dieldrin | 72-55-9/60-57-1 | µg/L | 0.01 | 0.01 | 0.0019 | Saltwater CCC | Yes | Yes |
| PEST | Aldrin | 309-00-2 | µg/L | 0.34 | 0.34 | 1.3 | Saltwater CMC | No | No |
| PEST | Chlordane (Alpha) | 5103-71-9 | µg/L | 0.01 | 0.01 | 0.0040 | Saltwater CCC LOEL | Yes | Yes |
| PEST | Chlordane (Gamma) | 5103-74-2 | µg/L | 0.01 | 0.01 | 0.0040 | Saltwater CCC LOEL | Yes | Yes |
| PEST | Dieldrin | 60-57-1 | µg/L | 0.01 | 0.01 | 0.0019 | Saltwater CCC | Yes | Yes |
| PEST | Endosulfan II | 33213-65-9 | µg/L | 0.02 | 0.4 | 0.0087 | Saltwater CCC | Yes | Yes |
| PEST | Endosulfan sulfate | 1031-07-8 | µg/L | 0.02 | 0.35 | | | | |
| PEST | Endrin | 72-20-8 | µg/L | 0.03 | 0.03 | 0.0023 | Saltwater CCC | Yes | Yes |
| PEST | Endrin aldehyde | 7421-93-4 | µg/L | 0.04 | 0.5 | | | | |
| PEST | Heptachlor | 76-44-8 | µg/L | 0.01 | 0.4 | 0.0036 | Saltwater CCC | Yes | Yes |
| PEST | Methoxychlor | 72-43-5 | µg/L | 0.02 | 0.02 | 0.030 | Saltwater CCC | No | No |
| PEST | beta-BHC | 319-85-7 | µg/L | 0.01 | 0.01 | 0.34 | Saltwater CMC LOEL | No | No |
| PEST | gamma-BHC (Lindane) | 58-89-9 | µg/L | 0.01 | 0.01 | 0.16 | Saltwater CMC | No | No |
| PCB | Aroclor-1016 | 12674-11-2 | µg/L | 0.051 | 0.051 | 0.030 | Saltwater CCC | Yes | Yes |
| PCB | Aroclor-1221 | 11104-28-2 | µg/L | 0.08 | 0.08 | 0.030 | Saltwater CCC | Yes | Yes |
| PCB | Aroclor-1232 | 11141-16-5 | µg/L | 0.13 | 0.13 | 0.030 | Saltwater CCC | Yes | Yes |
| PCB | Aroclor-1242 | 53469-21-9 | µg/L | 0.29 | 0.29 | 0.030 | Saltwater CCC | Yes | Yes |
| PCB | Aroclor-1248 | 12672-29-6 | µg/L | 0.086 | 0.086 | 0.030 | Saltwater CCC | Yes | Yes |
| PCB | Aroclor-1254 | 11097-69-1 | µg/L | 0.12 | 0.12 | 0.030 | Saltwater CCC | Yes | Yes |
| PCB | Aroclor-1260 | 11096-82-5 | µg/L | 0.069 | 0.069 | 0.030 | Saltwater CCC | Yes | Yes |
| PAH | Acenaphthene | 83-32-9 | µg/L | 0.11 | 0.11 | 320 | HDOH Tier 1 | No | No |
| PAH | Acenaphthylene | 208-96-8 | µg/L | 0.2 | 0.2 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Anthracene | 120-12-7 | µg/L | 0.01 | 0.01 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Benzo (a) anthracene | 56-55-3 | µg/L | 0.015 | 0.015 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Benzo (a) pyrene | 50-32-8 | µg/L | 0.016 | 0.016 | 300 | Saltwater CMC LOEL, exclude MCL-based HDOH Tier 1 | No | No |
| PAH | Benzo (b) fluoranthene | 205-99-2 | µg/L | 0.032 | 0.032 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Benzo (g,h,i) perylene | 191-24-2 | µg/L | 0.041 | 0.041 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Benzo (k) fluoranthene | 207-08-9 | µg/L | 0.016 | 0.016 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Chrysene | 218-01-9 | µg/L | 0.01 | 0.01 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Dibenzo (a,h) anthracene | 53-70-3 | µg/L | 0.04 | 0.04 | 300 | Saltwater CMC LOEL | No | No |

**Table F-1**
**Complete Comparision of Method Detection Limits in Surface Water to Screening Levels**
*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Chemical Group** | **Chemical** | **CAS** | **Units** | **Minimum MDL** | **Maximum MDL** | **Value** | **Source** | **MDL > Value?** | **MDL > Value?** |
| PAH | Fluoranthene | 206-44-0 | µg/L | 0.02 | 0.02 | 13 | HDOH Tier 1 | No | No |
| PAH | Fluorene | 86-73-7 | µg/L | 0.02 | 0.02 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Indeno (1,2,3-c,d) pyrene | 193-39-5 | µg/L | 0.036 | 0.036 | 300 | Saltwater CMC LOEL | No | No |
| PAH | Naphthalene | 91-20-3 | µg/L | 0.09 | 0.1 | 770 | HDOH Tier 1 | No | No |
| PAH | Phenanthrene | 85-01-8 | µg/L | 0.01 | 0.01 | 4.6 | Saltwater CCC proposed criterion | No | No |
| PAH | Pyrene | 129-00-0 | µg/L | 0.03 | 0.03 | 300 | Saltwater CMC LOEL | No | No |
| METALS | Arsenic | 7440-38-2 | mg/L | 0.0069 | 0.0069 | 0.036 | Saltwater CCC | No | No |
| METALS | Beryllium | 7440-41-7 | mg/L | 0.001 | 0.001 | | | | |
| METALS | Beryllium, dissolved | 7440-41-7_D | mg/L | 0.001 | 0.001 | | | | |
| METALS | Cadmium, dissolved | 7440-43-9_D | mg/L | 0.001 | 0.001 | 0.0090 | HDOH Tier 1 | No | No |
| METALS | Chromium | 7440-47-3 | mg/L | 0.004 | 0.004 | 0.050 | Saltwater CMC | No | No |
| METALS | Chromium, dissolved | 7440-47-3_D | mg/L | 0.004 | 0.004 | 0.050 | Saltwater CMC | No | No |
| METALS | Cobalt | 7440-48-4 | mg/L | 0.003 | 0.003 | | | | |
| METALS | Cobalt, dissolved | 7440-48-4_D | mg/L | 0.003 | 0.003 | | | | |
| METALS | Copper | 7440-50-8 | mg/L | 0.001 | 0.001 | 0.0037 | Saltwater CCC | No | No |
| METALS | Copper, dissolved | 7440-50-8_D | mg/L | 0.001 | 0.001 | 0.0031 | Saltwater CCC | No | No |
| METALS | Iron | 7439-89-6 | mg/L | 0.073 | 0.141 | | | | |
| METALS | Mercury | 7439-97-6 | mg/L | 0.0001 | 0.0001 | 0.0011 | Saltwater CCC | No | No |
| METALS | Mercury, dissolved | 7439-97-6_D | mg/L | 0.0001 | 0.0001 | 9.40E-04 | Saltwater CCC | No | No |
| METALS | Selenium | 7782-49-2 | mg/L | 0.0058 | 0.0058 | 0.071 | Saltwater CCC | No | No |
| METALS | Selenium, dissolved | 7782-49-2_D | mg/L | 0.0058 | 0.0058 | 0.071 | Saltwater CCC | No | No |
| METALS | Silver | 7440-22-4 | mg/L | 0.002 | 0.002 | 0.0022 | Saltwater CMC | No | No |
| METALS | Silver, dissolved | 7440-22-4_D | mg/L | 0.002 | 0.002 | 0.0019 | Saltwater CMC | Yes | Yes |
| METALS | Thallium | 7440-28-0 | mg/L | 0.011 | 0.011 | 2.1 | Saltwater CMC LOEL | No | No |
| METALS | Thallium, dissolved | 7440-28-0_D | mg/L | 0.011 | 0.011 | 2.1 | Saltwater CMC LOEL | No | No |
| HERB | 2,4,5-T | 93-76-5 | µg/L | 0.23 | 0.23 | | | | |
| HERB | Dicamba | 1918-00-9 | µg/L | 0.38 | 0.38 | | | | |
| HERB | MCPA | 94-74-6 | µg/L | 54 | 54 | | | | |
| HERB | MCPP | 93-65-2 | µg/L | 22 | 22 | | | | |

**Notes:**

Screening levels are not available for all analytes.

*Chemical Groups*
VOC = volatile organic compounds
TPH = total petroleum hydrocarbons
SVOC = semivolatile organic compounds
PEST= pesticides
PCB = polychlorinated biphenyls
HERB = herbicides
PAH = polynuclear aromatic hydrocarbons

*Abbreviations*
µg/L = micrograms per liter
mg/L = milligrams per liter
MDL = method detection limit
HDOH = Hawaii Department of Health
Saltwater CCC = Marine Chronic, National Recommended Water Quality Criteria (64 FR 68357-68364, December 10, 1998)
Saltwater CMC = Marine Acute, National Recommended Water Quality Criteria (64 FR 68357-68364, December 10, 1998)

**Table F-2**
**Complete Comparision of Method Detection Limits in Surface Sediment to Screening Levels**
*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Group | Chemical | CAS | Units | Minimum MDL | Maximum MDL | Value | Source | Minimum MDL > Value? | Maximum MDL > Value? |
| VOC | 1,1,1,2-Tetrachloroethane | 630-20-6 | mg/kg | 0.0002 | 0.0005 | 6.8 | PRG IND | No | No |
| VOC | 1,1,1-TCA | 71-55-6 | mg/kg | 0.0002 | 0.0005 | 1,400 | PRG IND | No | No |
| VOC | 1,1,2,2-Tetrachloroethane | 79-34-5 | mg/kg | 0.0003 | 0.0007 | 0.87 | PRG IND | No | No |
| VOC | 1,1,2-TCA | 79-00-5 | mg/kg | 0.0004 | 0.0008 | 1.9 | PRG IND | No | No |
| VOC | 1,1-DCA | 75-34-3 | mg/kg | 0.0003 | 0.0007 | 2,043 | PRG IND | No | No |
| VOC | 1,1-DCE | 75-35-4 | mg/kg | 0.0005 | 0.0011 | 0.12 | PRG IND | No | No |
| VOC | 1,1-Dichloropropene | 563-58-6 | mg/kg | 0.0004 | 0.0007 | | | | |
| VOC | 1,2,3-Trichlorobenzene | 87-61-6 | mg/kg | 0.0003 | 0.0006 | | | | |
| VOC | 1,2,3-Trichloropropane | 96-18-4 | mg/kg | 0.001 | 0.002 | 0.0031 | PRG IND | No | No |
| VOC | 1,2,4-Trichlorobenzene | 120-82-1 | mg/kg | 0.0005 | 0.0009 | 1,700 | PRG IND | No | No |
| VOC | 1,2,4-Trimethylbenzene | 95-63-6 | mg/kg | 0.0002 | 0.0004 | 170 | PRG IND | No | No |
| VOC | 1,2-DCA | 107-06-2 | mg/kg | 0.0002 | 0.0005 | 0.76 | PRG IND | No | No |
| VOC | 1,2-DCB | 95-50-1 | mg/kg | 0.0002 | 0.0003 | 370 | PRG IND | No | No |
| VOC | 1,2-Dibromo-3-chloropropane | 96-12-8 | mg/kg | 0.001 | 0.002 | 2.1 | PRG IND | No | No |
| VOC | 1,2-Dichloropropane | 78-87-5 | mg/kg | 0.0003 | 0.0005 | 0.76 | PRG IND | No | No |
| VOC | 1,2-EDB | 106-93-4 | mg/kg | 0.0003 | 0.0007 | 0.029 | PRG IND | No | No |
| VOC | 1,3,5-Trimethylbenzene | 108-67-8 | mg/kg | 0.0003 | 0.0006 | 70 | PRG IND | No | No |
| VOC | 1,3-DCB | 541-73-1 | mg/kg | 0.0003 | 0.0006 | 136 | PRG IND | No | No |
| VOC | 1,3-Dichloropropane | 142-28-9 | mg/kg | 0.0004 | 0.0008 | 0.18 | PRG IND | No | No |
| VOC | 1,4-DCB | 106-46-7 | mg/kg | 0.0003 | 0.0007 | 7.3 | PRG IND | No | No |
| VOC | 1-Chlorohexane | 544-10-5 | mg/kg | 0.0003 | 0.0007 | | | | |
| VOC | 2,2-Dichloropropane | 594-20-7 | mg/kg | 0.0004 | 0.001 | | | | |
| VOC | 2-Chlorotoluene | 95-49-8 | mg/kg | 0.0003 | 0.0006 | 561 | PRG IND | No | No |
| VOC | 4-Chlorotoluene | 106-43-4 | mg/kg | 0.0003 | 0.0006 | | | | |
| VOC | Benzene | 71-43-2 | mg/kg | 0.0003 | 0.0006 | 1.4 | PRG IND | No | No |
| VOC | Bromobenzene | 108-86-1 | mg/kg | 0.0002 | 0.0005 | 92 | PRG IND | No | No |
| VOC | Bromochloromethane | 74-97-5 | mg/kg | 0.0003 | 0.0006 | | | | |
| VOC | Bromodichloromethane | 75-27-4 | mg/kg | 0.0002 | 0.0005 | 2.3 | PRG IND | No | No |
| VOC | Bromoform | 75-25-2 | mg/kg | 0.0003 | 0.0006 | 379 | PRG IND | No | No |
| VOC | Bromomethane | 74-83-9 | mg/kg | 0.0003 | 0.0006 | 13 | PRG IND | No | No |
| VOC | Carbon tetrachloride | 56-23-5 | mg/kg | 0.0005 | 0.001 | 0.52 | PRG IND | No | No |
| VOC | Chlorobenzene | 108-90-7 | mg/kg | 0.0003 | 0.0006 | 183 | PRG IND | No | No |
| VOC | Chloroethane | 75-00-3 | mg/kg | 0.0004 | 0.0007 | 1,600 | PRG IND | No | No |
| VOC | Chloroform | 67-66-3 | mg/kg | 0.0003 | 0.0007 | 0.52 | PRG IND | No | No |
| VOC | Chloromethane | 74-87-3 | mg/kg | 0.0003 | 0.0007 | 2.6 | PRG IND | No | No |

**Table F-2**
**Complete Comparision of Method Detection Limits in Surface Sediment to Screening Levels**
*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Group | Chemical | CAS | Units | Minimum MDL | Maximum MDL | Value | Source | Minimum MDL > Value? | Maximum MDL > Value? |
| VOC | Cis-1,2-DCE | 156-59-2 | mg/kg | 0.0004 | 0.0008 | 146 | PRG IND | No | No |
| VOC | Cis-1,3-Dichloropropene | 10061-01-5 | mg/kg | 0.0002 | 0.0005 | 0.18 | PRG IND | No | No |
| VOC | Dibromochloromethane | 124-48-1 | mg/kg | 0.0003 | 0.0006 | 36 | PRG IND | No | No |
| VOC | Dibromomethane | 74-95-3 | mg/kg | 0.0003 | 0.001 | 10,689 | PRG IND | No | No |
| VOC | Dichlorodifluoromethane | 75-71-8 | mg/kg | 0.0004 | 0.0009 | 308 | PRG IND | No | No |
| VOC | Ethylbenzene | 100-41-4 | mg/kg | 0.0003 | 0.0005 | 230 | PRG IND | No | No |
| VOC | Hexachlorobutadiene | 87-68-3 | mg/kg | 0.0004 | 0.0008 | 38 | PRG IND | No | No |
| VOC | Isopropylbenzene | 98-82-8 | mg/kg | 0.0002 | 0.0004 | 521 | PRG IND | No | No |
| VOC | Methylene chloride | 75-09-2 | mg/kg | 0.0004 | 0.0009 | 20 | PRG IND | No | No |
| VOC | Sec-Butylbenzene | 135-98-8 | mg/kg | 0.0002 | 0.0003 | 408 | PRG IND | No | No |
| VOC | Styrene | 100-42-5 | mg/kg | 0.0002 | 0.0004 | 1,700 | PRG IND | No | No |
| VOC | TCE | 79-01-6 | mg/kg | 0.0003 | 0.001 | 6.1 | PRG IND | No | No |
| VOC | Tert-Butylbenzene | 98-06-6 | mg/kg | 0.0002 | 0.0004 | 492 | PRG IND | No | No |
| VOC | Tetrachloroethene | 127-18-4 | mg/kg | 0.0004 | 0.0007 | 16 | PRG IND | No | No |
| VOC | Toluene | 108-88-3 | mg/kg | 0.0002 | 0.0005 | 520 | PRG IND | No | No |
| VOC | Trans-1,2-DCE | 156-60-5 | mg/kg | 0.0006 | 0.0012 | 213 | PRG IND | No | No |
| VOC | Trans-1,3-Dichloropropene | 10061-02-6 | mg/kg | 0.0003 | 0.0006 | 0.18 | PRG IND | No | No |
| VOC | Trichlorofluoromethane | 75-69-4 | mg/kg | 0.0004 | 0.0009 | 1,276 | PRG IND | No | No |
| VOC | Vinyl chloride | 75-01-4 | mg/kg | 0.0005 | 0.001 | 0.048 | PRG IND | No | No |
| VOC | m, p-Xylene | 108-38-3/1 | mg/kg | 0.0004 | 0.001 | 210 | PRG IND | No | No |
| VOC | n-Butylbenzene | 104-51-8 | mg/kg | 0.0003 | 0.0006 | 550 | PRG IND | No | No |
| VOC | n-Propylbenzene | 103-65-1 | mg/kg | 0.0002 | 0.0005 | 550 | PRG IND | No | No |
| VOC | o-Xylene | 95-47-6 | mg/kg | 0.0001 | 0.0003 | 280 | PRG IND | No | No |
| VOC | p-Isopropyltoluene | 99-87-6 | mg/kg | 0.0002 | 0.0004 | | | | |
| SVOC | 2,4,5-Trichlorophenol | 95-95-4 | mg/kg | 0.26 | 0.53 | 106,887 | PRG IND | No | No |
| SVOC | 2,4,6-Trichlorophenol | 88-06-2 | mg/kg | 0.106 | 0.215 | 272 | PRG IND | No | No |
| SVOC | 2,4-DNT | 121-14-2 | mg/kg | 0.17 | 0.35 | 2,138 | PRG IND | No | No |
| SVOC | 2,4-Dichlorophenol | 120-83-2 | mg/kg | 0.092 | 0.186 | 3,207 | PRG IND | No | No |
| SVOC | 2,4-Dimethylphenol | 105-67-9 | mg/kg | 0.133 | 0.269 | 21,377 | PRG IND | No | No |
| SVOC | 2,4-Dinitrophenol | 51-28-5 | mg/kg | 0.29 | 0.58 | 2,138 | PRG IND | No | No |
| SVOC | 2,6-DNT | 606-20-2 | mg/kg | 0.11 | 0.21 | 1,069 | PRG IND | No | No |
| SVOC | 2-Chloronaphthalene | 91-58-7 | mg/kg | 0.1 | 0.21 | 23,681 | PRG IND | No | No |
| SVOC | 2-Chlorophenol | 95-57-8 | mg/kg | 0.131 | 0.266 | 236 | PRG IND | No | No |
| SVOC | 2-Methylnaphthalene | 91-57-6 | mg/kg | 0.11 | 0.22 | | | | |
| SVOC | 2-Methylphenol | 95-48-7 | mg/kg | 0.164 | 0.332 | 53,443 | PRG IND | No | No |

**Table F-2**
**Complete Comparision of Method Detection Limits in Surface Sediment to Screening Levels**
*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Group | Chemical | CAS | Units | Minimum MDL | Maximum MDL | Value | Source | Minimum MDL > Value? | Maximum MDL > Value? |
| SVOC | 2-Nitroaniline | 88-74-4 | mg/kg | 0.29 | 0.59 | 64 | PRG IND | No | No |
| SVOC | 2-Nitrophenol | 88-75-5 | mg/kg | 0.135 | 0.274 | | | | |
| SVOC | 3,3'-Dichlorobenzidine | 91-94-1 | mg/kg | 0.2 | 0.4 | 6.7 | PRG IND | No | No |
| SVOC | 3-Nitroaniline | 99-09-2 | mg/kg | 0.29 | 0.59 | | | | |
| SVOC | 4,6-Dinitro-2-methylphenol | 534-52-1 | mg/kg | 0.37 | 0.75 | | | | |
| SVOC | 4-Bromophenyl phenyl ether | 101-55-3 | mg/kg | 0.14 | 0.29 | | | | |
| SVOC | 4-Chloro-3-methylphenol | 59-50-7 | mg/kg | 0.13 | 0.26 | | | | |
| SVOC | 4-Chloroaniline | 106-47-8 | mg/kg | 0.16 | 0.32 | 4,275 | PRG IND | No | No |
| SVOC | 4-Chlorophenyl phenyl ether | 7005-72-3 | mg/kg | 0.1 | 0.2 | | | | |
| SVOC | 4-Methylphenol | 106-44-5 | mg/kg | 0.112 | 0.227 | 5,344 | PRG IND | No | No |
| SVOC | 4-Nitroaniline | 100-01-6 | mg/kg | 0.46 | 0.92 | | | | |
| SVOC | 4-Nitrophenol | 100-02-7 | mg/kg | 0.22 | 0.44 | 66,270 | PRG IND | No | No |
| SVOC | Benzoic acid | 65-85-0 | mg/kg | 0.32 | 0.64 | 100,000 | PRG IND | No | No |
| SVOC | Benzyl alcohol | 100-51-6 | mg/kg | 0.15 | 0.31 | 100,000 | PRG IND | No | No |
| SVOC | Bis (2-chloroethoxy) methane | 111-91-1 | mg/kg | 0.12 | 0.24 | | | | |
| SVOC | Bis (2-chloroethyl) ether | 111-44-4 | mg/kg | 0.15 | 0.31 | 0.56 | PRG IND | No | No |
| SVOC | Bis (2-chloroisopropyl) ether | 108-60-1 | mg/kg | 0.1 | 0.2 | 43 | PRG IND | No | No |
| SVOC | Bis (2-ethylhexyl) phthalate | 117-81-7 | mg/kg | 0.2 | 0.4 | 214 | PRG IND | No | No |
| SVOC | Butyl benzylphthalate | 85-68-7 | mg/kg | 0.16 | 0.32 | 930 | PRG IND | No | No |
| SVOC | Di-n-octylphthalate | 117-84-0 | mg/kg | 0.04 | 0.09 | 10,000 | PRG IND | No | No |
| SVOC | Dibenzofuran | 132-64-9 | mg/kg | 0.09 | 0.19 | 3,236 | PRG IND | No | No |
| SVOC | Diethyl phthalate | 84-66-2 | mg/kg | 0.17 | 0.34 | 100,000 | PRG IND | No | No |
| SVOC | Dimethyl phthalate | 131-11-3 | mg/kg | 0.09 | 0.19 | 100,000 | PRG IND | No | No |
| SVOC | Hexachlorobenzene | 118-74-1 | mg/kg | 0.11 | 0.23 | 1.9 | PRG IND | No | No |
| SVOC | Hexachlorocyclopentadiene | 77-47-4 | mg/kg | 0.26 | 0.53 | 7,089 | PRG IND | No | No |
| SVOC | Hexachloroethane | 67-72-1 | mg/kg | 0.16 | 0.32 | 214 | PRG IND | No | No |
| SVOC | Isophorone | 78-59-1 | mg/kg | 0.11 | 0.23 | 3,150 | PRG IND | No | No |
| SVOC | N-Nitrosodi-n-propylamine | 621-64-7 | mg/kg | 0.14 | 0.29 | 0.43 | PRG IND | No | No |
| SVOC | N-Nitrosodiphenylamine | 86-30-6 | mg/kg | 0.12 | 0.25 | 611 | PRG IND | No | No |
| SVOC | Nitrobenzene | 98-95-3 | mg/kg | 0.13 | 0.26 | 104 | PRG IND | No | No |
| SVOC | Pentachlorophenol | 87-86-5 | mg/kg | 0.41 | 0.83 | 15 | PRG IND | No | No |
| SVOC | Phenol | 108-95-2 | mg/kg | 0.114 | 0.23 | 100,000 | PRG IND | No | No |
| PAH | Acenaphthene | 83-32-9 | mg/kg | 0.02 | 0.04 | 27,983 | PRG IND | No | No |
| PAH | Acenaphthylene | 208-96-8 | mg/kg | 0.038 | 0.063 | | | | |
| PAH | Dibenzo (a,h) anthracene | 53-70-3 | mg/kg | 0.005 | 0.008 | 0.36 | PRG IND | No | No |

**Table F-2**
**Complete Comparision of Method Detection Limits in Surface Sediment to Screening Levels**
*Bellows OU1 EE/CA, Bellows AFS, Hawaii*

| | | | | | | Screening Level | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chemical Group | Chemical | CAS | Units | Minimum MDL | Maximum MDL | Value | Source | Minimum MDL > Value? | Maximum MDL > Value? |
| PAH | Fluorene | 86-73-7 | mg/kg | 0.004 | 0.006 | 22,381 | PRG IND | No | No |
| PAH | Naphthalene | 91-20-3 | mg/kg | 0.0004 | 0.0009 | 188 | PRG IND | No | No |
| PCB | Aroclor-1016 | 12674-11-2 | mg/kg | 0.0096 | 0.18 | 63 | PRG IND | No | No |
| PCB | Aroclor-1221 | 11104-28-2 | mg/kg | 0.011 | 0.2 | 1.3 | PRG IND | No | No |
| PCB | Aroclor-1232 | 11141-16-5 | mg/kg | 0.0092 | 0.18 | 1.3 | PRG IND | No | No |
| PCB | Aroclor-1242 | 53469-21-9 | mg/kg | 0.012 | 0.22 | 1.3 | PRG IND | No | No |
| PCB | Aroclor-1248 | 12672-29-6 | mg/kg | 0.016 | 0.3 | 1.3 | PRG IND | No | No |
| PCB | Aroclor-1254 | 11097-69-1 | mg/kg | 0.0027 | 0.051 | 18 | PRG IND | No | No |
| PCB | Aroclor-1260 | 11096-82-5 | mg/kg | 0.0038 | 0.073 | 1.3 | PRG IND | No | No |
| METALS | Antimony | 7440-36-0 | mg/kg | 1.37 | 2.8 | 749 | PRG IND | No | No |
| METALS | Mercury | 7439-97-6 | mg/kg | 0.06 | 0.13 | 562 | PRG IND | No | No |
| METALS | Selenium | 7782-49-2 | mg/kg | 1.06 | 2.16 | 9,366 | PRG IND | No | No |
| METALS | Thallium | 7440-28-0 | mg/kg | 0.91 | 1.85 | 130 | PRG IND | No | No |
| HERB | 2,4,5-T | 93-76-5 | mg/kg | 0.006 | 0.013 | 545 | PRG IND | No | No |
| HERB | 2,4-DB | 94-82-6 | mg/kg | 0.03 | 0.067 | 436 | PRG IND | No | No |
| HERB | Dichloroprop | 120-36-5 | mg/kg | 0.019 | 0.042 | | | | |
| HERB | Dinoseb | 88-85-7 | mg/kg | 0.0071 | 0.016 | 55 | PRG IND | No | No |
| HERB | MCPA | 94-74-6 | mg/kg | 4.3 | 9.5 | 27 | PRG IND | No | No |

**Notes:**

Screening levels are not available for all analytes.

*Chemical Groups*
VOC = volatile organic compounds
SVOC = semivolatile organic compounds
PAH = polynuclear aromatic hydrocarbons
PCB = polychlorinated biphenyls
HERB = herbicides

*Abbreviations*
mg/kg = milligrams per kilogram
PRG IND = EPA Region IX industrial preliminary remediation goal
MDL = method detection limit