

Appendix A1  
Analytical Method, CAS Number and Chemical Name  
Sediments

| Analytical Method | CAS Number | Chemical Name                        | Alternative Chemical Name |
|-------------------|------------|--------------------------------------|---------------------------|
| 300               | 16984-48-8 | Fluoride                             |                           |
| 6010B             | 7429-90-5  | Aluminum                             |                           |
| 6010B             | 7439-89-6  | Iron                                 |                           |
| 6020              | 7439-92-1  | Lead                                 |                           |
| 6010B             | 7439-93-2  | Lithium                              |                           |
| 6010B             | 7439-95-4  | Magnesium                            |                           |
| 6010B             | 7439-96-5  | Manganese                            |                           |
| 7471A             | 7439-97-6  | Mercury                              |                           |
| 6020              | 7439-98-7  | Molybdenum                           |                           |
| 6020              | 7440-02-0  | Nickel                               |                           |
| 6010B             | 7440-09-7  | Potassium                            |                           |
| 6020              | 7440-22-4  | Silver                               |                           |
| 6010B             | 7440-23-5  | Sodium                               |                           |
| 6010B             | 7440-24-6  | Strontium                            |                           |
| 6020              | 7440-28-0  | Thallium                             |                           |
| 6010B             | 7440-31-5  | Tin                                  |                           |
| 6010B             | 7440-32-6  | Titanium                             |                           |
| 6020              | 7440-36-0  | Antimony                             |                           |
| 6020              | 7440-38-2  | Arsenic                              |                           |
| 6020              | 7440-41-7  | Beryllium                            |                           |
| 6020              | 7440-39-3  | Barium                               |                           |
| 6010B             | 7440-42-8  | Boron                                |                           |
| 6020              | 7440-43-9  | Cadmium                              |                           |
| 6020              | 7440-47-3  | Chromium                             |                           |
| 6020              | 7440-48-4  | Cobalt                               |                           |
| 6020              | 7440-50-8  | Copper                               |                           |
| 6020              | 7440-62-2  | Vanadium                             |                           |
| 6020              | 7440-66-6  | Zinc                                 |                           |
| 6010B             | 7440-67-7  | Zirconium                            |                           |
| 6010B             | 7440-70-2  | Calcium                              |                           |
| 6010B             | 7723-14-0  | Phosphorus                           |                           |
| 6020              | 7782-49-2  | Selenium                             |                           |
| 1630M             | 22967-92-6 | Methyl Mercury                       |                           |
| 7199              | 18540-29-9 | Chromium (Hexavalent Compounds)      | Chromium VI               |
| 314               | 14797-73-0 | Perchlorate                          |                           |
| 6850              | 14797-73-0 | Perchlorate                          |                           |
| 8151A             | 120-36-5   | Dichlorprop                          |                           |
| 8151A             | 1918-00-9  | Dicamba                              |                           |
| 8151A             | 75-99-0    | 2,2-Dichlor-Propionic Acid           | Dalapon                   |
| 8151A             | 88-85-7    | Dinitrobutyl Phenol                  | Dinoseb                   |
| 8151A             | 93-65-2    | Methylchlorophenoxypropionic acid    | MCPP                      |
| 8151A             | 93-72-1    | 2,4,5-Trichlorophenoxyacetic acid    | Silvex (2,4,5-TP)         |
| 8151A             | 93-76-5    | 2,4,5-Trichlorophenoxyacetic Acid    | 2,4,5-T                   |
| 8151A             | 94-74-6    | 2-Methyl-4-Chlorophenoxyacetic Acid  | MCPA                      |
| 8151A             | 94-75-7    | Dichlorophenoxyacetic Acid           | 2,4-D                     |
| 8151A             | 94-82-6    | 4-(2,4-dichlorophenoxy)butanoic acid | 2,4 DB                    |
| 8081A             | 8001-35-2  | Chlorinated Camphene                 | Toxaphene                 |
| 8081A             | 1024-57-3  | Heptachlor Epoxide                   |                           |
| 8081A             | 1031-07-8  | Endosulfan Sulfate                   |                           |

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| 8081A             | 2385-85-5  | Mirex                                      |                           |
| 8081A             | 309-00-2   | Aldrin                                     |                           |
| 8081A             | 319-84-6   | Alpha-BHC                                  |                           |
| 8081A             | 319-85-7   | Beta-BHC                                   |                           |
| 8081A             | 319-86-8   | Delta-BHC                                  |                           |
| 8081A             | 33213-65-9 | Endosulfan II                              |                           |
| 8081A             | 50-29-3    | 4,4'-DDT                                   |                           |
| 8081A             | 53494-70-5 | Endrin Ketone                              |                           |
| 8081A             | 57-74-9    | Chlordane                                  |                           |
| 8081A             | 58-89-9    | Gamma-BHC (Lindane)                        |                           |
| 8081A             | 60-57-1    | Dieldrin                                   |                           |
| 8081A             | 72-20-8    | Endrin                                     |                           |
| 8081A             | 72-43-5    | Methoxychlor                               |                           |
| 8081A             | 72-54-8    | 4,4'-DDD                                   |                           |
| 8081A             | 72-55-9    | 4,4'-DDE                                   |                           |
| 8081A             | 7421-93-4  | Endrin Aldehyde                            |                           |
| 8081A             | 76-44-8    | Heptachlor                                 |                           |
| 8081A             | 959-98-8   | Endosulfan I                               |                           |
| 1613B             | 1746-01-6  | 2,3,7,8-Tetrachlorodibenzo-p-dioxin        | 2,3,7,8-TCDD              |
| 1613B             | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin     | 1,2,3,7,8,9-HxCDD         |
| 1613B             | 3268-87-9  | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin | OCDD                      |
| 1613B             | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin  | 1,2,3,4,6,7,8-HpCDD       |
| 1613B             | 39001-02-0 | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran     | OCDF                      |
| 1613B             | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin     | 1,2,3,4,7,8-HxCDD         |
| 1613B             | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin      | 1,2,3,7,8-PeCDD           |
| 1613B             | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran            | 2,3,7,8-TCDF              |
| 1613B             | 55673-89-7 | 1,2,3,4,7,8,9-Heptachlorodibenzofuran      | 1,2,3,4,7,8,9-HpCDF       |
| 1613B             | 57117-31-4 | 2,3,4,7,8-Pentachlorodibenzofuran          | 2,3,4,7,8-PeCDF           |
| 1613B             | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran          | 1,2,3,7,8-PeCDF           |
| 1613B             | 57117-44-9 | 1,2,3,6,7,8-Hexachlorodibenzofuran         | 1,2,3,6,7,8-HxCDF         |
| 1613B             | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin     | 1,2,3,6,7,8-HxCDD         |
| 1613B             | 60851-34-5 | 2,3,4,6,7,8-Hexachlorodibenzofuran         | 2,3,4,6,7,8-HxCDF         |
| 1613B             | 67562-39-4 | 1,2,3,4,6,7,8-Heptachlorodibenzofuran      | 1,2,3,4,6,7,8-HpCDF       |
| 1613B             | 70648-26-9 | 1,2,3,4,7,8-Hexachlorodibenzofuran         | 1,2,3,4,7,8-HxCDF         |
| 1613B             | 72918-21-9 | 1,2,3,7,8,9-Hexachlorodibenzofuran         | 1,2,3,7,8,9-HxCDF         |
| 8082              | 11096-82-5 | Aroclor 1260                               |                           |
| 8082              | 11097-69-1 | Aroclor 1254                               |                           |
| 8082              | 11100-14-4 | Aroclor 1268                               |                           |
| 8082              | 11104-28-2 | Aroclor 1221                               |                           |
| 8082              | 11126-42-4 | Aroclor 5460                               |                           |
| 8082              | 11141-16-5 | Aroclor 1232                               |                           |
| 8082              | 12642-23-8 | Aroclor 5442                               |                           |
| 8082              | 12672-29-6 | Aroclor 1248                               |                           |
| 8082              | 12674-11-2 | Aroclor 1016                               |                           |
| 8082              | 37324-23-5 | Aroclor 1262                               |                           |
| 8082              | 53469-21-9 | Aroclor 1242                               |                           |
| 8082              | 63496-31-1 | Aroclor 5432                               |                           |
| 1625C             | 62-75-9    | N-Nitrosodimethylamine                     |                           |
| 8270C SIM         | 62-75-9    | N-Nitrosodimethylamine                     |                           |

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| 8270C             | 121-14-2   | 2,4-Dinitrotoluene           |                           |
| 8270C             | 98-95-3    | Nitrobenzene                 |                           |
| 8270C             | 106-46-7   | 1,4-Dichlorobenzene          |                           |
| 8270C             | 120-82-1   | 1,2,4-Trichlorobenzene       |                           |
| 8270C             | 541-73-1   | 1,3-Dichlorobenzene          |                           |
| 8270C             | 87-68-3    | Hexachlorobutadiene          |                           |
| 8270C             | 95-50-1    | 1,2-Dichlorobenzene          |                           |
| 8270C             | 100-01-6   | 4-Nitroaniline               |                           |
| 8270C             | 100-02-7   | 4-Nitrophenol                |                           |
| 8270C             | 101-55-3   | 4-Bromophenyl Phenyl Ether   |                           |
| 8270C             | 105-67-9   | 2,4-Dimethylphenol           |                           |
| 8270C             | 106-44-5   | 4-Methylphenol               |                           |
| 8270C             | 106-47-8   | 4-Chloroaniline              |                           |
| 8270C             | 108-68-9   | 3,5-Dimethylphenol           |                           |
| 8270C             | 108-95-2   | Phenol                       |                           |
| 8270C             | 111-44-4   | Bis(2-Chloroethyl) ether     |                           |
| 8270C             | 111-91-1   | Bis(2-Chloroethoxy) methane  |                           |
| 8270C             | 117-81-7   | Bis(2-Ethylhexyl) phthalate  |                           |
| 8270C SIM         | 117-81-7   | Bis(2-Ethylhexyl) phthalate  |                           |
| 8270C             | 117-84-0   | Di-N-Octyl Phthalate         |                           |
| 8270C SIM         | 117-84-0   | Di-N-Octyl Phthalate         |                           |
| 8270C             | 118-74-1   | Hexachlorobenzene            |                           |
| 8270C SIM         | 120-12-7   | Anthracene                   |                           |
| 8270C             | 120-83-2   | 2,4-Dichlorophenol           |                           |
| 8270C             | 122-66-7   | 1,2-Diphenylhydrazine        |                           |
| 8270C             | 129-00-0   | Pyrene                       |                           |
| 8270C SIM         | 129-00-0   | Pyrene                       |                           |
| 8270C             | 131-11-3   | Dimethylphthalate            |                           |
| 8270C SIM         | 131-11-3   | Dimethylphthalate            |                           |
| 8270C             | 132-64-9   | Dibenzofuran                 |                           |
| 8270C             | 191-24-2   | Benzo(g,h,i)perylene         |                           |
| 8270C SIM         | 191-24-2   | Benzo(g,h,i)perylene         |                           |
| 8270C             | 193-39-5   | Indeno(1,2,3-Cd)Pyrene       |                           |
| 8270C SIM         | 193-39-5   | Indeno(1,2,3-Cd)Pyrene       |                           |
| 8270C             | 205-99-2   | Benzo(b)fluoranthene         |                           |
| 8270C SIM         | 205-99-2   | Benzo(b)fluoranthene         |                           |
| 8270C             | 206-44-0   | Fluoranthene                 |                           |
| 8270C SIM         | 206-44-0   | Fluoranthene                 |                           |
| 8270C             | 207-08-9   | Benzo(k)fluoranthene         |                           |
| 8270C SIM         | 207-08-9   | Benzo(k)fluoranthene         |                           |
| 8270C SIM         | 208-96-8   | Acenaphthylene               |                           |
| 8270C             | 218-01-9   | Chrysene                     |                           |
| 8270C SIM         | 218-01-9   | Chrysene                     |                           |
| 8270C             | 39638-32-9 | bis(2-Chloroisopropyl) ether |                           |
| 8270C             | 50-32-8    | Benzo(a)pyrene               |                           |
| 8270C SIM         | 50-32-8    | Benzo(a)pyrene               |                           |
| 8270C             | 51-28-5    | 2,4-Dinitrophenol            |                           |
| 8270C             | 534-52-1   | 4,6-Dinitro-2-Methylphenol   |                           |
| 8270C             | 53-70-3    | Dibenzo(a,h)anthracene       |                           |

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|-------------------|------------|----------------------------|---------------------------|
| 8270C SIM         | 53-70-3    | Dibenzo(a,h)anthracene     |                           |
| 8270C             | 56-55-3    | Benzo(a)anthracene         |                           |
| 8270C SIM         | 56-55-3    | Benzo(a)anthracene         |                           |
| 8270C             | 59-50-7    | 4-Chloro-3-Methylphenol    |                           |
| 8270C             | 621-64-7   | N-Nitroso-Di-N-Propylamine |                           |
| 8270C             | 62-53-3    | Aniline                    |                           |
| 8270C             | 65-85-0    | Benzoic Acid               |                           |
| 8270C             | 67-72-1    | Hexachloroethane           |                           |
| 8270C             | 7005-72-3  | 4-Chlorophenyl Phenylether |                           |
| 8270C             | 77-47-4    | Hexachlorocyclopentadiene  |                           |
| 8270C             | 78-59-1    | Isophorone                 |                           |
| 8270C SIM         | 83-32-9    | Acenaphthene               |                           |
| 8270C             | 84-66-2    | Diethylphthalate           |                           |
| 8270C SIM         | 84-66-2    | Diethylphthalate           |                           |
| 8270C             | 84-74-2    | Di-N-Butylphthalate        |                           |
| 8270C SIM         | 84-74-2    | Di-N-Butylphthalate        |                           |
| 8270C             | 85-01-8    | Phenanthrene               |                           |
| 8270C SIM         | 85-01-8    | Phenanthrene               |                           |
| 8270C             | 85-68-7    | Butylbenzylphthalate       |                           |
| 8270C SIM         | 85-68-7    | Butylbenzylphthalate       |                           |
| 8270C             | 86-30-6    | N-Nitrosodiphenylamine     |                           |
| 8270C SIM         | 86-73-7    | Fluorene                   |                           |
| 8270C             | 86-74-8    | Carbazole                  |                           |
| 8270C             | 87-86-5    | Pentachlorophenol          |                           |
| 8270C             | 88-06-2    | 2,4,6-Trichlorophenol      |                           |
| 8270C             | 88-74-4    | 2-Nitroaniline             |                           |
| 8270C             | 88-75-5    | 2-Nitrophenol              |                           |
| 8270C             | 90-12-0    | 1-Methylnaphthalene        |                           |
| 8270C SIM         | 90-12-0    | 1-Methylnaphthalene        |                           |
| 8270C             | 91-20-3    | Naphthalene                |                           |
| 8270C SIM         | 91-20-3    | Naphthalene                |                           |
| 8270C             | 91-57-6    | 2-Methylnaphthalene        |                           |
| 8270C SIM         | 91-57-6    | 2-Methylnaphthalene        |                           |
| 8270C             | 91-58-7    | 2-Chloronaphthalene        |                           |
| 8270C             | 91-94-1    | 3,3`-Dichlorobenzidine     |                           |
| 8270C             | 92-87-5    | Benzidine                  |                           |
| 8270C             | 95-48-7    | 2-Methylphenol             |                           |
| 8270C             | 95-57-8    | 2-Chlorophenol             |                           |
| 8270C             | 95-95-4    | 2,4,5-Trichlorophenol      |                           |
| 8270C             | 99-09-2    | 3-Nitroaniline             |                           |
| 8270C             | 100-51-6   | Benzyl Alcohol             |                           |
| 8270C             | 606-20-2   | 2,6-Dinitrotoluene         |                           |
| NOAA S&T          | 1461-25-2  | Tetrabutyltin              |                           |
| NOAA S&T          | 688-73-3   | Tributyltin                |                           |
| NOAA S&T          | 77-58-7    | Dibutyltin                 |                           |
| NOAA S&T          | 78763-54-9 | Monobutyltin               |                           |

Appendix A2  
Metals and Inorganics - Validated Data  
Sediments

| Sample Name         | SED-001-SIV-SD-0.0-0.5 | SED-002-SIV-SD-0.0-0.5 | SED-003-SIV-SD-0.0-0.5 | SED-004-SIV-SD-0.0-0.5 | SED-005-SIV-SD-0.0-0.5 | SED-006-SIV-SD-0.0-0.5 | SED-007-SIV-SD-0.0-0.6 | SED-008-SIV-SD-0.0-0.5 | SED-009-SIV-SD-0.0-0.5 | SED-010-SIV-SD-0.0-0.5 | SED-011-SIV-SD-0.0-0.5 | SED-012-SIV-SD-0.0-0.5 | SED-013-SIV-SD-0.0-0.5 | SED-014-SIV-SD-0.0-0.5 | SED-015-SIV-SD-0.0-0.5 |          |
|---------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|----------|
| Sample Date         | 12/17/2010             | 12/21/2010             | 12/20/2010             | 12/17/2010             | 12/20/2010             | 12/17/2010             | 12/20/2010             | 12/20/2010             | 01/13/2011             | 12/22/2010             | 12/16/2010             | 12/17/2010             | 12/16/2010             | 12/17/2010             | 12/21/2010             |          |
| SDG                 | DE045                  | DE050                  | DX029                  | DE045                  | DX029                  | DE045                  | DX029                  | DX029                  | DE060                  | DE051                  | DX026                  | DE045                  | DX026                  | DE045                  | DE050                  |          |
| Start Depth         | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      |          |
| End Depth           | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.6                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    |          |
| Chemical Name       | Unit                   | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 |          |
| Fluoride            | mg/kg                  | 1.2                    | 1.1 J                  | 2.9 J                  | 1.3                    | 2.6 J                  | 1.2 U                  | 1.9 J                  | 2.7 J                  | 1.8                    | 1.4                    | 2                      | 1.7                    | 2.6                    | 1.1 J                  | 1.2 J    |
| Aluminum            | mg/kg                  | 17400                  | 14600                  | 10400                  | 27300                  | 15200                  | 30200                  | 11300                  | 12800                  | 10700                  | 8910                   | 11500                  | 7920                   | 19000                  | 11900                  | 10200    |
| Iron                | mg/kg                  | 20400                  | 22100                  | 14800                  | 32800                  | 19200                  | 30300                  | 17200                  | 19500                  | 19800                  | 15400 J                | 18200                  | 14400                  | 27700                  | 18700                  | 15300    |
| Lead                | mg/kg                  | 15.3 J                 | 10 J                   | 11 J                   | 12.9 J                 | 16.5 J                 | 31.1 J                 | 11.7 J                 | 16.9 J                 | 12.8                   | 8.58                   | 13.8 J                 | 9.9 J                  | 19.8 J                 | 12.2 J                 | 13.2 J   |
| Lithium             | mg/kg                  | 23.8                   | 29.2                   | 20.3 J                 | 34.3                   | 22.6 J                 | 26.5                   | 18.2 J                 | 23.9 J                 | 26.2                   | 23.2                   | 23.4 J                 | 17.6                   | 32.2 J                 | 21.1                   | 21.2     |
| Magnesium           | mg/kg                  | 4420                   | 6260                   | 3220                   | 9100                   | 4420                   | 6430                   | 3910                   | 4440                   | 5720                   | 3720 J                 | 4210                   | 3640                   | 6690                   | 5030                   | 3790     |
| Manganese           | mg/kg                  | 440                    | 332                    | 190                    | 398                    | 287                    | 454                    | 277                    | 293                    | 306                    | 301                    | 330                    | 209                    | 524                    | 274                    | 257      |
| Mercury             | mg/kg                  | 0.927                  | 0.114 U                | 0.0761 J               | 0.0343 J               | 0.0309 J               | 0.0233 J               | 0.0257 J               | 0.106 J                | 0.022 J                | 0.0093 J               | 0.105 U                | 0.0078 J               | 0.0198 J               | 0.0209 J               | 0.0053 J |
| Methyl Mercury      | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --       |
| Molybdenum          | mg/kg                  | 1.05 J                 | 0.457 J                | 0.396 J                | 0.614 J                | 0.819 J                | 0.893 J                | 0.495 J                | 0.508 J                | 0.435                  | 0.276                  | 0.641 J                | 0.478 J                | 0.992 J                | 1.09 J                 | 0.513 J  |
| Nickel              | mg/kg                  | 16 J                   | 12.1 J                 | 11.2 J                 | 21.8 J                 | 17.6 J                 | 21.8 J                 | 12.8 J                 | 12.3 J                 | 14.7                   | 8.35                   | 12.9 J                 | 9.76 J                 | 21.7 J                 | 14.4 J                 | 12.7 J   |
| Potassium           | mg/kg                  | 4070                   | 3940                   | 2930                   | 6980                   | 3360                   | 5400                   | 2880                   | 3590                   | 3270                   | 2890 J                 | 3370 J                 | 2450                   | 4530 J                 | 3040                   | 3150     |
| Silver              | mg/kg                  | 0.0983 J               | 0.0286 J               | 0.0333 J               | 0.0368 J               | 0.0489 J               | 0.0845 J               | 0.0542 J               | 0.0811 J               | 0.0798 J               | 0.0232 J               | 0.0437 J               | 0.0246 J               | 0.0981 J               | 0.035 J                | 0.0473 J |
| Sodium              | mg/kg                  | 110 J                  | 74.9 J                 | 99.8 J                 | 155                    | 75.7 J                 | 113 J                  | 69.5 J                 | 82.4 J                 | 64 J                   | 56.7 J                 | 75.3 J                 | 78.1 J                 | 112 J                  | 101 J                  | 72.3 J   |
| Strontium           | mg/kg                  | 27.2                   | 13.6                   | 14.6 J                 | 67.1                   | 15.8 J                 | 32.8                   | 24.3 J                 | 19.3 J                 | 22.9                   | 13.2 J                 | 18.4                   | 10.3                   | 24.5                   | 26.6                   | 23.9     |
| Thallium            | mg/kg                  | 0.335                  | 0.296                  | 0.291 J                | 0.454                  | 0.358 J                | 0.449                  | 0.234 J                | 0.268 J                | 0.323                  | 0.247                  | 0.368 J                | 0.216                  | 0.575 J                | 0.307                  | 0.29     |
| Tin                 | mg/kg                  | 11.2 U                 | 11.4 U                 | 12.9 U                 | 12.4 U                 | 12 U                   | 12 U                   | 11.8 U                 | 14.2 U                 | 2.74 J                 | 2.4 J                  | 10.8 U                 | 10.6 U                 | 11.5 U                 | 11.6 U                 | 12.8 U   |
| Titanium            | mg/kg                  | 1160                   | 1360                   | 856                    | 1550                   | 1140                   | 1460                   | 906                    | 1110                   | 997                    | 873                    | 1080                   | 786                    | 1550                   | 1070                   | 883      |
| Antimony            | mg/kg                  | 0.118 J                | 0.111 J                | 0.265 UJ               | 0.113 J                | 0.24 UJ                | 0.174 J                | 0.234 UJ               | 0.297 UJ               | 0.118 J                | 0.233 UJ               | 0.221 UJ               | 0.1 J                  | 0.219 UJ               | 0.101 J                | 0.0859 J |
| Arsenic             | mg/kg                  | 7.32 J                 | 6.18 J                 | 8.91 J                 | 8.81 J                 | 5.63 J                 | 7.45 J                 | 4.12 J                 | 12.9 J                 | 37.9                   | 9.04 J                 | 6.56 J                 | 5.73 J                 | 9.74 J                 | 5.93 J                 | 11.6 J   |
| Beryllium           | mg/kg                  | 0.73                   | 0.574                  | 0.565                  | 0.797                  | 0.649                  | 0.991                  | 0.439                  | 0.499                  | 0.549                  | 0.407                  | 0.675 J                | 0.405                  | 1.06 J                 | 0.591                  | 0.497    |
| Barium              | mg/kg                  | 138                    | 104                    | 101 J                  | 147                    | 113 J                  | 184                    | 96.6 J                 | 89.9 J                 | 69.6                   | 72.5 J                 | 119 J                  | 65.3                   | 180 J                  | 117                    | 99.4     |
| Boron               | mg/kg                  | 8.79                   | 4.65 J                 | 5.57 J                 | 15.7                   | 4.11 J                 | 11.3                   | 7.37                   | 6.76 J                 | 6.54 U                 | 6.51                   | 5.55                   | 6.39                   | 4.43 J                 | 8.15                   | 5.34 J   |
| Cadmium             | mg/kg                  | 0.457 J                | 0.233 J                | 0.164 J                | 0.371 J                | 0.224 J                | 0.752 J                | 0.305 J                | 0.238 J                | 0.211                  | 0.152                  | 0.279 J                | 0.157 J                | 0.423 J                | 0.279 J                | 0.191 J  |
| Chromium            | mg/kg                  | 26.7 J                 | 20.4 J                 | 17.3 J                 | 43.6 J                 | 25.3 J                 | 38 J                   | 16.5 J                 | 16.3 J                 | 19.1                   | 11.8 J                 | 20.1 J                 | 15.3 J                 | 37.4 J                 | 22.9 J                 | 18.7 J   |
| Cobalt              | mg/kg                  | 7.38 J                 | 5.89 J                 | 6.47 J                 | 11.6 J                 | 6.97 J                 | 10.3 J                 | 5.12 J                 | 5.85 J                 | 6.53                   | 4.17 J                 | 6.24 J                 | 4.48 J                 | 9.87 J                 | 8.83 J                 | 5.55 J   |
| Copper              | mg/kg                  | 13.2 J                 | 8.69 J                 | 8.4 J                  | 17.8 J                 | 11 J                   | 17.7 J                 | 10.8 J                 | 10.2 J                 | 11.2                   | 5.42 J                 | 9.7 J                  | 7.46 J                 | 15.4 J                 | 10.8 J                 | 9.12 J   |
| Vanadium            | mg/kg                  | 48.4 J                 | 42.4 J                 | 36.5 J                 | 83.9 J                 | 43.7 J                 | 68.9 J                 | 32.3 J                 | 31.2 J                 | 32.4                   | 23.9 J                 | 41.7 J                 | 32.1 J                 | 69 J                   | 47.2 J                 | 36.1 J   |
| Zinc                | mg/kg                  | 88.8                   | 70.9                   | 71.6 J                 | 113                    | 82.4 J                 | 186                    | 111 J                  | 67.9 J                 | 57.9                   | 58                     | 91.8 J                 | 64.1                   | 141 J                  | 84.4                   | 73.3     |
| Zirconium           | mg/kg                  | 4.21 J                 | 4.42 J                 | 1.21 J                 | 6.96                   | 6 UJ                   | 6.11                   | 1.02 J                 | 1.44 J                 | 6.54 U                 | 5.93 U                 | 5.4 U                  | 1.57 J                 | 5.75 U                 | 2.4 J                  | 2.32 J   |
| Calcium             | mg/kg                  | 5250                   | 2940                   | 2810                   | 31400                  | 2560                   | 4880                   | 3980                   | 3610                   | 8140                   | 4260 J                 | 3840                   | 3220                   | 4700                   | 6160                   | 5080     |
| Phosphorus          | mg/kg                  | 423                    | 501                    | 378                    | 641                    | 451                    | 526                    | 427                    | 415                    | 474                    | 378 J                  | 457 J                  | 327                    | 449 J                  | 441                    | 399      |
| Selenium            | mg/kg                  | 0.23 J                 | 0.153 J                | 0.155 J                | 0.517                  | 0.199 J                | 0.193 J                | 0.168 J                | 0.199 J                | 0.179 J                | 0.465 U                | 0.148 J                | 0.172 J                | 0.207 J                | 0.239 J                | 0.188 J  |
| Chromium VI         | mg/kg                  | 1.1 U                  | 0.25 J                 | 1.4 U                  | 0.37 J                 | 0.6 J                  | 0.35 J                 | 1.2 U                  | 1.5 U                  | 1.3 U                  | 1.2 U                  | 0.6 J                  | 0.56 J                 | 0.95 J                 | 0.32 J                 | 1.3 U    |
| Perchlorate (314.0) | ug/kg                  | 34.1 U                 | 35.9 U                 | 40.6 U                 | 37.1 U                 | 37.1 U                 | 37.5 U                 | 36.5 U                 | 29.4 J                 | 39.2 U                 | 36.6 U                 | 33.1 U                 | 31.8 U                 | 34.5 U                 | 35.3 U                 | 39.1 U   |
| Perchlorate (6850)  | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | 5.5 U                  | --                     | --                     | --                     | --       |
| Percent Moisture    | %                      | 12.1                   | 16.4                   | 26.1                   | 19.2                   | 19.1                   | 19.9                   | 17.8                   | 32.7                   | 23.5                   | 18.1                   | 9.3                    | 5.8                    | 13                     | 15                     | 23.2     |
| Tetrabutyltin       | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --       |
| Tributyltin         | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --       |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected

Appendix A2  
Metals and Inorganics - Validated Data  
Sediments

| Sample Name   | SED-001-SIV-SD-0.0-0.5 | SED-002-SIV-SD-0.0-0.5 | SED-003-SIV-SD-0.0-0.5 | SED-004-SIV-SD-0.0-0.5 | SED-005-SIV-SD-0.0-0.5 | SED-006-SIV-SD-0.0-0.5 | SED-007-SIV-SD-0.0-0.6 | SED-008-SIV-SD-0.0-0.5 | SED-009-SIV-SD-0.0-0.5 | SED-010-SIV-SD-0.0-0.5 | SED-011-SIV-SD-0.0-0.5 | SED-012-SIV-SD-0.0-0.5 | SED-013-SIV-SD-0.0-0.5 | SED-014-SIV-SD-0.0-0.5 | SED-015-SIV-SD-0.0-0.5 |      |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------|
| Sample Date   | 12/17/2010             | 12/21/2010             | 12/20/2010             | 12/17/2010             | 12/20/2010             | 12/17/2010             | 12/20/2010             | 12/20/2010             | 01/13/2011             | 12/22/2010             | 12/16/2010             | 12/17/2010             | 12/16/2010             | 12/17/2010             | 12/21/2010             |      |
| SDG           | DE045                  | DE050                  | DX029                  | DE045                  | DX029                  | DE045                  | DX029                  | DX029                  | DE060                  | DE051                  | DX026                  | DE045                  | DX026                  | DE045                  | DE050                  |      |
| Start Depth   | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      |      |
| End Depth     | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.6                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    |      |
| Chemical Name | Unit                   | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 |      |
| Dibutyltin    | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |      |
| Monobutyltn   | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |      |
| pH            | pH unit                | 7.16                   | 6.51                   | 7.06                   | 7.88                   | 6.64                   | 6.29                   | 7.88                   | 6.59                   | 7.15                   | 7.98                   | 7.19                   | 7.64                   | 7.32                   | 7.56                   | 6.89 |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected

Appendix A2  
Metals and Inorganics - Validated Data  
Sediments

| Sample Name         | SED-016-SIV-SD-0.0-0.5 | SED-017-SIV-SD-0.0-0.5 | SED-018-SIV-SD-0.0-0.5 | SED-019-SIV-SD-0.0-0.5 | SED-020-SIV-SD-0.0-0.5 | SED-021-SIV-SD-0.0-0.5 | SED-022-SIV-SD-0.0-0.5 | SED-023-SIV-SD-0.0-0.5 | SED-024-SIV-SD-0.0-0.5 | SED-025-SIV-SD-0.0-0.5 | SED-026-SIV-SD-0.0-0.5 | SED-027-SIV-SD-0.0-0.5 | SED-028-SIV-SD-0.0-0.5 | SED-029-SIV-SD-0.0-0.5 | SED-030-SIV-SD-0.0-0.5 |            |      |      |      |     |      |
|---------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------|------|------|------|-----|------|
| Sample Date         | 12/15/2010             | 12/16/2010             | 12/15/2010             | 12/16/2010             | 12/16/2010             | 12/15/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 01/13/2011             | 12/13/2010             | 12/13/2010 |      |      |      |     |      |
| SDG                 | DE040                  | DX026                  | DE040                  | DX026                  | DX026                  | DE040                  | DE039                  | DE039                  | DE039                  | DE038                  | DE039                  | DE039                  | DE039                  | DE060                  | DE036                  | DE036      |      |      |      |     |      |
| Start Depth         | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0          |      |      |      |     |      |
| End Depth           | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5        |      |      |      |     |      |
| Chemical Name       | Unit                   | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result     |      |      |      |     |      |
| Fluoride            | mg/kg                  | 2                      | 1.1                    | 1.3                    | 1.4                    | 1.1                    | 1.1 U                  | 1.1                    | 1.1 U                  | 1.3                    | 1.5                    | 1.7 J                  | 1.1 J                  | 2 J                    | 1.1 U                  | 1.2 U      |      |      |      |     |      |
| Aluminum            | mg/kg                  | 13900                  | 12100                  | 14800                  | 16900                  | 9110                   | 9560                   | 10800                  | 10800                  | 11500                  | 11900                  | 15500                  | 12500                  | 9630                   | 10400                  | 17700      |      |      |      |     |      |
| Iron                | mg/kg                  | 19300 J                | 17500                  | 20100 J                | 25200                  | 14100                  | 16900 J                | 19400                  | 19900                  | 22600                  | 19900                  | 22200                  | 21200                  | 18800                  | 16900                  | 26600      |      |      |      |     |      |
| Lead                | mg/kg                  | 6 J                    | 29.7 J                 | 7.2 J                  | 54.2 J                 | 12.2 J                 | 5.31 J                 | 10.5 J                 | 14.2 J                 | 16.7 J                 | 14                     | 19.5 J                 | 16.2 J                 | 6.77                   | 50.6 J                 | 19.8 J     |      |      |      |     |      |
| Lithium             | mg/kg                  | 22 J                   | 22.2 J                 | 27.1 J                 | 26.8 J                 | 22.5 J                 | 19.8 J                 | 24.1 J                 | 22.7 J                 | 24.5 J                 | 22.2                   | 25.7 J                 | 24.6 J                 | 22.6                   | 18.5                   | 28.8       |      |      |      |     |      |
| Magnesium           | mg/kg                  | 4220 J                 | 4030                   | 4410 J                 | 4990                   | 3380                   | 3980 J                 | 4750                   | 5070                   | 5470                   | 5230 J                 | 4510                   | 5510                   | 4850                   | 4470                   | 5770       |      |      |      |     |      |
| Manganese           | mg/kg                  | 260 J                  | 270                    | 306 J                  | 269                    | 206                    | 239 J                  | 293                    | 297                    | 309                    | 311 J                  | 340                    | 308                    | 246                    | 255                    | 399        |      |      |      |     |      |
| Mercury             | mg/kg                  | 0.0469 J               | 0.0741 J               | 0.0097 J               | 0.574                  | 0.0051 J               | 0.101 U                | 0.022 J                | 0.0082 J               | 0.0121 J               | 0.0102 J               | 0.614                  | 0.0513 J               | 0.0904 J               | 0.038 J                | 0.0222 J   |      |      |      |     |      |
| Methyl Mercury      | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |      |      |      |     |      |
| Molybdenum          | mg/kg                  | 0.377                  | 0.865 J                | 0.468                  | 3.69 J                 | 0.497 J                | 0.222                  | 0.611 J                | 0.678 J                | 0.57 J                 | 0.508                  | 0.94 J                 | 0.731 J                | 0.291                  | 0.694 J                | 0.876 J    |      |      |      |     |      |
| Nickel              | mg/kg                  | 10.3 J                 | 15.7 J                 | 9.7 J                  | 23.5 J                 | 11.1 J                 | 6.99 J                 | 12.6 J                 | 14 J                   | 14.2 J                 | 15.3                   | 15 J                   | 15.8 J                 | 9.52                   | 15.1 J                 | 22.2 J     |      |      |      |     |      |
| Potassium           | mg/kg                  | 2780 J                 | 3590 J                 | 3880 J                 | 3540 J                 | 2480 J                 | 2920 J                 | 3120 J                 | 3290 J                 | 3150 J                 | 3320 J                 | 3830 J                 | 3150 J                 | 2750                   | 2610                   | 5000       |      |      |      |     |      |
| Silver              | mg/kg                  | 0.0265 J               | 0.141 J                | 0.0255 J               | 0.267 J                | 0.0561 J               | 0.017 J                | 0.0842 J               | 0.0467 J               | 0.06 J                 | 0.04 J                 | 0.575 J                | 0.146 J                | 0.037 J                | 0.147 J                | 0.0806 J   |      |      |      |     |      |
| Sodium              | mg/kg                  | 89.4 J                 | 79.4 J                 | 71.2 J                 | 136                    | 60.8 J                 | 63.5 J                 | 79.9 J                 | 67.3 J                 | 68.9 J                 | 67.1 J                 | 112 J                  | 86.1 J                 | 65.7 J                 | 86.8 J                 | 78.9 J     |      |      |      |     |      |
| Strontium           | mg/kg                  | 14 J                   | 23.6                   | 14.8 J                 | 26.2                   | 12.8                   | 7.16 J                 | 16.3                   | 15.5                   | 15.2                   | 17.9                   | 20.6                   | 18                     | 12                     | 45.6                   | 29.1       |      |      |      |     |      |
| Thallium            | mg/kg                  | 0.214                  | 0.387 J                | 0.234                  | 0.505 J                | 0.284 J                | 0.156                  | 0.377 J                | 0.357 J                | 0.3 J                  | 0.24                   | 0.465 J                | 0.347 J                | 0.191                  | 0.188                  | 0.394      |      |      |      |     |      |
| Tin                 | mg/kg                  | 11.2 U                 | 11.1 U                 | 11 U                   | 13 U                   | 10.7 U                 | 10.3 U                 | 10.6 U                 | 10.9 U                 | 11.2 U                 | 10.8 U                 | 11.5 U                 | 11.6 U                 | 2.53 J                 | 10.6 U                 | 11.5 U     |      |      |      |     |      |
| Titanium            | mg/kg                  | 1270                   | 1080                   | 1260                   | 1270                   | 868                    | 1130                   | 1200                   | 1250                   | 1350                   | 1250 J                 | 1290                   | 1250                   | 1070                   | 1020                   | 1460       |      |      |      |     |      |
| Antimony            | mg/kg                  | 0.219 UJ               | 0.222 UJ               | 0.22 UJ                | 0.931 J                | 0.209 UJ               | 0.203 UJ               | 0.246 U                | 0.235 U                | 0.223 U                | 0.136 J                | 0.23 U                 | 0.227 U                | 0.278 U                | 0.191 J                | 0.115 J    |      |      |      |     |      |
| Arsenic             | mg/kg                  | 4.07 J                 | 7.45 J                 | 4.12 J                 | 11.1 J                 | 4.71 J                 | 2.43 J                 | 5.23 J                 | 6.07 J                 | 4.96 J                 | 4.21 J                 | 6.61 J                 | 6.17 J                 | 2.87                   | 6.15 J                 | 7.83 J     |      |      |      |     |      |
| Beryllium           | mg/kg                  | 0.468                  | 0.735 J                | 0.486                  | 1.07 J                 | 0.548 J                | 0.274                  | 0.438 J                | 0.472 J                | 0.455 J                | 0.488                  | 0.666 J                | 0.5 J                  | 0.365                  | 0.463 J                | 0.785 J    |      |      |      |     |      |
| Barium              | mg/kg                  | 69.7 J                 | 136 J                  | 80.1 J                 | 183 J                  | 95.9 J                 | 62.3 J                 | 110 J                  | 122 J                  | 99.6 J                 | 118 J                  | 150 J                  | 126 J                  | 64.4                   | 100 J                  | 202 J      |      |      |      |     |      |
| Boron               | mg/kg                  | 4.3 J                  | 5.92                   | 5.74                   | 6.31 J                 | 3.88 J                 | 3.56 J                 | 4.54 J                 | 4.1 J                  | 3.73 J                 | 9.33                   | 4.12 J                 | 4.15 J                 | 6.88 U                 | 4.76 J                 | 7.59       |      |      |      |     |      |
| Cadmium             | mg/kg                  | 0.154                  | 0.743 J                | 0.166                  | 2.23 J                 | 0.311 J                | 0.08 J                 | 0.358 UJ               | 0.216 UJ               | 0.251 UJ               | 0.202                  | 0.26 UJ                | 0.259 UJ               | 0.208                  | 0.902 J                | 0.461 J    |      |      |      |     |      |
| Chromium            | mg/kg                  | 17.9 J                 | 30.3 J                 | 15.9 J                 | 40.2 J                 | 19 J                   | 12.5 J                 | 22.4 J                 | 23.2 J                 | 21.8 J                 | 24.1                   | 24.3 J                 | 26.8 J                 | 15.9                   | 23 J                   | 33.4 J     |      |      |      |     |      |
| Cobalt              | mg/kg                  | 4.65 J                 | 7.3 J                  | 4.39 J                 | 11.2 J                 | 5.25 J                 | 3.62 J                 | 8.04 J                 | 7.05 J                 | 7.26 J                 | 6.33 J                 | 7.27 J                 | 7.14 J                 | 5.06                   | 6.94 J                 | 9.86 J     |      |      |      |     |      |
| Copper              | mg/kg                  | 6.7                    | 16 J                   | 6.16                   | 50.5 J                 | 8.77 J                 | 4.44                   | 9.68 J                 | 10.5 J                 | 10.3 J                 | 10.6                   | 11.3 J                 | 10.6 J                 | 6.44                   | 17.8 J                 | 18.1 J     |      |      |      |     |      |
| Vanadium            | mg/kg                  | 32.7 J                 | 52.1 J                 | 28.6 J                 | 68.2 J                 | 38.2 J                 | 26.8 J                 | 44.8 J                 | 48.9 J                 | 48.1 J                 | 47 J                   | 46.8 J                 | 54.9 J                 | 32.6                   | 41.3                   | 56.4       |      |      |      |     |      |
| Zinc                | mg/kg                  | 62.4 J                 | 117 J                  | 54.9 J                 | 308 J                  | 96.5 J                 | 42.6 J                 | 99 J                   | 93.4 J                 | 82.8 J                 | 70.5                   | 105 J                  | 88.1 J                 | 52.6                   | 174                    | 122        |      |      |      |     |      |
| Zirconium           | mg/kg                  | 1.3 J                  | 1.45 J                 | 1.38 J                 | 1.15 J                 | 5.33 U                 | 5.17 U                 | 0.9 J                  | 1.16 J                 | 1.51 J                 | 1.29 J                 | 5.74 U                 | 1.31 J                 | 2.1 J                  | 5.32 U                 | 1.44 J     |      |      |      |     |      |
| Calcium             | mg/kg                  | 2450 J                 | 5400                   | 3310 J                 | 3050                   | 2190                   | 1820 J                 | 3690                   | 4000                   | 3960                   | 3940 J                 | 3130                   | 3280                   | 3900                   | 23900                  | 4700       |      |      |      |     |      |
| Phosphorus          | mg/kg                  | 299 J                  | 475 J                  | 394 J                  | 707 J                  | 310 J                  | 324 J                  | 390 J                  | 405 J                  | 434 J                  | 470                    | 437 J                  | 446 J                  | 478                    | 403                    | 700        |      |      |      |     |      |
| Selenium            | mg/kg                  | 0.0957 J               | 0.12 J                 | 0.155 J                | 0.202 J                | 0.0829 J               | 0.0924 J               | 0.184 J                | 0.313 J                | 0.206 J                | 0.16 J                 | 0.177 J                | 0.225 J                | 0.124 J                | 0.144 J                | 0.209 J    |      |      |      |     |      |
| Chromium VI         | mg/kg                  | 0.81 J                 | 0.56 J                 | 0.34 J                 | 1.3 U                  | 1.1 U                  | 1.1 U                  | 1.1 U                  | 1.1 U                  | 1.1 U                  | 1.1 U                  | 1.2 U                  | 1.2 U                  | 0.29 J                 | 1.1 U                  | 0.7 J      |      |      |      |     |      |
| Perchlorate (314.0) | ug/kg                  | 33.5 U                 | 33.9 U                 | 33.3 U                 | 40.4 U                 | 32.6 U                 | 31.6 U                 | 32.5 U                 | 33.6 U                 | 34.4 U                 | 33.5 U                 | 34.8 U                 | 34.7 U                 | 42.5 U                 | 33.2 U                 | 35.8 U     |      |      |      |     |      |
| Perchlorate (6850)  | ug/kg                  | --                     | --                     | --                     | --                     | 5.4 U                  | --                     | --                     | --                     | 5.7 U                  | --                     | --                     | --                     | --                     | --                     | --         |      |      |      |     |      |
| Percent Moisture    | %                      | 10.4                   | 11.5                   | 9.9                    | 25.8                   | 8                      | 5.1                    | 7.6                    | 7.6                    | 10.8                   | 10.8                   | 12.8                   | 12.8                   | 10.4                   | 13.8                   | 13.8       | 13.6 | 13.6 | 29.4 | 9.7 | 16.3 |
| Tetrabutyltin       | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |      |      |      |     |      |
| Tributyltin         | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |      |      |      |     |      |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected

Appendix A2  
Metals and Inorganics - Validated Data  
Sediments

| Sample Name   | SED-016-SIV-SD-0.0-0.5 | SED-017-SIV-SD-0.0-0.5 | SED-018-SIV-SD-0.0-0.5 | SED-019-SIV-SD-0.0-0.5 | SED-020-SIV-SD-0.0-0.5 | SED-021-SIV-SD-0.0-0.5 | SED-022-SIV-SD-0.0-0.5 | SED-023-SIV-SD-0.0-0.5 | SED-024-SIV-SD-0.0-0.5 | SED-025-SIV-SD-0.0-0.5 | SED-026-SIV-SD-0.0-0.5 | SED-027-SIV-SD-0.0-0.5 | SED-028-SIV-SD-0.0-0.5 | SED-029-SIV-SD-0.0-0.5 | SED-030-SIV-SD-0.0-0.5 |            |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------|
| Sample Date   | 12/15/2010             | 12/16/2010             | 12/15/2010             | 12/16/2010             | 12/16/2010             | 12/15/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 12/14/2010             | 01/13/2011             | 12/13/2010             | 12/13/2010 |
| SDG           | DE040                  | DX026                  | DE040                  | DX026                  | DX026                  | DE040                  | DE039                  | DE039                  | DE039                  | DE038                  | DE039                  | DE039                  | DE039                  | DE060                  | DE036                  | DE036      |
| Start Depth   | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0          |
| End Depth     | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5        |
| Chemical Name | Unit                   | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result     |
| Dibutyltin    | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |
| Monobutyltn   | ug/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |
| pH            | pH unit                | 7                      | 7.92                   | 7.25                   | 4.76                   | 6.84                   | 6.92                   | 7.07                   | 7.02                   | 6.78                   | 7.56                   | 7.28                   | 6.96                   | 7.41                   | 7.35                   | 7.22       |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected



Appendix A2  
Metals and Inorganics - Validated Data  
Sediments

| Sample Name         | SED-031-SIV-SD-0.0-0.5 | SED-032-SIV-SD-0.0-0.5 | SED-033-SIV-SD-0.0-0.5 | SED-034-SIV-SD-0.0-0.5 | SED-035-SIV-SD-0.0-0.5 | SED-036-SIV-SD-0.0-0.5 | SED-037-SIV-SD-0.0-0.5 | SED-038-SIV-SD-0.0-0.5 | SED-039-SIV-SD-0.0-0.5 | SED-040-SIV-SD-0.0-0.5 |          |
|---------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|----------|
| Sample Date         | 12/13/2010             | 12/13/2010             | 12/13/2010             | 12/20/2010             | 05/23/2011             | 12/21/2010             | 12/20/2010             | 12/21/2010             | 12/21/2010             | 12/13/2010             |          |
| SDG                 | DE036                  | DE037                  | DE037                  | DX029                  | DE159                  | DE050                  | DX029                  | DE050                  | DE050                  | DE036                  |          |
| Start Depth         | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      |          |
| End Depth           | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    |          |
| Chemical Name       | Unit                   | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 |          |
| Fluoride            | mg/kg                  | 1.4                    | 1.7                    | 0.9 J                  | 2 J                    | 2.9 J                  | 1.6                    | 2.4 J                  | 1.3                    | 1.3                    | 1.1 U    |
| Aluminum            | mg/kg                  | 10300                  | 10300                  | 7300                   | 8990                   | 10600                  | 22100                  | 14100                  | 12600                  | 9390                   | 11700    |
| Iron                | mg/kg                  | 17000                  | 17800                  | 13900                  | 15700                  | 14800                  | 31800                  | 18600                  | 17600                  | 15400                  | 18700    |
| Lead                | mg/kg                  | 20.2 J                 | 25 J                   | 15 J                   | 12.7 J                 | 21                     | 18.6 J                 | 49 J                   | 12 J                   | 10.3 J                 | 10.8 J   |
| Lithium             | mg/kg                  | 19.5                   | 19.4                   | 14.9                   | 22.6 J                 | 15.9                   | 42.9                   | 20.8 J                 | 19.7                   | 21.5                   | 21.6     |
| Magnesium           | mg/kg                  | 3910                   | 4130                   | 3090                   | 3960                   | 3220                   | 7270                   | 4530                   | 4300                   | 3420                   | 4180     |
| Manganese           | mg/kg                  | 234                    | 254                    | 247                    | 218                    | 232                    | 389                    | 306                    | 267                    | 230                    | 252      |
| Mercury             | mg/kg                  | 0.0049 J               | 0.0148 J               | 0.0998 U               | 0.121 U                | 0.0187 J               | 0.0109 J               | 0.021 J                | 0.0059 J               | 0.125 U                | 0.0039 J |
| Methyl Mercury      | ug/kg                  | --                     | --                     | --                     | --                     | 0.452                  | --                     | --                     | --                     | --                     | --       |
| Molybdenum          | mg/kg                  | 0.584 J                | 0.707 J                | 0.691 J                | 0.357 J                | 1.59 J                 | 0.783 J                | 0.676 J                | 0.56 J                 | 0.364 J                | 0.471 J  |
| Nickel              | mg/kg                  | 15.1 J                 | 17.6                   | 21.6                   | 9.34 J                 | 13.5 J                 | 28 J                   | 18.6 J                 | 13.7 J                 | 11.6 J                 | 13 J     |
| Potassium           | mg/kg                  | 2850                   | 2790 J                 | 1810 J                 | 2630                   | 2260 J                 | 4840                   | 3310                   | 3270                   | 3100                   | 3390     |
| Silver              | mg/kg                  | 0.0557 J               | 1.39 J                 | 0.329 J                | 0.0249 J               | 0.315 J                | 0.161                  | 0.127 J                | 0.0475 J               | 0.0238 J               | 0.0217 J |
| Sodium              | mg/kg                  | 54.3 J                 | 78.8 J                 | 64.8 J                 | 56.6 J                 | 161 J                  | 93.5 J                 | 121 J                  | 61.9 J                 | 59.6 J                 | 62.3 J   |
| Strontium           | mg/kg                  | 16.1                   | 18.3                   | 9.87                   | 8.22 J                 | 37.7                   | 20.4                   | 27 J                   | 14.3                   | 11.1                   | 13.8     |
| Thallium            | mg/kg                  | 0.302                  | 0.298                  | 0.435                  | 0.252 J                | 0.265 J                | 0.585                  | 0.321 J                | 0.267                  | 0.268                  | 0.31     |
| Tin                 | mg/kg                  | 10.7 U                 | 11.2 U                 | 10.2 U                 | 12.6 U                 | 16.6 U                 | 12.6 U                 | 13.7 U                 | 11.4 U                 | 13 U                   | 10.7 U   |
| Titanium            | mg/kg                  | 1200                   | 1030                   | 759                    | 826                    | 912                    | 1440                   | 1030                   | 1030                   | 821                    | 1120     |
| Antimony            | mg/kg                  | 0.22 R                 | 0.192 J                | 0.286 J                | 0.247 UJ               | 0.437 J                | 0.203 J                | 0.266 UJ               | 0.0951 J               | 0.258 UJ               | 0.218 R  |
| Arsenic             | mg/kg                  | 5.9 J                  | 8.28 J                 | 9.5 J                  | 5.3 J                  | 4.36 J                 | 15.7 J                 | 5.93 J                 | 5.11 J                 | 6.51 J                 | 4.31 J   |
| Beryllium           | mg/kg                  | 0.546 J                | 0.616                  | 0.782                  | 0.459                  | 0.48 J                 | 1.07                   | 0.677                  | 0.555                  | 0.513                  | 0.503 J  |
| Barium              | mg/kg                  | 112 J                  | 112 J                  | 133 J                  | 76.1 J                 | 110 J                  | 154                    | 124 J                  | 106                    | 106                    | 120 J    |
| Boron               | mg/kg                  | 6.11                   | 4.97 J                 | 3.23 J                 | 5.57 J                 | 8.28 U                 | 9.31                   | 8.62                   | 4.94 J                 | 3.97 J                 | 5.27 J   |
| Cadmium             | mg/kg                  | 0.255 J                | 0.249 J                | 0.15 J                 | 0.167 J                | 0.732 J                | 0.285 J                | 0.397 J                | 0.248 J                | 0.125 J                | 0.192 J  |
| Chromium            | mg/kg                  | 25.1 J                 | 25.4                   | 36.8                   | 13 J                   | 15.4 J                 | 41.7 J                 | 23.8 J                 | 24 J                   | 18.3 J                 | 20.5 J   |
| Cobalt              | mg/kg                  | 7.18 J                 | 6.3                    | 7.49                   | 4.99 J                 | 3.92 J                 | 13.1 J                 | 7.03 J                 | 6.49 J                 | 6.8 J                  | 6.78 J   |
| Copper              | mg/kg                  | 12.7 J                 | 13.1                   | 15.8                   | 6.53 J                 | 13.1 J                 | 22.4 J                 | 12.8 J                 | 9.33 J                 | 7.54 J                 | 9.21 J   |
| Vanadium            | mg/kg                  | 44.2                   | 42.8                   | 58                     | 27.7 J                 | 34.3 J                 | 79.5 J                 | 46.2 J                 | 44.4 J                 | 37 J                   | 41.7     |
| Zinc                | mg/kg                  | 89.1                   | 109 J                  | 118 J                  | 93.8 J                 | 209 J                  | 142                    | 238 J                  | 76.5                   | 75.6                   | 77.6     |
| Zirconium           | mg/kg                  | 0.92 J                 | 1.22 J                 | 5.1 U                  | 6.3 U                  | 2.73 J                 | 5.96 J                 | 1.54 J                 | 2.81 J                 | 2.19 J                 | 1.05 J   |
| Calcium             | mg/kg                  | 3000                   | 3360                   | 1710                   | 2330                   | 11800 J                | 5580                   | 4920                   | 2530                   | 2200                   | 2320     |
| Phosphorus          | mg/kg                  | 374                    | 386 J                  | 267 J                  | 404                    | 509 J                  | 561                    | 449                    | 362                    | 357                    | 408      |
| Selenium            | mg/kg                  | 0.151 J                | 0.168 J                | 0.209 J                | 0.143 J                | 0.22 J                 | 0.49 J                 | 0.266 J                | 0.161 J                | 0.136 J                | 0.129 J  |
| Chromium VI         | mg/kg                  | 1.1 U                  | 1.1 U                  | 1.1 U                  | 1.3 U                  | 1.7 U                  | 0.43 J                 | 0.63 J                 | 1.1 U                  | 0.29 J                 | 0.44 J   |
| Perchlorate (314.0) | ug/kg                  | 33.3 U                 | 34.3 U                 | 31.8 U                 | 38.6 U                 | 49.7 U                 | 37.9 U                 | 41.9 U                 | 34.3 U                 | 39.8 U                 | 32.7 U   |
| Perchlorate (6850)  | ug/kg                  | --                     | 5.7 U                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --       |
| Percent Moisture    | %                      | 10                     | 12.6                   | 5.8 U                  | 22.2                   | 39.6                   | 20.9                   | 28.4                   | 12.6                   | 24.6                   | 8.3      |
| Tetrabutyltin       | ug/kg                  | --                     | --                     | --                     | --                     | 3.2 U                  | --                     | --                     | --                     | --                     | --       |
| Tributyltin         | ug/kg                  | --                     | --                     | --                     | --                     | 2.9 U                  | --                     | --                     | --                     | --                     | --       |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected

Appendix A2  
Metals and Inorganics - Validated Data  
Sediments

| Sample Name   | SED-031-SIV-SD-0.0-0.5 | SED-032-SIV-SD-0.0-0.5 | SED-033-SIV-SD-0.0-0.5 | SED-034-SIV-SD-0.0-0.5 | SED-035-SIV-SD-0.0-0.5 | SED-036-SIV-SD-0.0-0.5 | SED-037-SIV-SD-0.0-0.5 | SED-038-SIV-SD-0.0-0.5 | SED-039-SIV-SD-0.0-0.5 | SED-040-SIV-SD-0.0-0.5 |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample Date   | 12/13/2010             | 12/13/2010             | 12/13/2010             | 12/20/2010             | 05/23/2011             | 12/21/2010             | 12/20/2010             | 12/21/2010             | 12/21/2010             | 12/13/2010             |
| SDG           | DE036                  | DE037                  | DE037                  | DX029                  | DE159                  | DE050                  | DX029                  | DE050                  | DE050                  | DE036                  |
| Start Depth   | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      | 0                      |
| End Depth     | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    | 0.5                    |
| Chemical Name | Unit                   | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 | Result                 |
| Dibutyltin    | ug/kg                  | --                     | --                     | --                     | --                     | 2.5 U                  | --                     | --                     | --                     | --                     |
| Monobutyltn   | ug/kg                  | --                     | --                     | --                     | --                     | 9.5 UJ                 | --                     | --                     | --                     | --                     |
| pH            | pH unit                | 6.92                   | 8.48                   | 8                      | 6.61                   | 7.19                   | 7.19                   | 7.3                    | 6.94                   | 7.02                   |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected

Appendix A3  
PCBs and Dioxins - Validated Data  
Sediments

| Sample Name         | SED-001-SIV<br>SD-0.0-0.5 | SED-002-SIV<br>SD-0.0-0.5 | SED-003-SIV<br>SD-0.0-0.5 | SED-004-SIV<br>SD-0.0-0.5 | SED-005-SIV<br>SD-0.0-0.5 | SED-006-SIV<br>SD-0.0-0.5 | SED-007-SIV<br>SD-0.0-0.6 | SED-008-SIV<br>SD-0.0-0.5 | SED-009-SIV<br>SD-0.0-0.5 | SED-010-SIV<br>SD-0.0-0.5 | SED-011-SIV<br>SD-0.0-0.5 | SED-012-SIV<br>SD-0.0-0.5 | SED-013-SIV<br>SD-0.0-0.5 | SED-014-SIV<br>SD-0.0-0.5 | SED-015-SIV<br>SD-0.0-0.5 | SED-016-SIV<br>SD-0.0-0.5 |          |
|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------|
| Sample Date         | 12/17/2010                | 12/21/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/20/2010                | 01/13/2011                | 12/22/2010                | 12/16/2010                | 12/17/2010                | 12/16/2010                | 12/17/2010                | 12/21/2010                | 12/15/2010                |          |
| SDG                 | DE045                     | DE050                     | DX029                     | DE045                     | DX029                     | DE045                     | DX029                     | DX029                     | DE060                     | DE051                     | DX026                     | DE045                     | DX026                     | DE045                     | DE050                     | DE040                     |          |
| Start Depth         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |          |
| End Depth           | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.6                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |          |
| Chemical Name       | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |          |
| 2,3,7,8-TCDD        | ng/kg                     | 0.0787 J                  | 1.2 U                     | 0.108 J                   | 1.24 U                    | 1.24 UJ                   | 0.0794 J                  | 0.13 J                    | 1.49 U                    | 1.31 U                    | 0.0453 J                  | 0.12 J                    | 1.06 U                    | 0.0815 J                  | 0.217 J                   | 1.3 U                     | 0.12 J   |
| 1,2,3,7,8,9-HxCDD   | ng/kg                     | 1.21 J                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 0.99 J                    | 1.51 J                    | 1.39 J                    | 1.28 J                    | 0.354 J                   | 0.368 J                   | 1.06 J                    | 5.31 U                    | 3 J                       | 14.7                      | 0.524 J                   | 5.06 J   |
| OCDD                | ng/kg                     | 236                       | 13.8                      | 223                       | 240                       | 62.3                      | 259                       | 337                       | 180                       | 54.6                      | 58.4                      | 314                       | 153                       | 869                       | 49800 J                   | 65.2                      | 7800 J   |
| 1,2,3,4,6,7,8-HpCDD | ng/kg                     | 27.7                      | 2.08 J                    | 22.1                      | 21.9                      | 8.71                      | 29                        | 46.2                      | 18.9                      | 7.27                      | 7.16                      | 32.2                      | 15.8                      | 93                        | 4430 J                    | 5.17 J                    | 735      |
| OCDF                | ng/kg                     | 4.93 J                    | 12 U                      | 8.23 J                    | 52.6                      | 3.16 J                    | 9.52 J                    | 9.62 J                    | 7.73 J                    | 2.84 J                    | 2.13 J                    | 10.8 J                    | 5.17 J                    | 28.3                      | 2920                      | 2.04 J                    | 177      |
| 1,2,3,4,7,8-HxCDD   | ng/kg                     | 5.69 U                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 6.24 U                    | 0.782 J                   | 7.43 U                    | 0.183 J                   | 6.11 U                    | 0.511 J                   | 5.31 U                    | 1.48 J                    | 8.92                      | 0.281 J                   | 2.18 J   |
| 1,2,3,7,8-PeCDD     | ng/kg                     | 5.69 U                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 6.24 U                    | 0.58 J                    | 7.43 U                    | 0.245 J                   | 0.22 J                    | 0.432 J                   | 5.31 U                    | 0.847 J                   | 2.8 J                     | 0.419 J                   | 0.82 J   |
| 2,3,7,8-TCDF        | ng/kg                     | 1.76                      | 0.112 J                   | 0.719 J                   | 1.24 U                    | 4.44                      | 1.1 J                     | 0.307 J                   | 1.1 J                     | 0.338 J                   | 1.22 U                    | 1.1 U                     | 1.06 U                    | 0.355 J                   | 0.384 J                   | 0.349 J                   | 0.0902 J |
| 1,2,3,4,7,8,9-HpCDF | ng/kg                     | 5.69 U                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 6.24 U                    | 1 J                       | 7.43 U                    | 6.54 U                    | 6.11 U                    | 0.462 J                   | 5.31 U                    | 1.11 J                    | 85.3                      | 0.314 J                   | 11.7     |
| 2,3,4,7,8-PeCDF     | ng/kg                     | 1.66 J                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 1.28 J                    | 2.16 J                    | 1.17 J                    | 0.956 J                   | 0.397 J                   | 0.515 J                   | 5.31 U                    | 0.68 J                    | 5.88 U                    | 0.787 J                   | 5.58 U   |
| 1,2,3,7,8-PeCDF     | ng/kg                     | 11.7                      | 5.98 U                    | 1.98 J                    | 6.19 U                    | 2.12 J                    | 1.38 J                    | 0.751 J                   | 3.1 J                     | 0.618 J                   | 6.11 U                    | 0.307 J                   | 5.31 U                    | 0.551 J                   | 5.88 U                    | 0.452 J                   | 0.363 J  |
| 1,2,3,6,7,8-HxCDF   | ng/kg                     | 5.69 U                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 6.24 U                    | 1.8 J                     | 7.43 U                    | 0.282 J                   | 6.11 U                    | 5.51 U                    | 5.31 U                    | 0.743 J                   | 12.4                      | 0.373 J                   | 2.82 J   |
| 1,2,3,6,7,8-HxCDD   | ng/kg                     | 1.56 J                    | 0.149 J                   | 1.06 J                    | 0.85 J                    | 0.918 J                   | 1.69 J                    | 2.45 J                    | 1.37 J                    | 0.49 J                    | 0.467 J                   | 1.4 J                     | 5.31 U                    | 3.74 J                    | 83.8                      | 0.511 J                   | 20.7     |
| 2,3,4,6,7,8-HxCDF   | ng/kg                     | 5.69 U                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 6.24 U                    | 1.9 J                     | 7.43 U                    | 6.54 U                    | 6.11 U                    | 5.51 U                    | 5.31 U                    | 0.972 J                   | 12.9                      | 0.51 J                    | 4.66 J   |
| 1,2,3,4,6,7,8-HpCDF | ng/kg                     | 5.69 U                    | 0.578 J                   | 6.77 U                    | 17.4                      | 6.18 U                    | 6.24 U                    | 8.14                      | 7.43 U                    | 1.52 J                    | 1.09 J                    | 5.49 J                    | 5.31 U                    | 14.3                      | 455                       | 1.12 J                    | 75.4     |
| 1,2,3,4,7,8-HxCDF   | ng/kg                     | 1.12 J                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 6.24 U                    | 3.3 J                     | 7.43 U                    | 0.531 J                   | 0.287 J                   | 5.51 U                    | 5.31 U                    | 0.855 J                   | 18.1                      | 0.334 J                   | 2.42 J   |
| 1,2,3,7,8,9-HxCDF   | ng/kg                     | 5.69 U                    | 5.98 U                    | 6.77 U                    | 6.19 U                    | 6.18 U                    | 6.24 U                    | 0.69 J                    | 7.43 U                    | 6.54 U                    | 6.11 U                    | 5.51 U                    | 5.31 U                    | 5.75 U                    | 2.86 J                    | 0.331 J                   | 0.495 J  |
| Aroclor 1260        | ug/kg                     | 18 J                      | 0.65 J                    | 45                        | 2.1                       | 4.2 J                     | 4.9                       | 27                        | 25 U                      | 3.3 J                     | 1.2 J                     | 1.1 J                     | 1.8 U                     | 3.3                       | 1.9 J                     | 0.71 J                    | 4        |
| Aroclor 1254        | ug/kg                     | 43 J                      | 2 U                       | 63                        | 3.2                       | 12 J                      | 4.8                       | 3.1 J                     | 300                       | 3.7 J                     | 2 J                       | 2.2                       | 1.8 U                     | 5.9                       | 4.4                       | 2.4 J                     | 1.9 U    |
| Aroclor 1268        | ug/kg                     | 3.9 U                     | 2 U                       | 12 U                      | 2.1 U                     | 4.2 U                     | 2.1 U                     | 4.1 U                     | 25 U                      | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U    |
| Aroclor 1221        | ug/kg                     | 3.9 U                     | 2 U                       | 12 U                      | 2.1 U                     | 4.2 U                     | 2.1 U                     | 4.1 U                     | 25 U                      | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U    |
| Aroclor 5460        | ug/kg                     | 8.2 J                     | 1.3 J                     | 22 UJ                     | 4.1 UJ                    | 8 J                       | 7.6 J                     | 9.6 J                     | 49 UJ                     | 3 J                       | 4 U                       | 2.6 J                     | 3.5 UJ                    | 4.7 J                     | 4.8 J                     | 1.6 J                     | 4.6      |
| Aroclor 1232        | ug/kg                     | 3.9 U                     | 2 U                       | 12 U                      | 2.1 U                     | 4.2 U                     | 2.1 U                     | 4.1 U                     | 25 U                      | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U    |
| Aroclor 5442        | ug/kg                     | 7.5 UJ                    | 3.9 UJ                    | 22 UJ                     | 4.1 UJ                    | 8.2 UJ                    | 4.1 UJ                    | 8 UJ                      | 49 UJ                     | 4.3 UJ                    | 4 U                       | 3.6 UJ                    | 3.5 UJ                    | 3.8 UJ                    | 3.9 UJ                    | 4.3 UJ                    | 3.7 U    |
| Aroclor 1248        | ug/kg                     | 3.9 U                     | 2 U                       | 12 U                      | 2.1 U                     | 4.2 U                     | 2.1 U                     | 4.1 U                     | 25 U                      | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U    |
| Aroclor 1016        | ug/kg                     | 3.9 U                     | 2 U                       | 12 U                      | 2.1 U                     | 4.2 U                     | 2.1 U                     | 4.1 U                     | 25 U                      | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U    |
| Aroclor 1262        | ug/kg                     | 3.9 U                     | 2 U                       | 12 U                      | 2.1 U                     | 4.2 U                     | 2.1 U                     | 4.1 U                     | 25 U                      | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U    |
| Aroclor 1242        | ug/kg                     | 3.9 U                     | 2 U                       | 12 U                      | 2.1 U                     | 4.2 U                     | 2.1 U                     | 4.1 U                     | 25 U                      | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U    |
| Aroclor 5432        | ug/kg                     | 7.5 UJ                    | 3.9 UJ                    | 22 UJ                     | 4.1 UJ                    | 8.2 UJ                    | 4.1 UJ                    | 8 UJ                      | 49 UJ                     | 4.3 UJ                    | 4 U                       | 3.6 UJ                    | 3.5 UJ                    | 3.8 UJ                    | 3.9 UJ                    | 4.3 UJ                    | 3.7 U    |

U – Compound not detected above the reporting limit  
J – Result is an estimated value  
R – Result is rejected

Appendix A3  
PCBs and Dioxins - Validated Data  
Sediments

| Sample Name         | SED-017-SIV<br>SD-0.0-0.5 | SED-018-SIV<br>SD-0.0-0.5 | SED-019-SIV<br>SD-0.0-0.5 | SED-020-SIV<br>SD-0.0-0.5 | SED-021-SIV<br>SD-0.0-0.5 | SED-022-SIV<br>SD-0.0-0.5 | SED-023-SIV<br>SD-0.0-0.5 | SED-024-SIV<br>SD-0.0-0.5 | SED-025-SIV<br>SD-0.0-0.5 | SED-026-SIV<br>SD-0.0-0.5 | SED-027-SIV<br>SD-0.0-0.5 | SED-028-SIV<br>SD-0.0-0.5 | SED-029-SIV<br>SD-0.0-0.5 | SED-030-SIV<br>SD-0.0-0.5 | SED-031-SIV<br>SD-0.0-0.5 | SED-032-SIV<br>SD-0.0-0.5 |         |
|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------|
| Sample Date         | 12/16/2010                | 12/15/2010                | 12/16/2010                | 12/16/2010                | 12/15/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 01/13/2011                | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/13/2010                |         |
| SDG                 | DX026                     | DE040                     | DX026                     | DX026                     | DE040                     | DE039                     | DE039                     | DE039                     | DE038                     | DE039                     | DE039                     | DE060                     | DE036                     | DE036                     | DE036                     | DE037                     |         |
| Start Depth         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |         |
| End Depth           | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |         |
| Chemical Name       | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |         |
| 2,3,7,8-TCDD        | ng/kg                     | 0.19 J                    | 0.0408 J                  | 2.18                      | 0.284 J                   | 0.0453 J                  | 0.184 J                   | 1.12 U                    | 1.15 U                    | 1.12 U                    | 1.16 U                    | 1.16 U                    | 1.42 U                    | 0.187 J                   | 1.19 U                    | 0.0302 J                  | 0.228   |
| 1,2,3,7,8,9-HxCDD   | ng/kg                     | 5.15 J                    | 0.458 J                   | 26.7                      | 5.57                      | 0.745 J                   | 1.93 J                    | 0.391 J                   | 0.43 J                    | 5.58 U                    | 1.6 J                     | 0.471 J                   | 0.156 J                   | 4.22 J                    | 0.836 J                   | 1.18 J                    | 3.68    |
| OCDD                | ng/kg                     | 3550                      | 191                       | 24600 J                   | 2980                      | 565                       | 1310                      | 29.8                      | 32                        | 31.4                      | 1490                      | 148                       | 31.3                      | 1970                      | 381                       | 1310                      | 982     |
| 1,2,3,4,6,7,8-HpCDD | ng/kg                     | 419                       | 16.4                      | 1720                      | 293                       | 54.5                      | 136                       | 5.1 J                     | 5 J                       | 4.55 J                    | 76.7                      | 11.3                      | 2.91 J                    | 182                       | 40.6                      | 103                       | 86.8    |
| OCDF                | ng/kg                     | 82.4                      | 8.78 J                    | 703                       | 87.8                      | 21                        | 80.4                      | 11.2 U                    | 2.24 J                    | 11.2 U                    | 50.3                      | 8.78 J                    | 1.72 J                    | 106                       | 21.5                      | 99.4                      | 43.1 U  |
| 1,2,3,4,7,8-HxCDD   | ng/kg                     | 4.07 J                    | 0.202 J                   | 16                        | 2.51 J                    | 0.391 J                   | 0.986 J                   | 5.61 U                    | 5.73 U                    | 5.58 U                    | 0.684 J                   | 5.79 U                    | 0.123 J                   | 2.99 J                    | 0.368 J                   | 0.578 J                   | 5.72 U  |
| 1,2,3,7,8-PeCDD     | ng/kg                     | 0.963 J                   | 0.19 J                    | 4.86 J                    | 1.07 J                    | 0.17 J                    | 0.532 J                   | 5.61 U                    | 5.73 U                    | 5.58 U                    | 0.376 J                   | 5.79 U                    | 7.08 U                    | 1.15 J                    | 5.97 U                    | 0.385 J                   | 1.4 J   |
| 2,3,7,8-TCDF        | ng/kg                     | 0.501 J                   | 0.128 J                   | 9.59                      | 0.492 J                   | 1.05 U                    | 0.473 J                   | 0.366 J                   | 0.324 J                   | 1.12 U                    | 0.426 J                   | 0.384 J                   | 0.0948 J                  | 1.03 J                    | 1.19 U                    | 0.331 J                   | 0.556 J |
| 1,2,3,4,7,8,9-HpCDF | ng/kg                     | 3.16 J                    | 5.55 U                    | 21.9                      | 4.32 J                    | 0.816 J                   | 2.68 J                    | 5.61 U                    | 5.73 U                    | 5.58 U                    | 0.727 J                   | 5.79 U                    | 7.08 U                    | 1.99 J                    | 5.97 U                    | 1.07 J                    | 1.13 J  |
| 2,3,4,7,8-PeCDF     | ng/kg                     | 1.11 J                    | 0.461 J                   | 9.6                       | 0.802 J                   | 5.27 U                    | 0.792 J                   | 0.57 J                    | 0.583 J                   | 5.58 U                    | 0.871 J                   | 0.736 J                   | 0.266 J                   | 4.53 J                    | 0.844 J                   | 0.812 J                   | 5.72 U  |
| 1,2,3,7,8-PeCDF     | ng/kg                     | 0.661 J                   | 0.26 J                    | 18.1                      | 0.971 J                   | 0.192 J                   | 0.657 J                   | 0.307 J                   | 0.275 J                   | 5.58 U                    | 1.91 J                    | 0.588 J                   | 0.206 J                   | 10.6                      | 1.71 J                    | 1.21 J                    | 5.72 U  |
| 1,2,3,6,7,8-HxCDF   | ng/kg                     | 1.35 J                    | 0.196 J                   | 11.4                      | 1.4 J                     | 0.343 J                   | 1.06 J                    | 5.61 U                    | 5.73 U                    | 5.58 U                    | 0.673 J                   | 0.387 J                   | 7.08 U                    | 2.44 J                    | 0.326 J                   | 0.541 J                   | 5.72 U  |
| 1,2,3,6,7,8-HxCDD   | ng/kg                     | 15.1                      | 0.619 J                   | 62.8                      | 10.9                      | 2.24 J                    | 5.6                       | 0.421 J                   | 0.441 J                   | 5.58 U                    | 4.59 J                    | 0.721 J                   | 0.226 J                   | 6.88                      | 1.12 J                    | 3.05 J                    | 4.48 J  |
| 2,3,4,6,7,8-HxCDF   | ng/kg                     | 2.2 J                     | 5.55 U                    | 13.7                      | 2.26 J                    | 0.513 J                   | 1.35 J                    | 5.61 U                    | 5.73 U                    | 5.58 U                    | 0.683 J                   | 5.79 U                    | 7.08 U                    | 3.27 J                    | 0.674 J                   | 0.768 J                   | 1.46    |
| 1,2,3,4,6,7,8-HpCDF | ng/kg                     | 38.5                      | 2.93 J                    | 239                       | 36.6                      | 9.15                      | 29.1                      | 0.994 J                   | 1.22 J                    | 5.58 U                    | 13.4                      | 3.24 J                    | 7.08 U                    | 29.4                      | 7.35                      | 22.8                      | 14.6 J  |
| 1,2,3,4,7,8-HxCDF   | ng/kg                     | 1.31 J                    | 5.55 U                    | 11.8                      | 1.31 J                    | 5.27 U                    | 0.858 J                   | 5.61 U                    | 5.73 U                    | 5.58 U                    | 0.673 J                   | 0.418 J                   | 7.08 U                    | 2 J                       | 0.523 J                   | 0.593 J                   | 5.72 U  |
| 1,2,3,7,8,9-HxCDF   | ng/kg                     | 0.332 J                   | 5.55 U                    | 2.48 J                    | 0.322 J                   | 5.27 U                    | 5.41 U                    | 5.61 U                    | 5.73 U                    | 5.58 U                    | 5.8 U                     | 5.79 U                    | 7.08 U                    | 0.718 J                   | 5.97 U                    | 5.56 U                    | 0.369   |
| Aroclor 1260        | ug/kg                     | 6.9                       | 1.1 J                     | 180                       | 10                        | 36 U                      | 37 U                      | 0.7 J                     | 1.5 J                     | 1.9 U                     | 12 J                      | 3.1 U                     | 2.4 U                     | 19 U                      | 5.6                       | 5.3 J                     | 9.5     |
| Aroclor 1254        | ug/kg                     | 4.1                       | 1.1 J                     | 99                        | 2.5 J                     | 36 U                      | 37 U                      | 1.4 J                     | 2.4 J                     | 1.2 J                     | 18 J                      | 11 J                      | 1.5 J                     | 180                       | 6.3                       | 8.4 J                     | 18      |
| Aroclor 1268        | ug/kg                     | 3.8 U                     | 1.9 U                     | 23 U                      | 3.7 U                     | 36 U                      | 37 U                      | 1.9 U                     | 1.9 U                     | 1.9 U                     | 3.9 U                     | 3.9 U                     | 2.4 U                     | 19 U                      | 4.1 U                     | 9.4 U                     | 3.9 U   |
| Aroclor 1221        | ug/kg                     | 3.8 U                     | 1.9 U                     | 23 U                      | 3.7 U                     | 36 U                      | 37 U                      | 1.9 U                     | 1.9 U                     | 1.9 U                     | 3.9 U                     | 3.9 U                     | 2.4 U                     | 19 U                      | 4.1 U                     | 9.4 U                     | 3.9 U   |
| Aroclor 5460        | ug/kg                     | 13 J                      | 3.7                       | 130 J                     | 6.6 J                     | 70 U                      | 71 UJ                     | 3.7 UJ                    | 3.1 J                     | 3.7 UJ                    | 22 J                      | 3.6 J                     | 4.7 UJ                    | 170 J                     | 6.7 J                     | 9.3 J                     | 8.5     |
| Aroclor 1232        | ug/kg                     | 3.8 U                     | 1.9 U                     | 23 U                      | 3.7 U                     | 36 U                      | 37 U                      | 1.9 U                     | 1.9 U                     | 1.9 U                     | 3.9 U                     | 3.9 U                     | 2.4 U                     | 19 U                      | 4.1 U                     | 9.4 U                     | 3.9 U   |
| Aroclor 5442        | ug/kg                     | 7.5 UJ                    | 3.7 U                     | 44 UJ                     | 7.2 UJ                    | 70 U                      | 71 UJ                     | 3.7 UJ                    | 3.8 UJ                    | 3.7 UJ                    | 7.7 UJ                    | 7.6 UJ                    | 4.7 UJ                    | 37 UJ                     | 7.9 UJ                    | 18 UJ                     | 7.6 U   |
| Aroclor 1248        | ug/kg                     | 3.8 U                     | 1.9 U                     | 23 U                      | 3.7 U                     | 36 U                      | 37 U                      | 1.9 U                     | 1.9 U                     | 1.9 U                     | 17 J                      | 6 U                       | 2.4 U                     | 19 U                      | 4.1 U                     | 9.4 U                     | 3.9 U   |
| Aroclor 1016        | ug/kg                     | 3.8 U                     | 1.9 U                     | 23 U                      | 3.7 U                     | 36 U                      | 37 U                      | 1.9 U                     | 1.9 U                     | 1.9 U                     | 3.9 U                     | 3.9 U                     | 2.4 U                     | 19 U                      | 4.1 U                     | 9.4 U                     | 3.9 U   |
| Aroclor 1262        | ug/kg                     | 3.8 U                     | 1.9 U                     | 23 U                      | 3.7 U                     | 36 U                      | 37 U                      | 1.9 U                     | 1.9 U                     | 1.9 U                     | 3.9 U                     | 3.9 U                     | 2.4 U                     | 19 U                      | 4.1 U                     | 9.4 U                     | 3.9 U   |
| Aroclor 1242        | ug/kg                     | 3.8 U                     | 1.9 U                     | 23 U                      | 3.7 U                     | 36 U                      | 37 U                      | 1.9 U                     | 1.9 U                     | 1.9 U                     | 3.9 U                     | 3.9 U                     | 2.4 U                     | 19 U                      | 4.1 U                     | 9.4 U                     | 3.9 U   |
| Aroclor 5432        | ug/kg                     | 7.5 UJ                    | 3.7 U                     | 44 UJ                     | 7.2 UJ                    | 70 U                      | 71 UJ                     | 3.7 UJ                    | 3.8 UJ                    | 3.7 UJ                    | 7.7 UJ                    | 7.6 UJ                    | 4.7 UJ                    | 37 UJ                     | 7.9 UJ                    | 18 UJ                     | 7.6 U   |

U – Compound not detected above the reporting limit  
J – Result is an estimated value  
R – Result is rejected

Appendix A3  
PCBs and Dioxins - Validated Data  
Sediments

| Sample Name         | SED-033-SIV<br>SD-0.0-0.5 | SED-034-SIV<br>SD-0.0-0.5 | SED-035-SIV<br>SD-0.0-0.5 | SED-036-SIV<br>SD-0.0-0.5 | SED-037-SIV<br>SD-0.0-0.5 | SED-038-SIV<br>SD-0.0-0.5 | SED-039-SIV<br>SD-0.0-0.5 | SED-040-SIV<br>SD-0.0-0.5 |         |
|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------|
| Sample Date         | 12/13/2010                | 12/20/2010                | 05/23/2011                | 12/21/2010                | 12/20/2010                | 12/21/2010                | 12/21/2010                | 12/13/2010                |         |
| SDG                 | DE037                     | DX029                     | DE159                     | DE050                     | DX029                     | DE050                     | DE050                     | DE036                     |         |
| Start Depth         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |         |
| End Depth           | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |         |
| Chemical Name       | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |         |
| 2,3,7,8-TCDD        | ng/kg                     | 0.103                     | 1.29 U                    | 0.209 J                   | 1.26 U                    | 0.139 J                   | 0.145 J                   | 1.33 U                    | 1.09 U  |
| 1,2,3,7,8,9-HxCDD   | ng/kg                     | 2.01                      | 6.43 U                    | 2.69 J                    | 6.32 U                    | 2.4 J                     | 6.93                      | 6.63 U                    | 0.493 J |
| OCDD                | ng/kg                     | 407                       | 21.4                      | 924                       | 6.76 J                    | 692                       | 1750                      | 18.1                      | 312     |
| 1,2,3,4,6,7,8-HpCDD | ng/kg                     | 45.6                      | 3.56 J                    | 91.1                      | 1.22 J                    | 95.9                      | 262                       | 2.51 J                    | 25.3    |
| OCDF                | ng/kg                     | 20.7 U                    | 12.9 U                    | 30.1                      | 12.6 U                    | 8.47 J                    | 43.7                      | 13.3 U                    | 15.5    |
| 1,2,3,4,7,8-HxCDD   | ng/kg                     | 5.31 U                    | 6.43 U                    | 1.31 J                    | 6.32 U                    | 0.876 J                   | 2.89 J                    | 0.114 J                   | 0.283 J |
| 1,2,3,7,8-PeCDD     | ng/kg                     | 0.874 J                   | 6.43 U                    | 0.874 J                   | 6.32 U                    | 6.98 U                    | 1.51 J                    | 0.223 J                   | 0.316 J |
| 2,3,7,8-TCDF        | ng/kg                     | 0.227 J                   | 1.29 U                    | 2.92                      | 0.175 J                   | 1.19 J                    | 0.217 J                   | 0.172 J                   | 1.09 U  |
| 1,2,3,4,7,8,9-HpCDF | ng/kg                     | 0.643 J                   | 6.43 U                    | 1.18 J                    | 6.32 U                    | 6.98 U                    | 2.1 J                     | 6.63 U                    | 5.45 U  |
| 2,3,4,7,8-PeCDF     | ng/kg                     | 5.31 U                    | 6.43 U                    | 0.96 J                    | 6.32 U                    | 1.16 J                    | 0.598 J                   | 6.63 U                    | 0.336 J |
| 1,2,3,7,8-PeCDF     | ng/kg                     | 5.31 U                    | 6.43 U                    | 0.734 J                   | 6.32 U                    | 1.57 J                    | 0.274 J                   | 6.63 U                    | 0.323 J |
| 1,2,3,6,7,8-HxCDF   | ng/kg                     | 5.31 U                    | 6.43 U                    | 0.736 J                   | 6.32 U                    | 6.98 U                    | 0.665 J                   | 6.63 U                    | 5.45 U  |
| 1,2,3,6,7,8-HxCDD   | ng/kg                     | 5.31 U                    | 6.43 U                    | 3.48 J                    | 6.32 U                    | 3.8 J                     | 12.1                      | 0.257 J                   | 1.09 J  |
| 2,3,4,6,7,8-HxCDF   | ng/kg                     | 1.07                      | 6.43 U                    | 0.983 J                   | 6.32 U                    | 6.98 U                    | 1.07 J                    | 6.63 U                    | 5.45 U  |
| 1,2,3,4,6,7,8-HpCDF | ng/kg                     | 9.94 J                    | 6.43 U                    | 12                        | 6.32 U                    | 6.98 U                    | 17.5                      | 0.459 J                   | 4.46 J  |
| 1,2,3,4,7,8-HxCDF   | ng/kg                     | 5.31 U                    | 6.43 U                    | 0.975 J                   | 6.32 U                    | 6.98 U                    | 0.67 J                    | 6.63 U                    | 5.45 U  |
| 1,2,3,7,8,9-HxCDF   | ng/kg                     | 0.217                     | 6.43 U                    | 8.12 U                    | 6.32 U                    | 6.98 U                    | 0.358 J                   | 6.63 U                    | 5.45 U  |
| Aroclor 1260        | ug/kg                     | 2.1 J                     | 1.3 J                     | 3.2                       | 0.77 J                    | 4.7 U                     | 1 J                       | 1.3 J                     | 4.3     |
| Aroclor 1254        | ug/kg                     | 1.7 J                     | 1.7 J                     | 2.8 U                     | 2.1 U                     | 88                        | 1.9 U                     | 4.2 J                     | 2.4     |
| Aroclor 1268        | ug/kg                     | 3.6 U                     | 2.2 U                     | 2.8 U                     | 2.1 U                     | 4.7 U                     | 1.9 U                     | 2.3 U                     | 1.9 U   |
| Aroclor 1221        | ug/kg                     | 3.6 U                     | 2.2 U                     | 2.8 U                     | 2.1 U                     | 4.7 U                     | 1.9 U                     | 2.3 U                     | 1.9 U   |
| Aroclor 5460        | ug/kg                     | 7 U                       | 1.5 J                     | 3.9 J                     | 4.2 UJ                    | 140 J                     | 2.8 J                     | 2.1 J                     | 4.2 J   |
| Aroclor 1232        | ug/kg                     | 3.6 U                     | 2.2 U                     | 2.8 U                     | 2.1 U                     | 4.7 U                     | 1.9 U                     | 2.3 U                     | 1.9 U   |
| Aroclor 5442        | ug/kg                     | 7 U                       | 4.2 UJ                    | 5.5 U                     | 4.2 UJ                    | 9.2 UJ                    | 3.8 UJ                    | 4.4 UJ                    | 3.6 UJ  |
| Aroclor 1248        | ug/kg                     | 3.6 U                     | 2.2 U                     | 6.8                       | 2.1 U                     | 4.7 U                     | 1.9 U                     | 2.3 U                     | 1.9 U   |
| Aroclor 1016        | ug/kg                     | 3.6 U                     | 2.2 U                     | 2.8 U                     | 2.1 U                     | 4.7 U                     | 1.9 U                     | 2.3 U                     | 1.9 U   |
| Aroclor 1262        | ug/kg                     | 3.6 U                     | 2.2 U                     | 2.8 U                     | 2.1 U                     | 4.7 U                     | 1.9 U                     | 2.3 U                     | 1.9 U   |
| Aroclor 1242        | ug/kg                     | 3.6 U                     | 2.2 U                     | 2.8 U                     | 2.1 U                     | 4.7 U                     | 1.9 U                     | 2.3 U                     | 1.9 U   |
| Aroclor 5432        | ug/kg                     | 7 U                       | 4.2 UJ                    | 5.5 U                     | 4.2 UJ                    | 9.2 UJ                    | 3.8 UJ                    | 4.4 UJ                    | 3.6 UJ  |

U – Compound not detected above the reporting limit  
J – Result is an estimated value  
R – Result is rejected

Appendix A4  
Herbicides and Pesticides - Validated Data  
Sediments

| Sample Name              | SED-001-SIV<br>SD-0.0-0.5 | SED-002-SIV<br>SD-0.0-0.5 | SED-003-SIV<br>SD-0.0-0.5 | SED-004-SIV<br>SD-0.0-0.5 | SED-005-SIV<br>SD-0.0-0.5 | SED-006-SIV<br>SD-0.0-0.5 | SED-007-SIV<br>SD-0.0-0.6 | SED-008-SIV<br>SD-0.0-0.5 | SED-009-SIV<br>SD-0.0-0.5 | SED-010-SIV<br>SD-0.0-0.5 | SED-011-SIV<br>SD-0.0-0.5 | SED-012-SIV<br>SD-0.0-0.5 | SED-013-SIV<br>SD-0.0-0.5 | SED-014-SIV<br>SD-0.0-0.5 | SED-015-SIV<br>SD-0.0-0.5 | SED-016-SIV<br>SD-0.0-0.5 |         |
|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------|
| Sample Date              | 12/17/2010                | 12/21/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/20/2010                | 01/13/2011                | 12/22/2010                | 12/16/2010                | 12/17/2010                | 12/16/2010                | 12/17/2010                | 12/21/2010                | 12/15/2010                |         |
| SDG                      | DE045                     | DE050                     | DX029                     | DE045                     | DX029                     | DE045                     | DX029                     | DX029                     | DE060                     | DE051                     | DX026                     | DE045                     | DX026                     | DE045                     | DE050                     | DE040                     |         |
| Start Depth              | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |         |
| End Depth                | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.6                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |         |
| Chemical Name            | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |         |
| Dichlorprop              | ug/kg                     | 1.9 U                     | 2 UJ                      | 2.3 U                     | 2.1 U                     | 2.1 U                     | 2 J                       | 2.1 U                     | 2.5 U                     | 2.2 U                     | 2.1 U                     | 1.9 U                     | 1.8 U                     | 2 U                       | 2 U                       | 2.2 U                     | 1.9 U   |
| Dicamba                  | ug/kg                     | 1.9                       | 1.4 UJ                    | 1.6 U                     | 1.5 U                     | 1.5 U                     | 0.78 J                    | 1.5 U                     | 1.8 U                     | 1.6 U                     | 0.74 U                    | 0.59 J                    | 0.77 J                    | 0.78 J                    | 1.4 U                     | 1.6 U                     | 1.3 U   |
| 2,2-Dichlor-Propionic Ac | ug/kg                     | 10 U                      | 11 U                      | 12 UJ                     | 11 U                      | 11 UJ                     | 11 U                      | 11 U                      | 13 U                      | 12 U                      | 11 U                      | 9.9 U                     | 9.6 U                     | 10 U                      | 11 U                      | 12 U                      | 10 U    |
| Dinitrobutyl Phenol      | ug/kg                     | 2.7 R                     | 2.9 R                     | 3.2 UJ                    | 3 R                       | 3 UJ                      | 3 R                       | 2.9 U                     | 3.6 U                     | 3.1 R                     | 2.9 R                     | 2.6 R                     | 2.5 R                     | 2.8 R                     | 2.8 R                     | 3.1 R                     | 2.7 R   |
| MCPP                     | ug/kg                     | 280 U                     | 300 U                     | 220 J                     | 310 U                     | 310 U                     | 360                       | 300 U                     | 370 U                     | 340 R                     | 310 U                     | 280 U                     | 240 J                     | 290 U                     | 290 U                     | 330 U                     | 430     |
| 2,4,5-TP                 | ug/kg                     | 0.19 U                    | 0.2 UJ                    | 0.23 U                    | 0.21 U                    | 0.21 UJ                   | 0.21 U                    | 0.21 U                    | 0.25 U                    | 0.22 U                    | 0.21 U                    | 0.19 U                    | 0.18 U                    | 0.2 U                     | 0.2 U                     | 0.22 U                    | 0.2     |
| 2,4,5-T                  | ug/kg                     | 0.19 U                    | 0.2 U                     | 0.23 U                    | 0.21 U                    | 0.21 U                    | 0.21 U                    | 0.21 U                    | 0.25 U                    | 0.22 U                    | 0.21 U                    | 0.19 U                    | 0.18 U                    | 0.2 U                     | 0.2 U                     | 0.22 U                    | 0.19 U  |
| MCPA                     | ug/kg                     | 490 U                     | 300 U                     | 340 J                     | 310 U                     | 310 U                     | 390                       | 300 U                     | 370 U                     | 1700 U                    | 310 U                     | 280 U                     | 270 U                     | 870                       | 580 U                     | 330 U                     | 430     |
| 2,4-D                    | ug/kg                     | 4.1 U                     | 4.3 U                     | 4.9 UJ                    | 4.5 U                     | 4.4 UJ                    | 4.5 U                     | 4.4 U                     | 5.3 U                     | 4.7 U                     | 4.4 U                     | 1.9 J                     | 3.8 U                     | 4.1 U                     | 4.2 U                     | 4.7 U                     | 4 U     |
| 2,4 DB                   | ug/kg                     | 1.9 U                     | 3.7 U                     | 2.3 U                     | 2.1 U                     | 4.6 U                     | 2.1 U                     | 2.3 J                     | 3.4 U                     | 3.5 R                     | 2.1 U                     | 8.9 U                     | 6.9 U                     | 2 U                       | 7.5 U                     | 2.2 U                     | 3.2 U   |
| Toxaphene                | ug/kg                     | 7.5 U                     | 7.9 U                     | 8.9 U                     | 8.2 R                     | 8.2 UJ                    | 8.2 UJ                    | 8 UJ                      | 9.8 R                     | 8.6 UJ                    | 8.1 U                     | 7.3 U                     | 7 U                       | 7.6 U                     | 7.8 U                     | 8.6 U                     | 7.4 U   |
| Heptachlor Epoxide       | ug/kg                     | 0.45 U                    | 0.2 U                     | 0.74 U                    | 0.21 R                    | 0.21 UJ                   | 0.21 UJ                   | 0.24 U                    | 0.64 R                    | 0.22 UJ                   | 0.2 U                     | 0.45 U                    | 0.18 U                    | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.19 U  |
| Endosulfan Sulfate       | ug/kg                     | 0.39 U                    | 0.41 U                    | 0.46 U                    | 0.42 R                    | 0.42 UJ                   | 0.42 UJ                   | 0.41 U                    | 0.51 R                    | 0.44 UJ                   | 0.61 U                    | 0.37 U                    | 0.36 U                    | 0.39 U                    | 0.4 U                     | 0.44 U                    | 0.38 U  |
| Mirex                    | ug/kg                     | 0.39 U                    | 0.41 U                    | 0.46 U                    | 0.42 R                    | 0.42 UJ                   | 0.42 UJ                   | 0.41 U                    | 0.51 R                    | 0.44 UJ                   | 0.5 U                     | 0.6 U                     | 0.36 U                    | 0.55 U                    | 0.4 U                     | 0.44 U                    | 1 U     |
| Aldrin                   | ug/kg                     | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.21 R                    | 0.21 UJ                   | 0.21 UJ                   | 0.2 U                     | 0.25 R                    | 0.22 UJ                   | 0.2 U                     | 0.18 U                    | 0.18 U                    | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.19 U  |
| Alpha-BHC                | ug/kg                     | 0.19 U                    | 0.2 UJ                    | 0.22 U                    | 0.21 R                    | 0.21 UJ                   | 0.21 UJ                   | 0.2 U                     | 0.25 R                    | 0.22 UJ                   | 0.2 U                     | 1.2 J                     | 0.18 U                    | 0.19 U                    | 0.2 U                     | 0.22 UJ                   | 0.19 U  |
| Beta-BHC                 | ug/kg                     | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.21 R                    | 0.21 UJ                   | 0.21 UJ                   | 0.2 U                     | 0.25 R                    | 0.22 UJ                   | 0.2 U                     | 0.18 U                    | 0.18 U                    | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.19 U  |
| Delta-BHC                | ug/kg                     | 0.074 J                   | 0.2 U                     | 0.22 U                    | 0.21 R                    | 0.21 UJ                   | 0.14 J                    | 0.2 U                     | 0.25 R                    | 0.22 UJ                   | 0.2 U                     | 0.27 J                    | 0.18 U                    | 0.071 J                   | 0.11 J                    | 0.11 J                    | 0.19 U  |
| Endosulfan II            | ug/kg                     | 2.1 U                     | 0.41 U                    | 1.7 U                     | 0.42 R                    | 0.42 UJ                   | 0.42 UJ                   | 0.41 U                    | 0.79 R                    | 0.44 UJ                   | 0.44 U                    | 0.37 U                    | 0.36 U                    | 0.39 U                    | 0.4 U                     | 0.44 U                    | 0.38 UJ |
| 4,4'-DDT                 | ug/kg                     | 7.8                       | 0.55 U                    | 11                        | 0.42 R                    | 0.83 UJ                   | 1.2 UJ                    | 3.8 J                     | 10 J                      | 1.9 UJ                    | 0.9 U                     | 1.2 U                     | 1.4                       | 1.1 U                     | 0.92 U                    | 0.89 U                    | 0.99 U  |
| Endrin Ketone            | ug/kg                     | 0.39 U                    | 0.41 U                    | 0.46 U                    | 0.42 R                    | 0.42 UJ                   | 0.42 UJ                   | 0.41 U                    | 0.51 R                    | 0.44 UJ                   | 0.42 U                    | 0.37 U                    | 0.36 U                    | 0.39 U                    | 0.4 U                     | 0.44 U                    | 0.38 U  |
| Chlordane                | ug/kg                     | 3.9 U                     | 4.1 U                     | 4.6 U                     | 4.2 R                     | 4.2 UJ                    | 4.2 UJ                    | 5.7 U                     | 5.1 R                     | 4.4 UJ                    | 4.2 U                     | 5 U                       | 3.6 U                     | 7 U                       | 4 U                       | 4.4 U                     | 3.8 U   |
| Gamma-BHC (Lindane)      | ug/kg                     | 0.19 U                    | 0.2 UJ                    | 0.058 J                   | 0.21 R                    | 0.21 UJ                   | 0.21 UJ                   | 0.06 J                    | 0.25 R                    | 0.22 UJ                   | 0.2 U                     | 0.18 U                    | 0.18 U                    | 0.19 U                    | 0.2 U                     | 0.22 UJ                   | 0.19 U  |
| Dieldrin                 | ug/kg                     | 0.47 U                    | 0.41 U                    | 0.93 U                    | 0.42 R                    | 0.42 UJ                   | 0.5 UJ                    | 0.41 U                    | 0.64 R                    | 0.44 UJ                   | 0.42 U                    | 0.37 U                    | 0.12 J                    | 0.39 U                    | 0.4 U                     | 0.44 U                    | 0.38 U  |
| Endrin                   | ug/kg                     | 0.39 U                    | 0.41 U                    | 1.2 J                     | 0.42 R                    | 0.42 UJ                   | 0.42 UJ                   | 0.41 U                    | 0.98 R                    | 0.44 UJ                   | 0.42 U                    | 0.37 U                    | 0.36 U                    | 0.39 U                    | 0.4 U                     | 0.44 U                    | 0.38 U  |
| Methoxychlor             | ug/kg                     | 1.9 U                     | 2 U                       | 2.2 U                     | 2.1 R                     | 2.1 UJ                    | 2.1 UJ                    | 2 U                       | 2.5 R                     | 2.2 UJ                    | 2 U                       | 1.8 U                     | 1.8 U                     | 1.9 U                     | 2 U                       | 2.2 U                     | 1.9 U   |
| 4,4'-DDD                 | ug/kg                     | 1.9 U                     | 0.41 U                    | 0.46 U                    | 0.42 R                    | 0.42 UJ                   | 1.3 UJ                    | 0.41 U                    | 0.51 R                    | 0.44 UJ                   | 0.42 U                    | 0.37 U                    | 0.35 J                    | 0.39 U                    | 0.48 U                    | 0.44 U                    | 0.38 U  |
| 4,4'-DDE                 | ug/kg                     | 2.6 U                     | 0.41 U                    | 2.7 U                     | 0.42 R                    | 0.53 UJ                   | 1 UJ                      | 1.6                       | 2.8 R                     | 1.5 UJ                    | 1.1                       | 1.4 U                     | 1                         | 1.7 U                     | 0.73 U                    | 0.76 U                    | 0.38 U  |
| Endrin Aldehyde          | ug/kg                     | 0.89 U                    | 0.41 U                    | 0.8 U                     | 0.42 R                    | 0.42 UJ                   | 0.42 UJ                   | 0.79 U                    | 0.51 R                    | 0.54 UJ                   | 0.42 U                    | 0.64 U                    | 0.4                       | 0.85 U                    | 0.4 U                     | 0.53 U                    | 0.38 U  |
| Heptachlor               | ug/kg                     | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.21 R                    | 0.21 UJ                   | 0.21 UJ                   | 0.2 U                     | 0.25 R                    | 0.26 UJ                   | 0.2 U                     | 0.18 U                    | 0.18 U                    | 0.19 U                    | 0.2 U                     | 0.11 J                    | 0.19 U  |
| Endosulfan I             | ug/kg                     | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.21 R                    | 0.21 UJ                   | 0.43 UJ                   | 0.2 U                     | 0.25 R                    | 0.22 UJ                   | 0.21 U                    | 0.13 J                    | 0.18 U                    | 0.19 U                    | 0.2 U                     | 0.22 U                    | 0.19 U  |

U – Compound not detected above the reporting limit  
J – Result is an estimated value  
R – Result is rejected

Appendix A4  
Herbicides and Pesticides - Validated Data  
Sediments

| Sample Name              | SED-017-SIV<br>SD-0.0-0.5 | SED-018-SIV<br>SD-0.0-0.5 | SED-019-SIV<br>SD-0.0-0.5 | SED-020-SIV<br>SD-0.0-0.5 | SED-021-SIV<br>SD-0.0-0.5 | SED-022-SIV<br>SD-0.0-0.5 | SED-023-SIV<br>SD-0.0-0.5 | SED-024-SIV<br>SD-0.0-0.5 | SED-025-SIV<br>SD-0.0-0.5 | SED-026-SIV<br>SD-0.0-0.5 | SED-027-SIV<br>SD-0.0-0.5 | SED-028-SIV<br>SD-0.0-0.5 | SED-029-SIV<br>SD-0.0-0.5 | SED-030-SIV<br>SD-0.0-0.5 | SED-031-SIV<br>SD-0.0-0.5 | SED-032-SIV<br>SD-0.0-0.5 |        |
|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date              | 12/16/2010                | 12/15/2010                | 12/16/2010                | 12/16/2010                | 12/15/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 01/13/2011                | 12/13/2010                | 12/13/2010                | 12/13/2010                |        |
| SDG                      | DX026                     | DE040                     | DX026                     | DX026                     | DE040                     | DE039                     | DE039                     | DE039                     | DE038                     | DE039                     | DE039                     | DE060                     | DE036                     | DE036                     | DE036                     | DE037                     |        |
| Start Depth              | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth                | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name            | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| Dichlorprop              | ug/kg                     | 1.9 U                     | 1.9 U                     | 2.3 U                     | 1.8 U                     | 1.8 U                     | 1.8 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 2 U                       | 2 U                       | 2.4 U                     | 1.9 U                     | 2 U                       | 1.9 U                     | 1.9 U  |
| Dicamba                  | ug/kg                     | 0.49 J                    | 1.3 U                     | 0.73 J                    | 0.57 J                    | 1.3 U                     | 1.3 U                     | 0.69 J                    | 1 J                       | 1.3 U                     | 0.57 J                    | 1.3 J                     | 1.7 U                     | 1.3 U                     | 0.78 J                    | 0.69 J                    | 1.4 U  |
| 2,2-Dichlor-Propionic Ac | ug/kg                     | 10 U                      | 10 U                      | 12 U                      | 9.8 U                     | 9.5 U                     | 9.7 UJ                    | 10 UJ                     | 10 UJ                     | 10 U                      | 10 UJ                     | 10 UJ                     | 13 U                      | 10 U                      | 11 U                      | 10 U                      | 10 U   |
| Dinitrobutyl Phenol      | ug/kg                     | 2.7 R                     | 2.7 R                     | 3.2 R                     | 2.6 R                     | 2.5 R                     | 2.6 R                     | 2.7 R                     | 2.8 R                     | 2.7 R                     | 2.8 R                     | 2.8 R                     | 3.4 R                     | 2.7 R                     | 2.9 R                     | 2.7 R                     | 2.7 R  |
| MCPP                     | ug/kg                     | 220 J                     | 200 J                     | 670 U                     | 540 U                     | 370                       | 270 U                     | 280 U                     | 290 U                     | 280 U                     | 290 U                     | 290 U                     | 570 U                     | 280 U                     | 300 U                     | 280 U                     | 290 U  |
| 2,4,5-TP                 | ug/kg                     | 0.19 U                    | 0.23                      | 0.53                      | 0.18 U                    | 0.18 U                    | 0.84 U                    | 0.19 U                    | 0.19 U                    | 0.19 U                    | 0.2 U                     | 0.23                      | 0.24 U                    | 0.19 U                    | 0.2 U                     | 0.19 U                    | 0.19 U |
| 2,4,5-T                  | ug/kg                     | 0.19 U                    | 0.19 U                    | 0.62 U                    | 0.18 U                    | 0.18 U                    | 0.38 J                    | 0.19 U                    | 0.19 U                    | 0.19 U                    | 0.2 U                     | 0.2 U                     | 0.24 U                    | 0.33 J                    | 0.2 U                     | 0.19 U                    | 0.19 U |
| MCPA                     | ug/kg                     | 360 U                     | 760                       | 700                       | 310                       | 280 U                     | 1800 J                    | 280 UJ                    | 290 UJ                    | 700                       | 1200 J                    | 290 UJ                    | 450 U                     | 340 U                     | 500 U                     | 280 U                     | 1100 U |
| 2,4-D                    | ug/kg                     | 1.9 J                     | 4 U                       | 4.9 U                     | 3.9 U                     | 3.8 U                     | 3.9 U                     | 4 U                       | 4.1 U                     | 1.4 J                     | 4.2 U                     | 4.2 U                     | 5.1 U                     | 4 U                       | 3 J                       | 4 U                       | 4.1 U  |
| 2,4 DB                   | ug/kg                     | 1.9 U                     | 12 U                      | 2.3 U                     | 10 U                      | 4.7 U                     | 14 U                      | 14                        | 11 U                      | 9.2 U                     | 2 U                       | 8.9 U                     | 3.8                       | 1.9 U                     | 12 U                      | 16 U                      | 30 U   |
| Toxaphene                | ug/kg                     | 7.5 UJ                    | 7.3 U                     | 44 U                      | 7.2 U                     | 7 R                       | 71 U                      | 37 U                      | 38 U                      | 7.4 U                     | 7.7 U                     | 7.6 U                     | 9.3 U                     | 37 U                      | 7.9 U                     | 7.3 U                     | 7.6 U  |
| Heptachlor Epoxide       | ug/kg                     | 0.19 UJ                   | 0.18 U                    | 1.1 U                     | 0.18 U                    | 0.17 R                    | 1.8 U                     | 0.93 U                    | 0.95 U                    | 0.19 U                    | 0.19 UJ                   | 0.39 UJ                   | 0.24 U                    | 1.2 U                     | 0.28 U                    | 0.18 U                    | 0.33 U |
| Endosulfan Sulfate       | ug/kg                     | 0.38 UJ                   | 0.38 U                    | 2.3 U                     | 0.37 U                    | 0.36 R                    | 3.7 U                     | 1.9 U                     | 1.9 U                     | 0.38 U                    | 0.44 UJ                   | 0.49 J                    | 0.48 U                    | 1.9 U                     | 0.41 U                    | 0.38 U                    | 0.76 U |
| Mirex                    | ug/kg                     | 0.55 UJ                   | 0.38 U                    | 2.3 U                     | 0.37 U                    | 0.36 R                    | 3.7 U                     | 1.9 U                     | 2.5 U                     | 0.6 U                     | 0.42 UJ                   | 0.61 UJ                   | 0.48 U                    | 1.9 U                     | 0.41 U                    | 0.38 U                    | 0.39 U |
| Aldrin                   | ug/kg                     | 0.19 UJ                   | 0.18 U                    | 1.1 U                     | 0.18 U                    | 0.17 R                    | 1.8 U                     | 0.93 U                    | 0.95 U                    | 0.19 U                    | 0.19 U                    | 0.19 U                    | 0.24 U                    | 0.92 U                    | 0.2 U                     | 0.18 U                    | 0.19 U |
| Alpha-BHC                | ug/kg                     | 0.19 UJ                   | 0.18 U                    | 1.1 U                     | 0.18 U                    | 0.17 R                    | 1.8 U                     | 0.93 U                    | 0.95 U                    | 0.19 U                    | 0.066 J                   | 0.19 U                    | 0.24 U                    | 0.29 J                    | 0.2 U                     | 0.18 U                    | 0.19 U |
| Beta-BHC                 | ug/kg                     | 0.19 UJ                   | 0.18 U                    | 1.1 U                     | 0.18 U                    | 0.17 R                    | 1.8 U                     | 0.93 U                    | 0.95 U                    | 0.19 U                    | 0.19 U                    | 0.19 U                    | 0.24 U                    | 0.92 U                    | 0.54                      | 0.18 U                    | 0.35 J |
| Delta-BHC                | ug/kg                     | 0.19 UJ                   | 0.078 J                   | 0.29 J                    | 0.075 J                   | 0.81 J                    | 2.6 J                     | 0.26 J                    | 0.93 J                    | 0.22                      | 0.19 U                    | 0.24                      | 0.24 U                    | 0.92 U                    | 0.2 U                     | 0.18 U                    | 0.19 J |
| Endosulfan II            | ug/kg                     | 0.38 UJ                   | 0.38 UJ                   | 2.3 U                     | 0.37 U                    | 0.36 R                    | 3.7 U                     | 1.9 U                     | 1.9 U                     | 0.66 U                    | 0.39 UJ                   | 0.39 UJ                   | 0.48 U                    | 1.9 U                     | 0.41 U                    | 0.38 U                    | 0.39 U |
| 4,4'-DDT                 | ug/kg                     | 2.1 UJ                    | 0.38 U                    | 32 U                      | 1 U                       | 0.62 J                    | 1.6 J                     | 1.9 U                     | 1.9 U                     | 2.1 U                     | 4.4 J                     | 2.2 UJ                    | 0.48 U                    | 8.5 U                     | 2.6 U                     | 2.3 U                     | 2.4 U  |
| Endrin Ketone            | ug/kg                     | 0.38 UJ                   | 0.38 U                    | 2.3 U                     | 0.37 U                    | 0.36 R                    | 3.7 U                     | 1.9 U                     | 1.9 U                     | 0.38 U                    | 0.39 UJ                   | 0.39 UJ                   | 0.48 U                    | 1.9 U                     | 0.41 U                    | 0.38 U                    | 0.39 U |
| Chlordane                | ug/kg                     | 3.8 UJ                    | 3.8 U                     | 23 U                      | 3.7 U                     | 3.6 R                     | 37 U                      | 19 U                      | 19 U                      | 3.8 U                     | 3.9 U                     | 4.2 U                     | 4.8 U                     | 19 U                      | 4.7 U                     | 3.8 U                     | 5 U    |
| Gamma-BHC (Lindane)      | ug/kg                     | 0.19 UJ                   | 0.18 U                    | 1.1 U                     | 0.18 U                    | 1.3 J                     | 2.7 J                     | 0.93 U                    | 0.95 U                    | 0.19 U                    | 0.19 U                    | 0.19 U                    | 0.24 U                    | 0.92 U                    | 0.2 U                     | 0.18 U                    | 0.19 U |
| Dieldrin                 | ug/kg                     | 0.38 UJ                   | 0.38 U                    | 2.3 U                     | 0.37 U                    | 0.36 R                    | 3.7 U                     | 1.9 U                     | 1.9 U                     | 0.33 U                    | 0.87 UJ                   | 0.39 UJ                   | 0.48 U                    | 1.9 U                     | 0.44 U                    | 0.38 U                    | 0.47 U |
| Endrin                   | ug/kg                     | 0.38 UJ                   | 0.38 U                    | 2.3 U                     | 0.37 U                    | 0.36 R                    | 3.7 U                     | 1.9 U                     | 1.9 U                     | 0.38 U                    | 0.39 UJ                   | 0.39 UJ                   | 0.48 U                    | 1.9 U                     | 0.41 U                    | 0.38 U                    | 0.39 U |
| Methoxychlor             | ug/kg                     | 1.9 UJ                    | 1.8 U                     | 11 U                      | 1.8 U                     | 1.7 R                     | 18 U                      | 9.3 U                     | 9.5 U                     | 1.9 U                     | 1.9 UJ                    | 1.9 UJ                    | 2.4 U                     | 9.2 U                     | 2 U                       | 1.8 U                     | 1.9 U  |
| 4,4'-DDD                 | ug/kg                     | 0.38 UJ                   | 0.38 U                    | 19 U                      | 0.37 U                    | 0.36 R                    | 3.7 U                     | 1.9 U                     | 1.9 U                     | 1.5 U                     | 0.39 U                    | 0.39 U                    | 0.48 U                    | 1.9 U                     | 1.9 U                     | 0.38 U                    | 2.4 U  |
| 4,4'-DDE                 | ug/kg                     | 1.3 UJ                    | 0.38 U                    | 2.3 U                     | 0.41 U                    | 0.18 J                    | 0.96 J                    | 1.9 U                     | 1.9 U                     | 1.3 U                     | 1.9 UJ                    | 0.69 UJ                   | 0.48 U                    | 1.9 U                     | 1.1 U                     | 1.1 U                     | 1.3 U  |
| Endrin Aldehyde          | ug/kg                     | 0.38 UJ                   | 0.38 U                    | 5.9 U                     | 0.37 U                    | 0.36 R                    | 1.8 J                     | 1.9 U                     | 1.9 U                     | 0.75 U                    | 0.64 UJ                   | 0.61 UJ                   | 0.48 U                    | 1.9 U                     | 0.61 U                    | 0.38 U                    | 0.62 U |
| Heptachlor               | ug/kg                     | 0.19 UJ                   | 0.12 J                    | 1.1 U                     | 0.18 U                    | 0.17 R                    | 1.8 U                     | 0.56 J                    | 0.39 J                    | 0.19 U                    | 0.19 U                    | 0.19 U                    | 0.24 U                    | 0.92 U                    | 0.2 U                     | 0.18 U                    | 0.19 U |
| Endosulfan I             | ug/kg                     | 0.19 UJ                   | 0.18 U                    | 1.1 U                     | 0.18 U                    | 0.17 R                    | 1.8 U                     | 0.93 U                    | 0.95 U                    | 0.19 U                    | 0.19 UJ                   | 0.19 UJ                   | 0.24 U                    | 0.92 U                    | 0.2 U                     | 0.18 U                    | 0.19 U |

U – Compound not detected above the reporting limit  
J – Result is an estimated value  
R – Result is rejected

Appendix A4  
Herbicides and Pesticides - Validated Data  
Sediments

| Sample Name              | SED-033-SIV<br>SD-0.0-0.5 | SED-034-SIV<br>SD-0.0-0.5 | SED-035-SIV<br>SD-0.0-0.5 | SED-036-SIV<br>SD-0.0-0.5 | SED-037-SIV<br>SD-0.0-0.5 | SED-038-SIV<br>SD-0.0-0.5 | SED-039-SIV<br>SD-0.0-0.5 | SED-040-SIV<br>SD-0.0-0.5 |        |
|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date              | 12/13/2010                | 12/20/2010                | 05/23/2011                | 12/21/2010                | 12/20/2010                | 12/21/2010                | 12/21/2010                | 12/13/2010                |        |
| SDG                      | DE037                     | DX029                     | DE159                     | DE050                     | DX029                     | DE050                     | DE050                     | DE036                     |        |
| Start Depth              | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth                | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name            | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| Dichlorprop              | ug/kg                     | 1.8 U                     | 2.2 U                     | 28 U                      | 2.1 U                     | 2.4 U                     | 1.9 U                     | 2.3 U                     | 1.9 U  |
| Dicamba                  | ug/kg                     | 1.3 U                     | 1.5 U                     | 20 U                      | 1.5 U                     | 1.7 U                     | 1.4 U                     | 1.6 U                     | 1.3 U  |
| 2,2-Dichlor-Propionic Ac | ug/kg                     | 9.6 U                     | 12 U                      | 150 U                     | 11 U                      | 13 U                      | 10 U                      | 12 U                      | 9.8 U  |
| Dinitrobutyl Phenol      | ug/kg                     | 2.5 R                     | 3.1 U                     | 40 R                      | 3 R                       | 3.4 U                     | 2.7 R                     | 3.2 R                     | 2.6 R  |
| MCPPP                    | ug/kg                     | 410 U                     | 320 U                     | 16000 U                   | 320 U                     | 390                       | 290 U                     | 330 U                     | 410    |
| 2,4,5-TP                 | ug/kg                     | 0.18 U                    | 0.22 U                    | 2.8 J                     | 0.21 U                    | 0.24 U                    | 0.19 U                    | 0.23 U                    | 0.19 U |
| 2,4,5-T                  | ug/kg                     | 0.18 U                    | 0.22 U                    | 2.8 U                     | 0.21 U                    | 0.24 U                    | 0.19 U                    | 0.23 U                    | 0.19 U |
| MCPA                     | ug/kg                     | 270 U                     | 320 U                     | 4100 U                    | 320 U                     | 350 U                     | 290 U                     | 460                       | 580 U  |
| 2,4-D                    | ug/kg                     | 3.8 U                     | 4.6 U                     | 59 U                      | 4.6 U                     | 5 U                       | 3 J                       | 4.8 U                     | 3.9 U  |
| 2,4 DB                   | ug/kg                     | 5.1 U                     | 2.2 U                     | 28 U                      | 2.7 U                     | 2.4 U                     | 1.9 U                     | 5.6                       | 1.9 U  |
| Toxaphene                | ug/kg                     | 7 U                       | 8.5 R                     | 11 UJ                     | 8.3 U                     | 9.2 U                     | 7.6 U                     | 8.8 U                     | 7.2 U  |
| Heptachlor Epoxide       | ug/kg                     | 0.18 U                    | 0.21 R                    | 0.27 UJ                   | 0.21 U                    | 0.29 U                    | 0.19 U                    | 0.22 U                    | 0.18 U |
| Endosulfan Sulfate       | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 0.47 U                    | 0.39 U                    | 0.45 U                    | 0.37 U |
| Mirex                    | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 0.47 U                    | 0.39 U                    | 1.7 U                     | 0.37 U |
| Aldrin                   | ug/kg                     | 0.18 U                    | 0.21 R                    | 0.27 UJ                   | 0.21 U                    | 0.23 U                    | 0.19 U                    | 0.13 J                    | 0.18 U |
| Alpha-BHC                | ug/kg                     | 0.16 J                    | 0.21 R                    | 2.7 U                     | 0.21 UJ                   | 0.23 U                    | 0.19 UJ                   | 0.22 UJ                   | 0.18 U |
| Beta-BHC                 | ug/kg                     | 0.18 U                    | 0.21 R                    | 2.7 U                     | 0.21 U                    | 0.23 U                    | 0.19 U                    | 0.22 U                    | 0.18 U |
| Delta-BHC                | ug/kg                     | 0.18 U                    | 0.21 R                    | 2.7 U                     | 0.26 J                    | 0.23 U                    | 0.19 U                    | 2.4 U                     | 0.18 U |
| Endosulfan II            | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 0.47 U                    | 0.39 U                    | 0.45 U                    | 0.37 U |
| 4,4'-DDT                 | ug/kg                     | 0.37 U                    | 0.44 R                    | 0.52 J                    | 0.44 U                    | 3.7 J                     | 0.39 U                    | 0.78 U                    | 0.69 U |
| Endrin Ketone            | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 0.47 U                    | 0.39 U                    | 0.45 U                    | 0.37 U |
| Chlordane                | ug/kg                     | 3.6 U                     | 4.4 R                     | 7.3 UJ                    | 4.3 U                     | 9.6 U                     | 3.9 U                     | 4.5 U                     | 4.1 U  |
| Gamma-BHC (Lindane)      | ug/kg                     | 0.18 U                    | 0.21 R                    | 3.2 U                     | 0.21 UJ                   | 0.23 U                    | 0.19 UJ                   | 0.16 J                    | 0.3 U  |
| Dieldrin                 | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 0.49 U                    | 0.39 U                    | 0.45 U                    | 0.37 U |
| Endrin                   | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 0.47 U                    | 0.39 U                    | 0.45 U                    | 0.37 U |
| Methoxychlor             | ug/kg                     | 1.8 U                     | 2.1 R                     | 2.7 UJ                    | 2.1 U                     | 2.3 U                     | 1.9 U                     | 8.6 U                     | 1.8 U  |
| 4,4'-DDD                 | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 0.47 U                    | 0.39 U                    | 0.45 U                    | 0.37 U |
| 4,4'-DDE                 | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.6 UJ                    | 0.43 U                    | 2.7 J                     | 0.39 U                    | 0.85 U                    | 0.56 U |
| Endrin Aldehyde          | ug/kg                     | 0.36 U                    | 0.44 R                    | 0.56 UJ                   | 0.43 U                    | 1.2 U                     | 0.39 U                    | 0.65 U                    | 0.37 U |
| Heptachlor               | ug/kg                     | 0.18 U                    | 0.21 R                    | 0.27 UJ                   | 0.21 U                    | 0.23 U                    | 0.19 U                    | 0.32                      | 0.18 U |
| Endosulfan I             | ug/kg                     | 0.18 U                    | 0.21 R                    | 0.27 UJ                   | 0.21 U                    | 0.23 U                    | 0.19 U                    | 0.22 U                    | 0.18 U |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected



Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name                             | SED-001-SIV<br>SD-0.0-0.5 | SED-002-SIV<br>SD-0.0-0.5 | SED-003-SIV<br>SD-0.0-0.5 | SED-004-SIV<br>SD-0.0-0.5 | SED-005-SIV<br>SD-0.0-0.5 | SED-006-SIV<br>SD-0.0-0.5 | SED-007-SIV<br>SD-0.0-0.6 | SED-008-SIV<br>SD-0.0-0.5 | SED-009-SIV<br>SD-0.0-0.5 | SED-010-SIV<br>SD-0.0-0.5 | SED-011-SIV<br>SD-0.0-0.5 | SED-012-SIV<br>SD-0.0-0.5 | SED-013-SIV<br>SD-0.0-0.5 | SED-014-SIV<br>SD-0.0-0.5 |        |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date                             | 12/17/2010                | 12/21/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/20/2010                | 01/13/2011                | 12/22/2010                | 12/16/2010                | 12/17/2010                | 12/16/2010                | 12/17/2010                |        |
| SDG                                     | DE045                     | DE050                     | DX029                     | DE045                     | DX029                     | DE045                     | DX029                     | DX029                     | DE060                     | DE051                     | DX026                     | DE045                     | DX026                     | DE045                     |        |
| Start Depth                             | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth                               | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.6                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name                           | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| N-Nitrosodimethylamine                  | ug/kg                     | 1.9 U                     | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 UJ                    | 2.1 U                     | 2 U                       | 2.5 U                     | 2.2 U                     | 2 U                       | 1.8 U                     | 1.8 U                     | 1.9 U                     | 2 U    |
| 2,4-Dinitrotoluene                      | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Nitrobenzene                            | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 1,4-Dichlorobenzene                     | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 1,2,4-Trichlorobenzene                  | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 1,3-Dichlorobenzene                     | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Hexachlorobutadiene                     | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 1,2-Dichlorobenzene                     | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 4-Nitroaniline                          | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 4-Nitrophenol                           | ug/kg                     | 570 U                     | 600 U                     | 680 U                     | 620 U                     | 620 U                     | 620 U                     | 610 U                     | 740 U                     | 650 U                     | 610 U                     | 550 U                     | 530 U                     | 570 U                     | 590 U  |
| 4-Bromophenyl Phenyl Ether              | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 2,4-Dimethylphenol                      | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 4-Methylphenol                          | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 4-Chloroaniline                         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 3,5-Dimethylphenol                      | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Phenol                                  | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Bis(2-Chloroethyl) ether                | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Bis(2-Chloroethoxy) methane             | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Bis(2-Ethylhexyl) phthalate (8270C)     | ug/kg                     | --                        | 45 J                      | --                        | --                        | 23 J                      | --                        | --                        | --                        | 440 U                     | 130 J                     | 95 J                      | --                        | 28 J                      | --     |
| Bis(2-Ethylhexyl) phthalate (8270C SIM) | ug/kg                     | 41                        | --                        | 38                        | 8.2 J                     | --                        | 54                        | 28                        | 69                        | --                        | --                        | --                        | 13 J                      | --                        | 18 J   |
| Di-N-Octyl Phthalate (8270C)            | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Di-N-Octyl Phthalate (8270C SIM)        | ug/kg                     | 20 U                      | 22 U                      | 24 U                      | 22 U                      | 15 J                      | 22 U                      | 22 UJ                     | 27 U                      | 24 U                      | 22 U                      | 8.6 J                     | 19 U                      | 21 U                      | 21 U   |
| Hexachlorobenzene                       | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Anthracene (8270C)                      | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Anthracene (8270C SIM)                  | ug/kg                     | 0.63 J                    | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 U                     | 0.83 J                    | 0.69 J                    | 0.51 J                    | 2.2 U                     | 2 U                       | 0.4 J                     | 1.8 U                     | 1.9 U                     | 2 U    |
| 2,4-Dichlorophenol                      | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 1,2-Diphenylhydrazine                   | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Pyrene (8270C)                          | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Pyrene (8270C SIM)                      | ug/kg                     | 2.8                       | 1.3 J                     | 1.3 J                     | 2.1 U                     | 2.1 J                     | 11                        | 6.8                       | 3.1                       | 3.6                       | 1 J                       | 3.7                       | 1.8                       | 3.4                       | 2.2    |
| Dimethylphthalate (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Dimethylphthalate (8270C SIM)           | ug/kg                     | 20 U                      | 22 U                      | 24 U                      | 22 U                      | 22 U                      | 22 U                      | 22 U                      | 27 U                      | 24 U                      | 22 U                      | 20 U                      | 19 U                      | 21 U                      | 21 U   |
| Dibenzofuran                            | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Benzo(g,h,i)perylene (8270C)            | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | 22 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Benzo(g,h,i)perylene (8270C SIM)        | ug/kg                     | 0.77 J                    | 2 UJ                      | 1 J                       | 2.1 U                     | 1.9 J                     | 1.2 J                     | --                        | 2 J                       | 1.5 J                     | 2 U                       | 1.6 J                     | 0.82 J                    | 1.4 J                     | 1 J    |
| Indeno(1,2,3-Cd)Pyrene (8270C)          | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Indeno(1,2,3-Cd)Pyrene (8270C SIM)      | ug/kg                     | 1.9 U                     | 2 U                       | 2.3 U                     | 2.1 U                     | 1.4 J                     | 1 J                       | 5.9 J                     | 1.2 J                     | 1.1 J                     | 2 U                       | 1.2 J                     | 1.8 U                     | 1.2 J                     | 0.91 J |
| Benzo(b)fluoranthene (8270C)            | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Benzo(b)fluoranthene (8270C SIM)        | ug/kg                     | 3.4                       | 1.3 J                     | 1.9 J                     | 2.1 U                     | 2.6 J                     | 5.4                       | 35 J                      | 3.4                       | 49                        | 1.2 J                     | 3.7                       | 2.2                       | 4.1                       | 3      |

U – Compound not detected above the reporting limit  
J – Result is an estimated value  
R – Result is rejected

Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name                        | SED-001-SIV<br>SD-0.0-0.5 | SED-002-SIV<br>SD-0.0-0.5 | SED-003-SIV<br>SD-0.0-0.5 | SED-004-SIV<br>SD-0.0-0.5 | SED-005-SIV<br>SD-0.0-0.5 | SED-006-SIV<br>SD-0.0-0.5 | SED-007-SIV<br>SD-0.0-0.6 | SED-008-SIV<br>SD-0.0-0.5 | SED-009-SIV<br>SD-0.0-0.5 | SED-010-SIV<br>SD-0.0-0.5 | SED-011-SIV<br>SD-0.0-0.5 | SED-012-SIV<br>SD-0.0-0.5 | SED-013-SIV<br>SD-0.0-0.5 | SED-014-SIV<br>SD-0.0-0.5 |        |
|------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date                        | 12/17/2010                | 12/21/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/20/2010                | 01/13/2011                | 12/22/2010                | 12/16/2010                | 12/17/2010                | 12/16/2010                | 12/17/2010                |        |
| SDG                                | DE045                     | DE050                     | DX029                     | DE045                     | DX029                     | DE045                     | DX029                     | DX029                     | DE060                     | DE051                     | DX026                     | DE045                     | DX026                     | DE045                     |        |
| Start Depth                        | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth                          | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.6                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name                      | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| Fluoranthene (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Fluoranthene (8270C SIM)           | ug/kg                     | 4.1                       | 1.1 J                     | 1.5 J                     | 2.1 U                     | 2.6 J                     | 16                        | 3.8                       | 3.2                       | 3.3                       | 1.1 J                     | 4                         | 2                         | 3.8                       | 2.7    |
| Benzo(k)fluoranthene (8270C)       | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(k)fluoranthene (8270C SIM)   | ug/kg                     | 1.3 J                     | 2 U                       | 2.3 U                     | 2.1 U                     | 0.84 J                    | 1.7 J                     | 2 UJ                      | 1.2 J                     | 2.2 U                     | 2 U                       | 1.1 J                     | 0.89 J                    | 1.3 J                     | 1.1 J  |
| Acenaphthylene                     | ug/kg                     | 1.9 U                     | 2 UJ                      | 2.3 U                     | 2.1 U                     | 2.1 U                     | 0.55 J                    | 2 U                       | 2.5 U                     | 2.2 U                     | 2 U                       | 1.8 U                     | 1.8 U                     | 1.9 U                     | 2 U    |
| Chrysene (8270C)                   | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Chrysene (8270C SIM)               | ug/kg                     | 5.8                       | 0.9 J                     | 7.1                       | 2.1 U                     | 2.6 J                     | 6.9                       | 29                        | 8.6                       | 3                         | 1.1 J                     | 2.7                       | 1.5 J                     | 3                         | 1.9 J  |
| bis(2-Chloroisopropyl) ether       | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Benzo(a)pyrene (8270C)             | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(a)pyrene (8270C SIM)         | ug/kg                     | 0.96 J                    | 2 U                       | 2.3 U                     | 2.1 U                     | 1.2 J                     | 1.7 J                     | 10 J                      | 1.4 J                     | 4.5                       | 2 U                       | 2                         | 1 J                       | 2.2                       | 1.2 J  |
| 2,4-Dinitrophenol                  | ug/kg                     | 2300 U                    | 2400 U                    | 2700 U                    | 2500 U                    | 2500 U                    | 2500 U                    | 2400 U                    | 3000 U                    | 1300 U                    | 2400 U                    | 2200 U                    | 2100 U                    | 2300 U                    | 2400 U |
| 4,6-Dinitro-2-Methylphenol         | ug/kg                     | 570 U                     | 600 U                     | 680 U                     | 620 U                     | 620 U                     | 620 U                     | 610 U                     | 740 U                     | 650 U                     | 610 U                     | 550 U                     | 530 U                     | 570 U                     | 590 U  |
| Dibenzo(a,h)anthracene (8270C)     | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Dibenzo(a,h)anthracene (8270C SIM) | ug/kg                     | 1.9 U                     | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 U                     | 2.1 U                     | 5.7 J                     | 2.5 U                     | 2.2 U                     | 2 U                       | 1.8 U                     | 1.8 U                     | 1.9 U                     | 2 U    |
| Benzo(a)anthracene (8270C)         | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(a)anthracene (8270C SIM)     | ug/kg                     | 1.3 J                     | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 U                     | 1.5 J                     | 2 U                       | 1.6 J                     | 2.2 U                     | 2 U                       | 1.5 J                     | 0.95 J                    | 1.7 J                     | 1.2 J  |
| 4-Chloro-3-Methylphenol            | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| N-Nitroso-Di-N-Propylamine         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Aniline                            | ug/kg                     | 570 U                     | 600 U                     | 680 U                     | 620 U                     | 620 U                     | 620 U                     | 610 U                     | 740 U                     | 650 U                     | 610 U                     | 550 U                     | 530 U                     | 570 U                     | 590 U  |
| Benzoic Acid                       | ug/kg                     | 570 U                     | 600 U                     | 680 U                     | 620 U                     | 620 U                     | 620 U                     | 610 U                     | 740 U                     | 650 U                     | 610 U                     | 550 U                     | 530 U                     | 570 U                     | 590 U  |
| Hexachloroethane                   | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 4-Chlorophenyl Phenylether         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Hexachlorocyclopentadiene          | ug/kg                     | 570 U                     | 600 U                     | 680 U                     | 620 U                     | 620 U                     | 620 U                     | 610 U                     | 740 U                     | 650 U                     | 610 U                     | 550 U                     | 530 U                     | 570 U                     | 590 U  |
| Isophorone                         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Acenaphthene (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Acenaphthene (8270C SIM)           | ug/kg                     | 1.9 U                     | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 U                     | 2.1 U                     | 2 U                       | 2.5 U                     | 2.2 U                     | 2 U                       | 1.8 U                     | 1.8 U                     | 1.9 U                     | 2 U    |
| Diethylphthalate (8270C)           | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Diethylphthalate (8270C SIM)       | ug/kg                     | 20 U                      | 22 U                      | 24 U                      | 22 U                      | 22 U                      | 22 U                      | 22 U                      | 27 U                      | 24 U                      | 22 U                      | 20 U                      | 19 U                      | 21 U                      | 21 U   |
| Di-n-Butylphthalate (8270C)        | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Di-n-Butylphthalate (8270C SIM)    | ug/kg                     | 20 U                      | 22 U                      | 24 U                      | 22 U                      | 22 U                      | 22 U                      | 22 U                      | 27 U                      | 24 U                      | 22 U                      | 20 U                      | 19 U                      | 21 U                      | 21 U   |
| Phenanthrene (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Phenanthrene (8270C SIM)           | ug/kg                     | 6.8                       | 0.93 J                    | 1.3 J                     | 2.1 U                     | 1.6 J                     | 14                        | 1.4 J                     | 4.1                       | 1.4 J                     | 1.8 J                     | 2.5                       | 1.3 J                     | 2.1                       | 1.4 J  |
| Butylbenzylphthalate (8270C)       | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Butylbenzylphthalate (8270C SIM)   | ug/kg                     | 7.1 J                     | 22 U                      | 17 J                      | 22 U                      | 22 U                      | 13 J                      | 14 J                      | 9.9 J                     | 11 J                      | 22 U                      | 20 U                      | 12 J                      | 21 U                      | 11 J   |
| N-Nitrosodiphenylamine             | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Fluorene                           | ug/kg                     | 3                         | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 U                     | 2.1 U                     | 2 U                       | 2.5 U                     | 5.8                       | 2 U                       | 1.8 U                     | 11                        | 1.9 U                     | 1.9 J  |
| Carbazole                          | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Pentachlorophenol                  | ug/kg                     | 570 U                     | 600 U                     | 680 U                     | 620 U                     | 620 U                     | 620 U                     | 610 U                     | 740 U                     | 650 U                     | 610 U                     | 550 U                     | 530 U                     | 570 U                     | 590 U  |

U – Compound not detected above the reporting limit  
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R – Result is rejected

Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name            | SED-001-SIV<br>SD-0.0-0.5 | SED-002-SIV<br>SD-0.0-0.5 | SED-003-SIV<br>SD-0.0-0.5 | SED-004-SIV<br>SD-0.0-0.5 | SED-005-SIV<br>SD-0.0-0.5 | SED-006-SIV<br>SD-0.0-0.5 | SED-007-SIV<br>SD-0.0-0.6 | SED-008-SIV<br>SD-0.0-0.5 | SED-009-SIV<br>SD-0.0-0.5 | SED-010-SIV<br>SD-0.0-0.5 | SED-011-SIV<br>SD-0.0-0.5 | SED-012-SIV<br>SD-0.0-0.5 | SED-013-SIV<br>SD-0.0-0.5 | SED-014-SIV<br>SD-0.0-0.5 |        |
|------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date            | 12/17/2010                | 12/21/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/17/2010                | 12/20/2010                | 12/20/2010                | 01/13/2011                | 12/22/2010                | 12/16/2010                | 12/17/2010                | 12/16/2010                | 12/17/2010                |        |
| SDG                    | DE045                     | DE050                     | DX029                     | DE045                     | DX029                     | DE045                     | DX029                     | DX029                     | DE060                     | DE051                     | DX026                     | DE045                     | DX026                     | DE045                     |        |
| Start Depth            | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth              | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.6                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name          | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| 2,4,6-Trichlorophenol  | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 2-Nitroaniline         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 2-Nitrophenol          | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 1-Methylnaphthalene    | ug/kg                     | 1.8 J                     | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 U                     | 2.1 U                     | 2 U                       | 2.2 J                     | 2.2 U                     | 2 U                       | 1.8 U                     | 1.8 U                     | 1.9 U                     | 2 U    |
| Naphthalene            | ug/kg                     | 3.8                       | 2.6 J                     | 0.91 J                    | 2.1 U                     | 2.1 U                     | 2.1 U                     | 0.86 J                    | 4.4                       | 1 J                       | 1 J                       | 1.5 J                     | 1.8 U                     | 1.9 U                     | 0.98 J |
| 2-Methylnaphthalene    | ug/kg                     | 2.1                       | 2 U                       | 2.3 U                     | 2.1 U                     | 2.1 U                     | 2.1 U                     | 2 U                       | 2.1 J                     | 2.2 U                     | 2 U                       | 1.8 U                     | 1.8 U                     | 1.9 U                     | 2 U    |
| 2-Chloronaphthalene    | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 3,3'-Dichlorobenzidine | ug/kg                     | 380 U                     | 400 U                     | 450 U                     | 410 U                     | 410 U                     | 420 U                     | 410 U                     | 500 U                     | 440 U                     | 410 U                     | 370 U                     | 350 U                     | 380 U                     | 390 U  |
| Benzidine              | ug/kg                     | 3800 U                    | 4000 UJ                   | 4500 U                    | 4100 U                    | 4100 UJ                   | 4200 U                    | 4100 U                    | 5000 U                    | 4400 U                    | 4100 U                    | 3700 U                    | 3500 U                    | 3800 U                    | 3900 U |
| 2-Methylphenol         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 2-Chlorophenol         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 2,4,5-Trichlorophenol  | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| 3-Nitroaniline         | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |
| Benzyl Alcohol         | ug/kg                     | 570 U                     | 600 U                     | 680 U                     | 620 U                     | 620 U                     | 620 U                     | 610 U                     | 740 U                     | 650 U                     | 610 U                     | 550 U                     | 530 U                     | 570 U                     | 590 U  |
| 2,6-Dinitrotoluene     | ug/kg                     | 190 U                     | 200 U                     | 230 U                     | 210 U                     | 210 U                     | 210 U                     | 200 U                     | 250 U                     | 220 U                     | 200 U                     | 180 U                     | 180 U                     | 190 U                     | 200 U  |

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Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name                             | SED-015-SIV<br>SD-0.0-0.5 | SED-016-SIV<br>SD-0.0-0.5 | SED-017-SIV<br>SD-0.0-0.5 | SED-018-SIV<br>SD-0.0-0.5 | SED-019-SIV<br>SD-0.0-0.5 | SED-020-SIV<br>SD-0.0-0.5 | SED-021-SIV<br>SD-0.0-0.5 | SED-022-SIV<br>SD-0.0-0.5 | SED-023-SIV<br>SD-0.0-0.5 | SED-024-SIV<br>SD-0.0-0.5 | SED-025-SIV<br>SD-0.0-0.5 | SED-026-SIV<br>SD-0.0-0.5 | SED-027-SIV<br>SD-0.0-0.5 | SED-028-SIV<br>SD-0.0-0.5 |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Sample Date                             | 12/21/2010                | 12/15/2010                | 12/16/2010                | 12/15/2010                | 12/16/2010                | 12/16/2010                | 12/15/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 01/13/2011                |
| SDG                                     | DE050                     | DE040                     | DX026                     | DE040                     | DX026                     | DX026                     | DE040                     | DE039                     | DE039                     | DE039                     | DE038                     | DE039                     | DE039                     | DE060                     |
| Start Depth                             | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |
| End Depth                               | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |
| Chemical Name                           | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |
| N-Nitrosodimethylamine                  | ug/kg                     | 2.2 U                     | 1.9 U                     | 1.9 U                     | 1.8 U                     | 11 U                      | 1.8 U                     | 1.8 U                     | 1.8 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 2.4 U                     |
| 2,4-Dinitrotoluene                      | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Nitrobenzene                            | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 1,4-Dichlorobenzene                     | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 1,2,4-Trichlorobenzene                  | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 1,3-Dichlorobenzene                     | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Hexachlorobutadiene                     | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 1,2-Dichlorobenzene                     | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 4-Nitroaniline                          | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 4-Nitrophenol                           | ug/kg                     | 650 U                     | 560 U                     | 560 U                     | 550 U                     | 670 U                     | 540 U                     | 530 U                     | 540 U                     | 560 U                     | 570 U                     | 560 U                     | 580 U                     | 710 U                     |
| 4-Bromophenyl Phenyl Ether              | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 2,4-Dimethylphenol                      | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 4-Methylphenol                          | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 4-Chloroaniline                         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 3,5-Dimethylphenol                      | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Phenol                                  | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Bis(2-Chloroethyl) ether                | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Bis(2-Chloroethoxy) methane             | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Bis(2-Ethylhexyl) phthalate (8270C)     | ug/kg                     | 67 J                      | 28 J                      | 51 J                      | 24 J                      | 120 J                     | --                        | 19 J                      | --                        | --                        | 370 U                     | 47 J                      | --                        | 470 U                     |
| Bis(2-Ethylhexyl) phthalate (8270C SIM) | ug/kg                     | --                        | --                        | --                        | --                        | --                        | 20 U                      | --                        | 20                        | 8.4 J                     | 10 J                      | --                        | --                        | 13 J                      |
| Di-N-Octyl Phthalate (8270C)            | ug/kg                     | --                        | --                        | --                        | --                        | 220 U                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |
| Di-N-Octyl Phthalate (8270C SIM)        | ug/kg                     | 23 U                      | 20 U                      | 20 U                      | 20 U                      | --                        | 20 U                      | 19 U                      | 19 U                      | 20 U                      | 21 U                      | 20 U                      | 21 U                      | 25 U                      |
| Hexachlorobenzene                       | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Anthracene (8270C)                      | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |
| Anthracene (8270C SIM)                  | ug/kg                     | 2.2 U                     | 1.9 U                     | 1.9 U                     | 0.65 J                    | 6 J                       | 1.8 U                     | 1.8 U                     | 0.68 J                    | 1.9 U                     | 1.9 U                     | 0.42 J                    | 1 J                       | 1.9 U                     |
| 2,4-Dichlorophenol                      | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| 1,2-Diphenylhydrazine                   | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Pyrene (8270C)                          | ug/kg                     | --                        | --                        | --                        | --                        | 47 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |
| Pyrene (8270C SIM)                      | ug/kg                     | 1.5 J                     | 12                        | 1.9 U                     | 5.4                       | --                        | 1.8 U                     | 1.8 U                     | 10                        | 1.1 J                     | 0.95 J                    | 2                         | 6.1                       | 1.9 U                     |
| Dimethylphthalate (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | 220 U                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |
| Dimethylphthalate (8270C SIM)           | ug/kg                     | 23 U                      | 20 U                      | 20 U                      | 20 U                      | --                        | 20 U                      | 19 U                      | 19 U                      | 20 U                      | 21 U                      | 20 U                      | 21 U                      | 25 U                      |
| Dibenzofuran                            | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U                     |
| Benzo(g,h,i)perylene (8270C)            | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |
| Benzo(g,h,i)perylene (8270C SIM)        | ug/kg                     | 2.2 U                     | 3.1                       | 1.9 U                     | 1.2 J                     | 12                        | 1.8 U                     | 1.8 U                     | 1.2 J                     | 1.9 U                     | 1.9 U                     | 2                         | 1.6 J                     | 1.9 U                     |
| Indeno(1,2,3-Cd)Pyrene (8270C)          | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |
| Indeno(1,2,3-Cd)Pyrene (8270C SIM)      | ug/kg                     | 2.2 U                     | 2.9                       | 1.9 U                     | 1.1 J                     | 8.6 J                     | 1.8 U                     | 1.8 U                     | 1.1 J                     | 1.9 UJ                    | 1.9 UJ                    | 1.9 U                     | 1.3 J                     | 1.9 UJ                    |
| Benzo(b)fluoranthene (8270C)            | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |
| Benzo(b)fluoranthene (8270C SIM)        | ug/kg                     | 1.8 J                     | 12                        | 1.9 U                     | 4.7                       | 35                        | 1.8 U                     | 1.8 U                     | 4.7                       | 1.3 J                     | 1 J                       | 1.5 J                     | 5.6                       | 0.94 J                    |

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Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name                        | SED-015-SIV<br>SD-0.0-0.5 | SED-016-SIV<br>SD-0.0-0.5 | SED-017-SIV<br>SD-0.0-0.5 | SED-018-SIV<br>SD-0.0-0.5 | SED-019-SIV<br>SD-0.0-0.5 | SED-020-SIV<br>SD-0.0-0.5 | SED-021-SIV<br>SD-0.0-0.5 | SED-022-SIV<br>SD-0.0-0.5 | SED-023-SIV<br>SD-0.0-0.5 | SED-024-SIV<br>SD-0.0-0.5 | SED-025-SIV<br>SD-0.0-0.5 | SED-026-SIV<br>SD-0.0-0.5 | SED-027-SIV<br>SD-0.0-0.5 | SED-028-SIV<br>SD-0.0-0.5 |        |
|------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date                        | 12/21/2010                | 12/15/2010                | 12/16/2010                | 12/15/2010                | 12/16/2010                | 12/16/2010                | 12/15/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 01/13/2011                |        |
| SDG                                | DE050                     | DE040                     | DX026                     | DE040                     | DX026                     | DX026                     | DE040                     | DE039                     | DE039                     | DE039                     | DE038                     | DE039                     | DE039                     | DE060                     |        |
| Start Depth                        | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth                          | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name                      | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| Fluoranthene (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | 71 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Fluoranthene (8270C SIM)           | ug/kg                     | 1.9 J                     | 16                        | 1.9 U                     | 8                         | --                        | 1.8 U                     | 1.8 U                     | 16 J                      | 1.1 J                     | 1.2 J                     | 1.6 J                     | 8.6 J                     | 0.94 J                    | 1.3 J  |
| Benzo(k)fluoranthene (8270C)       | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(k)fluoranthene (8270C SIM)   | ug/kg                     | 1.1 J                     | 5.1                       | 1.9 U                     | 2                         | 9.7 J                     | 1.8 U                     | 1.8 U                     | 2.1                       | 1.9 U                     | 1.9 U                     | 1.9 U                     | 1.8 J                     | 1.9 U                     | 2.4 U  |
| Acenaphthylene                     | ug/kg                     | 0.47 J                    | 1.9 U                     | 1.9 U                     | 1.8 U                     | 11 U                      | 1.8 U                     | 1.8 U                     | 0.72 J                    | 1.9 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 2.4 U  |
| Chrysene (8270C)                   | ug/kg                     | --                        | --                        | --                        | --                        | 37 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Chrysene (8270C SIM)               | ug/kg                     | 1.9 J                     | 9                         | 1.8 J                     | 4.1                       | --                        | 1.8 U                     | 0.62 J                    | 5.6 J                     | 1.4 J                     | 1.1 J                     | 3.4                       | 5.1 J                     | 0.85 J                    | 0.93 J |
| bis(2-Chloroisopropyl) ether       | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| Benzo(a)pyrene (8270C)             | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(a)pyrene (8270C SIM)         | ug/kg                     | 2.2 U                     | 5.6                       | 1.9 U                     | 2.2                       | 16                        | 1.8 U                     | 1.8 U                     | 1.4 J                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 2.3                       | 1.9 U                     | 1.4 J  |
| 2,4-Dinitrophenol                  | ug/kg                     | 2600 U                    | 2200 U                    | 2300 U                    | 2200 U                    | 2700 U                    | 2200 U                    | 2100 U                    | 2200 U                    | 2200 U                    | 2300 U                    | 2200 U                    | 2300 U                    | 2300 U                    | 1400 U |
| 4,6-Dinitro-2-Methylphenol         | ug/kg                     | 650 U                     | 560 U                     | 560 U                     | 550 U                     | 670 U                     | 540 U                     | 530 U                     | 540 U                     | 560 U                     | 570 U                     | 560 U                     | 580 U                     | 580 U                     | 710 U  |
| Dibenzo(a,h)anthracene (8270C)     | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Dibenzo(a,h)anthracene (8270C SIM) | ug/kg                     | 2.2 U                     | 1.9 U                     | 1.9 U                     | 1.8 U                     | 11 U                      | 1.8 U                     | 1.8 U                     | 1.8 UJ                    | 1.9 UJ                    | 1.9 UJ                    | 1.9 U                     | 1.9 UJ                    | 1.9 UJ                    | 2.4 U  |
| Benzo(a)anthracene (8270C)         | ug/kg                     | --                        | --                        | --                        | --                        | 24 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(a)anthracene (8270C SIM)     | ug/kg                     | 2.2 U                     | 3                         | 1.9 U                     | 2                         | --                        | 1.8 U                     | 1.8 U                     | 1.2 J                     | 1.9 U                     | 1.9 U                     | 1.4 J                     | 3.1                       | 1.9 U                     | 2.4 U  |
| 4-Chloro-3-Methylphenol            | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| N-Nitroso-Di-N-Propylamine         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| Aniline                            | ug/kg                     | 650 U                     | 560 U                     | 560 U                     | 550 U                     | 670 U                     | 540 U                     | 530 U                     | 540 U                     | 560 U                     | 570 U                     | 560 U                     | 580 U                     | 580 U                     | 710 U  |
| Benzoic Acid                       | ug/kg                     | 650 U                     | 560 U                     | 560 U                     | 550 U                     | 670 U                     | 540 U                     | 530 U                     | 540 U                     | 560 U                     | 570 U                     | 560 U                     | 580 U                     | 580 U                     | 710 U  |
| Hexachloroethane                   | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 4-Chlorophenyl Phenylether         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| Hexachlorocyclopentadiene          | ug/kg                     | 650 U                     | 560 U                     | 560 U                     | 550 U                     | 670 U                     | 540 U                     | 530 U                     | 540 U                     | 560 U                     | 570 U                     | 560 U                     | 580 U                     | 580 U                     | 710 U  |
| Isophorone                         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| Acenaphthene (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Acenaphthene (8270C SIM)           | ug/kg                     | 2.2 U                     | 1.9 U                     | 1.9 U                     | 1.8 U                     | 11 U                      | 1.8 U                     | 1.8 U                     | 1.8 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 1.9 U                     | 2.4 U  |
| Diethylphthalate (8270C)           | ug/kg                     | --                        | --                        | --                        | --                        | 220 U                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Diethylphthalate (8270C SIM)       | ug/kg                     | 23 U                      | 20 U                      | 20 U                      | 20 U                      | --                        | 20 U                      | 19 U                      | 19 UJ                     | 20 UJ                     | 21 UJ                     | 20 U                      | 21 UJ                     | 21 UJ                     | 25 U   |
| Di-n-Butylphthalate (8270C)        | ug/kg                     | --                        | --                        | --                        | --                        | 26 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Di-n-Butylphthalate (8270C SIM)    | ug/kg                     | 23 U                      | 20 U                      | 20 U                      | 20 U                      | --                        | 20 U                      | 19 U                      | 19 UJ                     | 20 UJ                     | 21 UJ                     | 7.9 J                     | 21 UJ                     | 21 UJ                     | 25 U   |
| Phenanthrene (8270C)               | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Phenanthrene (8270C SIM)           | ug/kg                     | 2.4                       | 5.5                       | 1.9 U                     | 4.7                       | 22                        | 1.8 U                     | 1.8 U                     | 16                        | 1.6 J                     | 1.5 J                     | 2.5                       | 3.9                       | 1 J                       | 1.2 J  |
| Butylbenzylphthalate (8270C)       | ug/kg                     | --                        | --                        | --                        | --                        | 42 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Butylbenzylphthalate (8270C SIM)   | ug/kg                     | 23 U                      | 20 U                      | 20 U                      | 20 U                      | --                        | 20 U                      | 19 U                      | 19 U                      | 20 U                      | 21 U                      | 8.4 J                     | 9.1 J                     | 21 U                      | 25 U   |
| N-Nitrosodiphenylamine             | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| Fluorene                           | ug/kg                     | 2.2 U                     | 1.9 U                     | 1.9 U                     | 1.8 U                     | 11 U                      | 1.8 U                     | 1.8 U                     | 1.8 UJ                    | 1.9 UJ                    | 1.9 UJ                    | 6.9                       | 1.9 UJ                    | 1.9 UJ                    | 4.4    |
| Carbazole                          | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| Pentachlorophenol                  | ug/kg                     | 650 U                     | 560 U                     | 560 U                     | 550 U                     | 670 U                     | 540 U                     | 530 U                     | 540 U                     | 560 U                     | 570 U                     | 560 U                     | 580 U                     | 580 U                     | 710 U  |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected

Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name            | SED-015-SIV<br>SD-0.0-0.5 | SED-016-SIV<br>SD-0.0-0.5 | SED-017-SIV<br>SD-0.0-0.5 | SED-018-SIV<br>SD-0.0-0.5 | SED-019-SIV<br>SD-0.0-0.5 | SED-020-SIV<br>SD-0.0-0.5 | SED-021-SIV<br>SD-0.0-0.5 | SED-022-SIV<br>SD-0.0-0.5 | SED-023-SIV<br>SD-0.0-0.5 | SED-024-SIV<br>SD-0.0-0.5 | SED-025-SIV<br>SD-0.0-0.5 | SED-026-SIV<br>SD-0.0-0.5 | SED-027-SIV<br>SD-0.0-0.5 | SED-028-SIV<br>SD-0.0-0.5 |        |
|------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date            | 12/21/2010                | 12/15/2010                | 12/16/2010                | 12/15/2010                | 12/16/2010                | 12/16/2010                | 12/15/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 12/14/2010                | 01/13/2011                |        |
| SDG                    | DE050                     | DE040                     | DX026                     | DE040                     | DX026                     | DX026                     | DE040                     | DE039                     | DE039                     | DE039                     | DE038                     | DE039                     | DE039                     | DE060                     |        |
| Start Depth            | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth              | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name          | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| 2,4,6-Trichlorophenol  | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 2-Nitroaniline         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 2-Nitrophenol          | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 1-Methylnaphthalene    | ug/kg                     | 1.8 J                     | 1.9 U                     | 1.9 U                     | 1.8 U                     | 11 U                      | 1.8 U                     | 1.8 U                     | 1.4 J                     | 1.9 U                     | 1.9 U                     | 1.2 J                     | 1.9 U                     | 1.9 U                     | 2.4 U  |
| Naphthalene            | ug/kg                     | 4.3                       | 1.9 U                     | 1.9 U                     | 1.5 J                     | 9 J                       | 1.8 U                     | 1.8 U                     | 2.6                       | 1.6 J                     | 1.5 J                     | 2.9                       | 1.9 U                     | 1.9 U                     | 1.2 J  |
| 2-Methylnaphthalene    | ug/kg                     | 2.3                       | 1.9 U                     | 1.9 U                     | 1.8 U                     | 11 U                      | 1.8 U                     | 1.8 U                     | 1.6 J                     | 1.9 U                     | 1.9 U                     | 1.2 J                     | 1.9 U                     | 1.9 U                     | 2.4 U  |
| 2-Chloronaphthalene    | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 3,3'-Dichlorobenzidine | ug/kg                     | 430 U                     | 370 U                     | 380 U                     | 370 U                     | 450 U                     | 360 U                     | 350 U                     | 360 U                     | 370 U                     | 380 U                     | 370 U                     | 390 U                     | 390 U                     | 470 U  |
| Benzidine              | ug/kg                     | 4300 U                    | 3700 U                    | 3800 U                    | 3700 U                    | 4500 U                    | 3600 U                    | 3500 U                    | 3600 U                    | 3700 U                    | 3800 U                    | 3700 U                    | 3900 U                    | 3900 U                    | 4700 U |
| 2-Methylphenol         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 2-Chlorophenol         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 2,4,5-Trichlorophenol  | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| 3-Nitroaniline         | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |
| Benzyl Alcohol         | ug/kg                     | 650 U                     | 560 U                     | 560 U                     | 550 U                     | 670 U                     | 540 U                     | 530 U                     | 540 U                     | 560 U                     | 570 U                     | 560 U                     | 580 U                     | 580 U                     | 710 U  |
| 2,6-Dinitrotoluene     | ug/kg                     | 220 U                     | 190 U                     | 190 U                     | 180 U                     | 220 U                     | 180 U                     | 180 U                     | 180 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 190 U                     | 240 U  |

U – Compound not detected above the reporting limit  
J – Result is an estimated value  
R – Result is rejected

Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name                             | SED-029-SIV<br>SD-0.0-0.5 | SED-030-SIV<br>SD-0.0-0.5 | SED-031-SIV<br>SD-0.0-0.5 | SED-032-SIV<br>SD-0.0-0.5 | SED-033-SIV<br>SD-0.0-0.5 | SED-034-SIV<br>SD-0.0-0.5 | SED-035-SIV<br>SD-0.0-0.5 | SED-036-SIV<br>SD-0.0-0.5 | SED-037-SIV<br>SD-0.0-0.5 | SED-038-SIV<br>SD-0.0-0.5 | SED-039-SIV<br>SD-0.0-0.5 | SED-040-SIV<br>SD-0.0-0.5 |        |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date                             | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/20/2010                | 05/23/2011                | 12/21/2010                | 12/20/2010                | 12/21/2010                | 12/21/2010                | 12/13/2010                |        |
| SDG                                     | DE036                     | DE036                     | DE036                     | DE037                     | DE037                     | DX029                     | DE159                     | DE050                     | DX029                     | DE050                     | DE050                     | DE036                     |        |
| Start Depth                             | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth                               | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name                           | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| N-Nitrosodimethylamine                  | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | 1.9 U                     | 1.8 U                     | 2.1 U                     | 14 U                      | 2.1 U                     | 2.3 U                     | 1.9 U                     | 2.2 U                     | 1.8 U  |
| 2,4-Dinitrotoluene                      | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Nitrobenzene                            | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 1,4-Dichlorobenzene                     | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 1,2,4-Trichlorobenzene                  | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 1,3-Dichlorobenzene                     | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Hexachlorobutadiene                     | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 UJ                    | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 1,2-Dichlorobenzene                     | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 4-Nitroaniline                          | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 4-Nitrophenol                           | ug/kg                     | 550 U                     | 600 U                     | 560 U                     | 570 U                     | 530 U                     | 640 U                     | 830 U                     | 630 U                     | 700 U                     | 570 U                     | 660 U                     | 550 U  |
| 4-Bromophenyl Phenyl Ether              | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 UJ                    | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 2,4-Dimethylphenol                      | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 4-Methylphenol                          | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 4-Chloroaniline                         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 3,5-Dimethylphenol                      | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Phenol                                  | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Bis(2-Chloroethyl) ether                | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Bis(2-Chloroethoxy) methane             | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Bis(2-Ethylhexyl) phthalate (8270C)     | ug/kg                     | 110 J                     | 56 J                      | 38 J                      | --                        | --                        | --                        | 550 U                     | 48 J                      | 35 J                      | 30 J                      | 33 J                      | 360 U  |
| Bis(2-Ethylhexyl) phthalate (8270C SIM) | ug/kg                     | --                        | --                        | --                        | 30 U                      | 19 U                      | 29                        | --                        | --                        | --                        | --                        | --                        | --     |
| Di-N-Octyl Phthalate (8270C)            | ug/kg                     | --                        | --                        | --                        | --                        | --                        | --                        | 280 U                     | --                        | --                        | --                        | --                        | --     |
| Di-N-Octyl Phthalate (8270C SIM)        | ug/kg                     | 97 J                      | 22 U                      | 20 U                      | 21 U                      | 19 U                      | 23 U                      | --                        | 23 U                      | 25 U                      | 21 U                      | 24 U                      | 20 U   |
| Hexachlorobenzene                       | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 UJ                    | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Anthracene (8270C)                      | ug/kg                     | --                        | --                        | --                        | 37 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Anthracene (8270C SIM)                  | ug/kg                     | 4.4 J                     | 2 U                       | 0.43 J                    | --                        | 0.99 J                    | 2.1 U                     | 14 U                      | 2.1 U                     | 1.1 J                     | 0.39 J                    | 2.2 U                     | 0.38 J |
| 2,4-Dichlorophenol                      | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 1,2-Diphenylhydrazine                   | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Pyrene (8270C)                          | ug/kg                     | --                        | --                        | --                        | 540                       | --                        | --                        | 48 J                      | --                        | --                        | --                        | --                        | --     |
| Pyrene (8270C SIM)                      | ug/kg                     | 32                        | 1.2 J                     | 2.3                       | --                        | 15                        | 3.5                       | --                        | 1.5 J                     | 7.8                       | 4.6                       | 1.4 J                     | 2.3    |
| Dimethylphthalate (8270C)               | ug/kg                     | 180 U                     | --                        | --                        | --                        | --                        | --                        | 280 U                     | --                        | --                        | --                        | --                        | --     |
| Dimethylphthalate (8270C SIM)           | ug/kg                     | --                        | 22 U                      | 20 U                      | 21 U                      | 19 U                      | 23 U                      | --                        | 23 U                      | 25 U                      | 21 U                      | 24 U                      | 20 U   |
| Dibenzofuran                            | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Benzo(g,h,i)perylene (8270C)            | ug/kg                     | --                        | --                        | --                        | 500                       | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Benzo(g,h,i)perylene (8270C SIM)        | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | --                        | 11                        | 2.3                       | 10 J                      | 2.1 U                     | 4.5                       | 1.9 U                     | 2.2 U                     | 1.8 U  |
| Indeno(1,2,3-Cd)Pyrene (8270C)          | ug/kg                     | --                        | --                        | --                        | 420                       | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Indeno(1,2,3-Cd)Pyrene (8270C SIM)      | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | --                        | 10                        | 1.8 J                     | 8.7 J                     | 2.1 U                     | 3.4                       | 1.9 U                     | 2.2 U                     | 1.8 U  |
| Benzo(b)fluoranthene (8270C)            | ug/kg                     | --                        | --                        | --                        | 680                       | --                        | --                        | --                        | --                        | --                        | --                        | --                        | --     |
| Benzo(b)fluoranthene (8270C SIM)        | ug/kg                     | 27                        | 2                         | 2.7                       | --                        | 39                        | 5                         | 33                        | 2.8                       | 13                        | 2.4                       | 2.7                       | 2.1    |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected

Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name                        | SED-029-SIV<br>SD-0.0-0.5 | SED-030-SIV<br>SD-0.0-0.5 | SED-031-SIV<br>SD-0.0-0.5 | SED-032-SIV<br>SD-0.0-0.5 | SED-033-SIV<br>SD-0.0-0.5 | SED-034-SIV<br>SD-0.0-0.5 | SED-035-SIV<br>SD-0.0-0.5 | SED-036-SIV<br>SD-0.0-0.5 | SED-037-SIV<br>SD-0.0-0.5 | SED-038-SIV<br>SD-0.0-0.5 | SED-039-SIV<br>SD-0.0-0.5 | SED-040-SIV<br>SD-0.0-0.5 |        |
|------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date                        | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/20/2010                | 05/23/2011                | 12/21/2010                | 12/20/2010                | 12/21/2010                | 12/21/2010                | 12/13/2010                |        |
| SDG                                | DE036                     | DE036                     | DE036                     | DE037                     | DE037                     | DX029                     | DE159                     | DE050                     | DX029                     | DE050                     | DE050                     | DE036                     |        |
| Start Depth                        | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth                          | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name                      | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| Fluoranthene (8270C)               | ug/kg                     | --                        | --                        | --                        | 420                       | --                        | --                        | 53 J                      | --                        | --                        | --                        | --                        |        |
| Fluoranthene (8270C SIM)           | ug/kg                     | 47                        | 1.4 J                     | 3                         | --                        | 14                        | 3.7                       | --                        | 2 J                       | 8.3                       | 6.8                       | 2 J                       | 3.2    |
| Benzo(k)fluoranthene (8270C)       | ug/kg                     | --                        | --                        | --                        | 280                       | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(k)fluoranthene (8270C SIM)   | ug/kg                     | 18 U                      | 2 U                       | 0.85 J                    | --                        | 14                        | 2.6                       | 9.4 J                     | 0.96 J                    | 4.8                       | 1.3 J                     | 0.91 J                    | 0.73 J |
| Acenaphthylene                     | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | 0.49 J                    | 1.8 U                     | 2.1 U                     | 14 U                      | 0.46 J                    | 0.71 J                    | 1.9 U                     | 2.2 U                     | 1.8 U  |
| Chrysene (8270C)                   | ug/kg                     | --                        | --                        | --                        | 490                       | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Chrysene (8270C SIM)               | ug/kg                     | 25                        | 1.6 J                     | 2.2                       | --                        | 20                        | 4.5                       | 20                        | 1.4 J                     | 10                        | 2.8                       | 2.2                       | 1.8    |
| bis(2-Chloroisopropyl) ether       | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Benzo(a)pyrene (8270C)             | ug/kg                     | --                        | --                        | --                        | 650                       | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(a)pyrene (8270C SIM)         | ug/kg                     | 9.6 J                     | 2 U                       | 1.1 J                     | --                        | 25                        | 2.3                       | 18                        | 1.1 J                     | 6                         | 1.3 J                     | 1.1 J                     | 0.79 J |
| 2,4-Dinitrophenol                  | ug/kg                     | 2200 U                    | 2400 U                    | 2200 U                    | 2300 U                    | 2100 U                    | 2600 U                    | 1700 U                    | 2500 U                    | 2800 U                    | 2300 U                    | 2700 U                    | 2200 U |
| 4,6-Dinitro-2-Methylphenol         | ug/kg                     | 550 U                     | 600 U                     | 560 U                     | 570 U                     | 530 U                     | 640 U                     | 830 U                     | 630 U                     | 700 U                     | 570 U                     | 660 U                     | 550 U  |
| Dibenzo(a,h)anthracene (8270C)     | ug/kg                     | --                        | --                        | --                        | 120 J                     | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Dibenzo(a,h)anthracene (8270C SIM) | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | --                        | 3.2                       | 2.1 U                     | 14 U                      | 2.1 U                     | 2.3 U                     | 1.9 U                     | 2.2 U                     | 1.8 U  |
| Benzo(a)anthracene (8270C)         | ug/kg                     | --                        | --                        | --                        | 400                       | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Benzo(a)anthracene (8270C SIM)     | ug/kg                     | 9.6 J                     | 2 U                       | 0.99 J                    | --                        | 15                        | 1.2 J                     | 12 J                      | 2.1 U                     | 4.9                       | 1.2 J                     | 2.2 U                     | 0.84 J |
| 4-Chloro-3-Methylphenol            | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| N-Nitroso-Di-N-Propylamine         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Aniline                            | ug/kg                     | 550 U                     | 600 U                     | 560 U                     | 570 U                     | 530 U                     | 640 U                     | 830 U                     | 630 U                     | 700 U                     | 570 U                     | 660 U                     | 550 U  |
| Benzoic Acid                       | ug/kg                     | 550 U                     | 600 U                     | 560 U                     | 570 U                     | 530 U                     | 640 U                     | 830 U                     | 630 U                     | 700 U                     | 570 U                     | 660 U                     | 550 U  |
| Hexachloroethane                   | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 4-Chlorophenyl Phenylether         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Hexachlorocyclopentadiene          | ug/kg                     | 550 U                     | 600 U                     | 560 U                     | 570 U                     | 530 U                     | 640 U                     | 830 U                     | 630 U                     | 700 U                     | 570 U                     | 660 U                     | 550 U  |
| Isophorone                         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Acenaphthene (8270C)               | ug/kg                     | --                        | --                        | --                        | 43 J                      | --                        | --                        | --                        | --                        | --                        | --                        | --                        |        |
| Acenaphthene (8270C SIM)           | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | --                        | 1.8 U                     | 2.1 U                     | 14 U                      | 2.1 U                     | 2.3 U                     | 1.9 U                     | 2.2 U                     | 1.8 U  |
| Diethylphthalate (8270C)           | ug/kg                     | 180 U                     | --                        | --                        | --                        | --                        | --                        | 280 U                     | --                        | --                        | --                        | --                        |        |
| Diethylphthalate (8270C SIM)       | ug/kg                     | --                        | 22 U                      | 20 U                      | 21 U                      | 19 U                      | 23 U                      | --                        | 23 U                      | 25 U                      | 21 U                      | 24 U                      | 20 U   |
| Di-n-Butylphthalate (8270C)        | ug/kg                     | 180 U                     | --                        | --                        | --                        | --                        | --                        | 280 U                     | --                        | --                        | --                        | --                        |        |
| Di-n-Butylphthalate (8270C SIM)    | ug/kg                     | --                        | 7.3 J                     | 13 J                      | 21 U                      | 19 U                      | 23 U                      | --                        | 23 U                      | 25 U                      | 15 J                      | 24 U                      | 20 U   |
| Phenanthrene (8270C)               | ug/kg                     | --                        | --                        | --                        | 110 J                     | --                        | --                        | 35 J                      | --                        | --                        | --                        | --                        |        |
| Phenanthrene (8270C SIM)           | ug/kg                     | 22                        | 0.89 J                    | 1.6 J                     | --                        | 6.2                       | 2 J                       | --                        | 1.4 J                     | 6                         | 2.8                       | 1.6 J                     | 2.4    |
| Butylbenzylphthalate (8270C)       | ug/kg                     | 31 J                      | --                        | --                        | --                        | --                        | 32 J                      | 280 U                     | 56 J                      | --                        | --                        | --                        |        |
| Butylbenzylphthalate (8270C SIM)   | ug/kg                     | --                        | 22 U                      | 7.2 J                     | 21 U                      | 19 U                      | --                        | --                        | --                        | 25 U                      | 21 U                      | 17 J                      | 20 U   |
| N-Nitrosodiphenylamine             | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Fluorene                           | ug/kg                     | 18 U                      | 2 U                       | 2                         | 2                         | 1.8 U                     | 3.4                       | 14 U                      | 2.1 U                     | 3.5                       | 1.9 U                     | 2 J                       | 1.8 U  |
| Carbazole                          | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 24 J                      | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Pentachlorophenol                  | ug/kg                     | 550 U                     | 600 U                     | 560 U                     | 570 U                     | 530 U                     | 640 U                     | 830 U                     | 630 U                     | 700 U                     | 570 U                     | 660 U                     | 550 U  |

U – Compound not detected above the reporting limit

J – Result is an estimated value

R – Result is rejected



Appendix A5  
Semivolatile Organics - Validated Data  
Sediments

| Sample Name            | SED-029-SIV<br>SD-0.0-0.5 | SED-030-SIV<br>SD-0.0-0.5 | SED-031-SIV<br>SD-0.0-0.5 | SED-032-SIV<br>SD-0.0-0.5 | SED-033-SIV<br>SD-0.0-0.5 | SED-034-SIV<br>SD-0.0-0.5 | SED-035-SIV<br>SD-0.0-0.5 | SED-036-SIV<br>SD-0.0-0.5 | SED-037-SIV<br>SD-0.0-0.5 | SED-038-SIV<br>SD-0.0-0.5 | SED-039-SIV<br>SD-0.0-0.5 | SED-040-SIV<br>SD-0.0-0.5 |        |
|------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------|
| Sample Date            | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/13/2010                | 12/20/2010                | 05/23/2011                | 12/21/2010                | 12/20/2010                | 12/21/2010                | 12/21/2010                | 12/13/2010                |        |
| SDG                    | DE036                     | DE036                     | DE036                     | DE037                     | DE037                     | DX029                     | DE159                     | DE050                     | DX029                     | DE050                     | DE050                     | DE036                     |        |
| Start Depth            | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         | 0                         |        |
| End Depth              | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       | 0.5                       |        |
| Chemical Name          | Unit                      | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    | Result                    |        |
| 2,4,6-Trichlorophenol  | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 2-Nitroaniline         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 2-Nitrophenol          | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 UJ                    | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 1-Methylnaphthalene    | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | 1.9                       | 0.94 J                    | 2.1 U                     | 14 U                      | 2.1 U                     | 2.6                       | 1.9 U                     | 2.2 U                     | 1.8 U  |
| Naphthalene            | ug/kg                     | 18 U                      | 0.83 J                    | 1.1 J                     | 6.3                       | 1.1 J                     | 1.1 J                     | 14 U                      | 1.9 J                     | 5.9                       | 1.5 J                     | 1.7 J                     | 1.3 J  |
| 2-Methylnaphthalene    | ug/kg                     | 18 U                      | 2 U                       | 1.9 U                     | 2.4                       | 0.96 J                    | 2.1 U                     | 14 U                      | 2.1 U                     | 3.1                       | 1.9 U                     | 2.2 U                     | 1.8 U  |
| 2-Chloronaphthalene    | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 3,3`-Dichlorobenzidine | ug/kg                     | 370 UJ                    | 400 UJ                    | 370 UJ                    | 380 U                     | 350 U                     | 430 U                     | 550 U                     | 420 U                     | 470 U                     | 380 U                     | 440 U                     | 360 UJ |
| Benzidine              | ug/kg                     | 3700 U                    | 4000 U                    | 3700 U                    | 3800 U                    | 3500 U                    | 4300 U                    | 5500 U                    | 4200 U                    | 4700 U                    | 3800 U                    | 4400 U                    | 3600 U |
| 2-Methylphenol         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 2-Chlorophenol         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 2,4,5-Trichlorophenol  | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| 3-Nitroaniline         | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |
| Benzyl Alcohol         | ug/kg                     | 550 U                     | 600 U                     | 560 U                     | 570 U                     | 530 U                     | 640 U                     | 830 U                     | 630 U                     | 700 U                     | 570 U                     | 660 U                     | 550 U  |
| 2,6-Dinitrotoluene     | ug/kg                     | 180 U                     | 200 U                     | 190 U                     | 190 U                     | 180 U                     | 210 U                     | 280 U                     | 210 U                     | 230 U                     | 190 U                     | 220 U                     | 180 U  |

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J – Result is an estimated value  
R – Result is rejected