

Table 5-1. Distribution of Inorganic Chemicals in Surface Sediments

| Analyte   | Year | Total Number of Samples | Nondetects       |                                   |                         |                                          |                |                            | Threshold Values            |                 |                             |                                       |
|-----------|------|-------------------------|------------------|-----------------------------------|-------------------------|------------------------------------------|----------------|----------------------------|-----------------------------|-----------------|-----------------------------|---------------------------------------|
|           |      |                         | Total Nondetects | Range of Detection Limits (mg/kg) | Total Number of Detects | Range of Detected Concentrations (mg/kg) | Median (mg/kg) | Mean Concentration (mg/kg) | ER-L <sup>(a)</sup> (mg/kg) | Ambient (mg/kg) | ER-M <sup>(a)</sup> (mg/kg) | PRG Industrial <sup>(b)</sup> (mg/kg) |
| Aluminum  | 1997 | 6                       | 0                | -                                 | 6                       | 42,430-49,040                            | 46,620         | 46,210                     | NA                          | NA              | NA                          | 1.0E+05                               |
| Arsenic   | 1997 | 8                       | 6                | 36-36                             | 2                       | 9.2-9.9                                  | 9.55           | 9.55                       | 8.2                         | 15.3            | 70                          | 2.7E+00                               |
| Barium    | 1997 | 6                       | 0                | -                                 | 6                       | 50.4-143.2                               | 114.3          | 107.4                      | NA                          | NA              | NA                          | 1.0E+05                               |
| Cadmium   | 1997 | 8                       | 0                | -                                 | 8                       | 2.08-24.18                               | 16.28          | 15.48                      | 1.2                         | 0.33            | 9.6                         | 8.1E+02                               |
| Calcium   | 1997 | 6                       | 0                | -                                 | 6                       | 9187-10,930                              | 9,520          | 9,778                      | NA                          | NA              | NA                          | NA                                    |
| Chromium  | 1997 | 8                       | 0                | -                                 | 8                       | 146-300.4                                | 265.3          | 247.1                      | 81                          | 112             | 370                         | 4.5E+02                               |
| Cobalt    | 1997 | 6                       | 0                | -                                 | 6                       | 22.23-27.48                              | 25.81          | 25.47                      | NA                          | NA              | NA                          | 1.0E+05                               |
| Copper    | 1997 | 8                       | 0                | -                                 | 8                       | 58.2-135.2                               | 122            | 112.7                      | 34                          | 68.1            | 270                         | 7.6E+04                               |
| Iron      | 1997 | 6                       | 0                | -                                 | 6                       | 44,810-55,460                            | 51,170         | 51,260                     | NA                          | NA              | NA                          | 1.0E+05                               |
| Lead      | 1997 | 8                       | 0                | -                                 | 8                       | 56.5-290.2                               | 214.7          | 212.9                      | 46.7                        | 43.2            | 218                         | 7.5E+02                               |
| Magnesium | 1997 | 6                       | 0                | -                                 | 6                       | 9,399-16,170                             | 13,930         | 13,080                     | NA                          | NA              | NA                          | NA                                    |
| Manganese | 1997 | 6                       | 0                | -                                 | 6                       | 400.3-492.8                              | 458.8          | 456.5                      | NA                          | NA              | NA                          | 3.2E+04                               |
| Mercury   | 1997 | 8                       | 0                | -                                 | 8                       | 0.518-1.4                                | 1.13           | 1.067                      | 0.15                        | 0.43            | 0.71                        | 6.1E+02                               |
| Nickel    | 1997 | 8                       | 0                | -                                 | 8                       | 77.7-143                                 | 132            | 119.6                      | 20.9                        | 112             | 51.6                        | 4.1E+04                               |
| Selenium  | 1997 | 6                       | 0                | -                                 | 6                       | 87.4-157.6                               | 106.5          | 113.9                      | 0.7                         | 0.64            | 1.4                         | 1.0E+04                               |
| Silver    | 1997 | 6                       | 5                | 3-3                               | 1                       | 5.9-5.9                                  | 5.9            | 5.9                        | 1                           | 0.58            | 3.7                         | 1.0E+04                               |
| Vanadium  | 1997 | 6                       | 0                | -                                 | 6                       | 135.1-169.6                              | 158.6          | 157.4                      | NA                          | NA              | NA                          | 1.4E+04                               |
| Zinc      | 1997 | 8                       | 0                | -                                 | 8                       | 148-331.8                                | 299.8          | 277.8                      | 150                         | 158             | 410                         | 1.0E+05                               |

(a) Source: Long et al, 1995.

(b) Source: U.S. EPA, 2000.

NA = not available.

April 4, 2001

EXCERPTS FROM:  
DRAFT SEAPLANE LAGOON  
SITE CHARACTERIZATION MEMO

**Table 5-2. Distribution of Inorganic Chemicals in Subsurface Sediments**

| Analyte    | Year | Total Number of Samples | Total Nondetects | Range of Detection Limits (mg/kg) | Total Number of Detects | Range of Detected Concentrations (mg/kg) | Median (mg/kg) | Mean Concentration (mg/kg) | Threshold Values            |                 |                             |                                       |
|------------|------|-------------------------|------------------|-----------------------------------|-------------------------|------------------------------------------|----------------|----------------------------|-----------------------------|-----------------|-----------------------------|---------------------------------------|
|            |      |                         |                  |                                   |                         |                                          |                |                            | ER-L <sup>(a)</sup> (mg/kg) | Ambient (mg/kg) | ER-M <sup>(a)</sup> (mg/kg) | PRG Industrial <sup>(b)</sup> (mg/kg) |
| Aluminum   | 1996 | 43                      | 0                | -                                 | 43                      | 3,400-35,300                             | 6,970          | 11,390                     | NA                          | NA              | NA                          | 1.0E+05                               |
| Aluminum   | 1997 | 35                      | 0                | -                                 | 35                      | 31,050-54,120                            | 44,530         | 41,950                     | NA                          | NA              | NA                          | 1.0E+05                               |
| Antimony   | 1993 | 9                       | 0                | -                                 | 9                       | 32-53                                    | 41             | 42.11                      | 2                           | NA              | 25                          | 8.2E+02                               |
| Antimony   | 1996 | 43                      | 28               | 0.76-1.3                          | 15                      | 0.79-9.5                                 | 1.8            | 2.155                      | 2                           | NA              | 25                          | 8.2E+02                               |
| Arsenic    | 1993 | 9                       | 0                | -                                 | 9                       | 7.4-18                                   | 11             | 11.37                      | 8.2                         | 15.3            | 70                          | 2.7E+00                               |
| Arsenic    | 1996 | 43                      | 17               | 0.94-5.6                          | 26                      | 0.94-14.7                                | 5.4            | 6.108                      | 8.2                         | 15.3            | 70                          | 2.7E+00                               |
| Arsenic    | 1997 | 40                      | 34               | 36                                | 6                       | 9-39.3                                   | 12.6           | 18.12                      | 8.2                         | 15.3            | 70                          | 2.7E+00                               |
| Barium     | 1996 | 43                      | 0                | -                                 | 43                      | 12.3-149                                 | 52.1           | 56.48                      | NA                          | NA              | NA                          | 1.0E+05                               |
| Barium     | 1997 | 35                      | 0                | -                                 | 35                      | 8-209                                    | 101            | 112.1                      | NA                          | NA              | NA                          | 1.0E+05                               |
| Beryllium  | 1993 | 9                       | 6                | 0.25-0.25                         | 3                       | 0.25-0.25                                | 0.25           | 0.25                       | NA                          | NA              | NA                          | 2.2E+03                               |
| Beryllium  | 1996 | 43                      | 43               | 0.02-0.11                         | 0                       | -                                        | N/A            | N/A                        | NA                          | NA              | NA                          | 2.2E+03                               |
| Cadmium    | 1993 | 9                       | 0                | -                                 | 9                       | 0.9-1,400                                | 230            | 308.5                      | 1.2                         | 0.33            | 9.6                         | 8.1E+02                               |
| Cadmium    | 1996 | 43                      | 20               | 0.05-0.17                         | 23                      | 0.05-395                                 | 1.9            | 21.41                      | 1.2                         | 0.33            | 9.6                         | 8.1E+02                               |
| Cadmium    | 1997 | 40                      | 0                | -                                 | 40                      | 0.9-1,222                                | 66.75          | 166.8                      | 1.2                         | 0.33            | 9.6                         | 8.1E+02                               |
| Calcium    | 1996 | 43                      | 0                | -                                 | 43                      | 1,120-16,100                             | 2,740          | 3,565                      | NA                          | NA              | NA                          | NA                                    |
| Calcium    | 1997 | 35                      | 0                | -                                 | 35                      | 7,773-21,920                             | 9,743          | 10,650                     | NA                          | NA              | NA                          | NA                                    |
| Chromium   | 1993 | 9                       | 0                | -                                 | 9                       | 180-2,900                                | 880            | 1,168                      | 81                          | 112             | 370                         | 4.5E+02                               |
| Chromium   | 1996 | 43                      | 0                | -                                 | 43                      | 19.7-1,110                               | 44.2           | 88.02                      | 81                          | 112             | 370                         | 4.5E+02                               |
| Chromium   | 1997 | 40                      | 0                | -                                 | 40                      | 100-2,853                                | 478            | 639.4                      | 81                          | 112             | 370                         | 4.5E+02                               |
| Cobalt     | 1996 | 43                      | 0                | -                                 | 43                      | 4.6-25.5                                 | 7.2            | 9.912                      | NA                          | NA              | NA                          | 1.0E+05                               |
| Cobalt     | 1997 | 35                      | 0                | -                                 | 35                      | 14.4-156.9                               | 27.9           | 35.5                       | NA                          | NA              | NA                          | 1.0E+05                               |
| Copper     | 1993 | 9                       | 0                | -                                 | 9                       | 61-620                                   | 150            | 203.4                      | 34                          | 68.1            | 270                         | 7.6E+04                               |
| Copper     | 1996 | 43                      | 0                | -                                 | 43                      | 5-347                                    | 11.4           | 28.83                      | 34                          | 68.1            | 270                         | 7.6E+04                               |
| Copper     | 1997 | 40                      | 0                | -                                 | 40                      | 19-241.2                                 | 171.4          | 169.2                      | 34                          | 68.1            | 270                         | 7.6E+04                               |
| Iron       | 1996 | 43                      | 0                | -                                 | 43                      | 5,970-45,600                             | 11,300         | 17,890                     | NA                          | NA              | NA                          | 1.0E+05                               |
| Iron       | 1997 | 35                      | 0                | -                                 | 35                      | 23,340-58,200                            | 49,630         | 49,900                     | NA                          | NA              | NA                          | 1.0E+05                               |
| Lead       | 1993 | 9                       | 0                | -                                 | 9                       | 45-4,000                                 | 900            | 1,174                      | 46.7                        | 43.2            | 218                         | 7.5E+02                               |
| Lead       | 1996 | 43                      | 1                | 1.9-1.9                           | 42                      | 2.6-1,970                                | 10.55          | 68.95                      | 46.7                        | 43.2            | 218                         | 7.5E+02                               |
| Lead       | 1997 | 40                      | 0                | -                                 | 40                      | 55-1,396                                 | 596.5          | 672.4                      | 46.7                        | 43.2            | 218                         | 7.5E+02                               |
| Magnesium  | 1996 | 43                      | 0                | -                                 | 43                      | 2,090-18,100                             | 4,250          | 6,738                      | NA                          | NA              | NA                          | NA                                    |
| Magnesium  | 1997 | 35                      | 0                | -                                 | 35                      | 6,550-18,220                             | 13,230         | 13,200                     | NA                          | NA              | NA                          | NA                                    |
| Manganese  | 1996 | 43                      | 0                | -                                 | 43                      | 80.4-685                                 | 149            | 210.6                      | NA                          | NA              | NA                          | 3.2E+04                               |
| Manganese  | 1997 | 35                      | 0                | -                                 | 35                      | 341-952                                  | 424            | 447                        | NA                          | NA              | NA                          | 3.2E+04                               |
| Mercury    | 1993 | 9                       | 0                | -                                 | 9                       | 0.38-2.6                                 | 1.4            | 1.271                      | 0.15                        | 0.43            | 0.71                        | 6.1E+02                               |
| Mercury    | 1996 | 43                      | 18               | 0.02-0.24                         | 25                      | 0.03-2.4                                 | 0.34           | 0.4412                     | 0.15                        | 0.43            | 0.71                        | 6.1E+02                               |
| Mercury    | 1997 | 39                      | 0                | -                                 | 39                      | 0.3-2.6                                  | 1.8            | 1.644                      | 0.15                        | 0.43            | 0.71                        | 6.1E+02                               |
| Molybdenum | 1996 | 43                      | 41               | 0.29-0.79                         | 2                       | 0.41-6.5                                 | 3.455          | 3.455                      | NA                          | NA              | NA                          | 1.0E+04                               |

Table 5-2. Distribution of Inorganic Chemicals in Subsurface Sediments (continued)

| Analyte   | Year | Total Number<br>of Samples | Total<br>Nondetects | Range of<br>Detection Limits<br>(mg/kg) | Total Number<br>of Detects | Range of Detected<br>Concentrations<br>(mg/kg) | Median<br>(mg/kg) | Mean<br>Concentration<br>(mg/kg) | Threshold Values               |                    |                                |                                          |
|-----------|------|----------------------------|---------------------|-----------------------------------------|----------------------------|------------------------------------------------|-------------------|----------------------------------|--------------------------------|--------------------|--------------------------------|------------------------------------------|
|           |      |                            |                     |                                         |                            |                                                |                   |                                  | ER-L <sup>(a)</sup><br>(mg/kg) | Ambient<br>(mg/kg) | ER-M <sup>(a)</sup><br>(mg/kg) | PRG Industrial <sup>(b)</sup><br>(mg/kg) |
| Nickel    | 1993 | 9                          | 0                   | -                                       | 9                          | 98-170                                         | 130               | 121.9                            | 20.9                           | 112                | 51.6                           | 4.1E+04                                  |
| Nickel    | 1996 | 43                         | 0                   | -                                       | 43                         | 18.6-139                                       | 40.1              | 54.19                            | 20.9                           | 112                | 51.6                           | 4.1E+04                                  |
| Nickel    | 1997 | 40                         | 0                   | -                                       | 40                         | 73-186.3                                       | 142.5             | 139.7                            | 20.9                           | 112                | 51.6                           | 4.1E+04                                  |
| Potassium | 1996 | 43                         | 0                   | -                                       | 43                         | 687-9,890                                      | 1,660             | 2,995                            | NA                             | NA                 | NA                             | NA                                       |
| Selenium  | 1993 | 9                          | 4                   | 0.25-0.25                               | 5                          | 0.3-0.99                                       | 0.39              | 0.548                            | 0.7                            | 0.64               | 1.4                            | 1.0E+04                                  |
| Selenium  | 1996 | 43                         | 42                  | 0.74-1.9                                | 1                          | 1.6-1.6                                        | 1.6               | 1.6                              | 0.7                            | 0.64               | 1.4                            | 1.0E+04                                  |
| Selenium  | 1997 | 35                         | 0                   | -                                       | 35                         | 65-157                                         | 112               | 110.4                            | 0.7                            | 0.64               | 1.4                            | 1.0E+04                                  |
| Silver    | 1993 | 9                          | 0                   | -                                       | 9                          | 0.55-130                                       | 21                | 27.96                            | 1                              | 0.58               | 3.7                            | 1.0E+04                                  |
| Silver    | 1996 | 43                         | 35                  | 0.14-1.4                                | 8                          | 1-41.8                                         | 1.95              | 6.7                              | 1                              | 0.58               | 3.7                            | 1.0E+04                                  |
| Silver    | 1997 | 35                         | 14                  | 3                                       | 21                         | 3.6-44.6                                       | 9.2               | 13.18                            | 1                              | 0.58               | 3.7                            | 1.0E+04                                  |
| Sodium    | 1996 | 43                         | 0                   | -                                       | 43                         | 2,050-29,600                                   | 5,700             | 9,450                            | NA                             | NA                 | NA                             | NA                                       |
| Vanadium  | 1996 | 43                         | 1                   | 39.5-39.5                               | 42                         | 14.7-92.7                                      | 23.3              | 36.9                             | NA                             | NA                 | NA                             | 1.4E+04                                  |
| Vanadium  | 1997 | 35                         | 0                   | -                                       | 35                         | 83-206                                         | 165.2             | 162.3                            | NA                             | NA                 | NA                             | 1.4E+04                                  |
| Zinc      | 1993 | 9                          | 0                   | -                                       | 9                          | 200-1,400                                      | 830               | 784.4                            | 150                            | 158                | 410                            | 1.0E+05                                  |
| Zinc      | 1996 | 43                         | 2                   | 19.3-34.4                               | 41                         | 22.9-807                                       | 46.4              | 90.67                            | 150                            | 158                | 410                            | 1.0E+05                                  |
| Zinc      | 1997 | 40                         | 0                   | -                                       | 40                         | 85-1,325                                       | 412.5             | 442.2                            | 150                            | 158                | 410                            | 1.0E+05                                  |

(a) Source: Long et al, 1995.

(b) Source: U.S. EPA, 2000.

N/A = not applicable.

NA = not available.