Dry Weather Surface Water Sample PCB Congener Results
Outfall 006 Unfiltered - Incoming Tide
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 3.02 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 2.9 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 21.45 | BC129J |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 3.46 | QC137J |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 3.3 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 3.53 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | | 2.25 | U |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 38.05 | BC153J |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 3.04 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 93.1 | 3.1 | QJ |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 14.7 | 3.58 | QCJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 7.46 | 3.63 | J |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 3.58 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 136 | 3.36 | J |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 3.22 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 6.08 | 2.55 | QJ |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 47.5 | 3.59 | QJ |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 10.1 | 3.46 | QJ |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 39.9 | 2.52 | J |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 349 | 2.54 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 3.36 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 3.26 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 71.7 | 3.22 | CJ |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 2.37 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 3.22 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 2.58 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 212 | 3.04 | J |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 2.47 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 1.99 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 10.4 | 2.59 | QJ |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 2.53 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 2.73 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 2.74 | C180J |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 41.4 | 2.46 | QJ |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 9.47 | 2.69 | QJ |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 10.8 | 3.68 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | | 2.69 | U |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 37.9 | 3.66 | QCJ |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 3.66 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 2.69 | U |

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## 6/24/2005
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 2.68 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | | 2.83 | U |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 20.4 | 3.37 | QJ |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 2.76 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 1.71 | UJ |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 32.9 | 6.17 | QJ |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 5.57 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 11.5 | 5.37 | QJ |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 233 | 2.63 | J |
| | TOTAL = | 2873.81 | | |

Notes:

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

R = The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

pg/l = Picograms per liter.

Data validated by SECOR personnel

P:\Clients\Amtrak-APU\Phase 2 RI Laboratory Data\Attachments\Attachment F\[dry weather june 2005 PCB cong results validated.xls]006 unfil in validated wo B

**Dry Weather Surface Water Sample PCB Congener Results**
**Outfall 006 Filtered - Incoming Tide**
**6/24/2005**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 1.91 | U |
| 3-Chlorobiphenyl | 2 | | 2.33 | U |
| 4-Chlorobiphenyl | 3 | | 2.56 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 56 | QUBJ |
| 2,3-Dichlorobiphenyl | 5 | | 10.1 | U |
| 2,3'-Dichlorobiphenyl | 6 | 8.69 | 8.91 | QJ |
| 2,4-Dichlorobiphenyl | 7 | | 9.25 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 85 | QUBJ |
| 2,5-Dichlorobiphenyl | 9 | | 9.03 | U |
| 2,6-Dichlorobiphenyl | 10 | | 9.84 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 55.5 | QUBJ |
| 3,4-Dichlorobiphenyl | 12 | | 9.47 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 9.47 | U |
| 3,5-Dichlorobiphenyl | 14 | | 7.95 | U |
| 4,4'-Dichlorobiphenyl | 15 | 18.5 | 10.7 | QJ |
| 2,2',3-Trichlorobiphenyl | 16 | 8.79 | 5.25 | QJ |
| 2,2',4-Trichlorobiphenyl | 17 | 12.8 | 4.53 | J |
| 2,2',5-Trichlorobiphenyl | 18 | | 58 | BUJC |
| 2,2',6-Trichlorobiphenyl | 19 | 45.4 | 5.04 | J |
| 2,3,3'-Trichlorobiphenyl | 20 | | 79.5 | QUBCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 45.6 | BUCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | 7.51 | 3.81 | J |
| 2,3,5-Trichlorobiphenyl | 23 | | 3.83 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 3.35 | U |
| 2,3',4-Trichlorobiphenyl | 25 | | 3.24 | U |
| 2,3',5-Trichlorobiphenyl | 26 | 4.83 | 3.63 | QCJ |
| 2,3',6-Trichlorobiphenyl | 27 | 26.5 | 3.14 | J |
| 2,4,4'-Trichlorobiphenyl | 28 | | 79.5 | QUBC20J |
| 2,4,5-Trichlorobiphenyl | 29 | | 3.63 | BUC26J |
| 2,4,6-Trichlorobiphenyl | 30 | | 58 | BUC18J |
| 2,4',5-Trichlorobiphenyl | 31 | | 62 | QUBJ |
| 2,4',6-Trichlorobiphenyl | 32 | | 35 | QUBJ |
| 2,3',4'-Trichlorobiphenyl | 33 | | 45.6 | BUC21J |
| 2,3',5'-Trichlorobiphenyl | 34 | | 3.78 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 3.95 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 3.87 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 3.93 | U |
| 3,4,5-Trichlorobiphenyl | 38 | | 3.73 | U |
| 3,4',5-Trichlorobiphenyl | 39 | 5.43 | 3.53 | J |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 37.5 | 5.3 | CJ |

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| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 5.3 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 12 | 5.51 | QJ |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 4.93 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 80 | BUCJ |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 33.5 | 5.42 | CJ |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 13.4 | 6.7 | J |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 80 | BUC44J |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 5.46 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 43.6 | 4.28 | QCJ |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 36.5 | 5.02 | CJ |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 5.42 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 88 | QBJ |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 5.02 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 5.18 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 4.06 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 3.84 | U |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 3.84 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 3.74 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 5.81 | 3.61 | QCJ |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | | 4.09 | U |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 21 | 3.61 | CJ |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 3.61 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 3.47 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 18.2 | 3.44 | J |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 80 | BUC44J |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 25.1 | QUBJ |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 3.31 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 3.57 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 4.28 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 3.61 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 5.3 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 3.84 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 4.93 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 3.61 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 3.61 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 3.61 | C61 |
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | | 3.98 | U |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 4.16 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 3.19 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 3.55 | U |

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|---|---|---|---|---|
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 3.63 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | | 6.27 | UJ |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 47.4 | 5.34 | CJ |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 34.6 | 6.25 | J |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 10 | 4.3 | QCJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 32.4 | 4.29 | QCJ |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 4.29 | C86J |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 16.7 | 5.38 | QCJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 5.93 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | | 68 | BCJ |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 5.38 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 20.6 | 5.19 | J |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 5.09 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 5.88 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 108 | 5.21 | J |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 4.06 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 4.29 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 5.02 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | | 5.34 | C83 |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 5.09 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 68 | C90JB |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 5.02 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 4.95 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 3.68 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 11.6 | 3.24 | QJ |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 3.7 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | | 3.58 | U |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 4.29 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 3.51 | UJ |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | | 49.5 | BCJ |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 3.56 | UJ |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 3.83 | U |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 68 | BC90J |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 3.04 | U |
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 49.5 | BC110J |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 4.3 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 4.3 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 26.6 | BUJ |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 4.29 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 3.61 | U |

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| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 3.73 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 3.72 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 3.11 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 3.58 | U |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 4.29 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 3.58 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 3.34 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 9.03 | 4.64 | CJ |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 66.6 | 4.73 | QCJ |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | | 6.28 | U |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 6.36 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 31.8 | 6.16 | J |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 5.61 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | | 6.28 | U |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 62.5 | 5.65 | CJ |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 20.7 | 4.1 | J |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 5.62 | 4.62 | QCJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 4.73 | C129J |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 5.27 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 5.27 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 20.9 | 5.91 | J |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 6.19 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 6.28 | U |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | | 5.46 | U |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 4.05 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 13.5 | 5.06 | QJ |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 107 | 5.29 | CJ |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 5.6 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 5.29 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 3.91 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 5.65 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 3.88 | U |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 70 | 4.08 | CJ |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 4.6 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 3.66 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 5.92 | 4.39 | CJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 4.39 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 7.51 | 3.65 | J |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 3.97 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 4.73 | C129 |

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| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 3.87 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 3.93 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 4.73 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 4.62 | C137J |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 4.41 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 4.64 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | | 2.97 | U |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 4.08 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 3.6 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 20.4 | 4.94 | QJ |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 8.87 | 4.8 | QCJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | | 4.79 | U |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 4.8 | C171J |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 22.7 | 4.36 | QJ |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 4.26 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | | 3.14 | U |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 16.2 | 4.59 | J |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | | 4.58 | U |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 14.1 | 3.32 | J |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 43.4 | 3.57 | CJ |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 4.13 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 4.02 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 9.79 | 4.24 | QCJ |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 3.36 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 4.24 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 3.3 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 29.7 | 3.93 | J |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 3.02 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 2.86 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | | 3.28 | U |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 3.14 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 3.57 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 3.57 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | | 3.69 | U |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | | 4.04 | U |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | | 4.5 | U |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | | 3.13 | U |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 8.83 | 4.52 | QCJ |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 4.52 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 3.13 | U |

## Dry Weather Surface Water Sample PCB Congener Results
## Outfall 006 Filtered - Incoming Tide
## 6/24/2005
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 2.99 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | | 3.38 | U |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | | 4.07 | U |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 3.18 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 2.99 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | | 6.71 | U |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 4.56 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | | 4.69 | U |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 24.4 | 3.78 | J |
| | TOTAL = | 1260.73 | | |

*Notes:*

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = Not detected.

UJ = The analyte was not detected above the reported sample quanitation limit. However the reported quanitation limit is approximate and may or may not represent the actual liimit of quanitation necessary to accurately and precisely measure the analyte in the sample.

Q = Estimated maximum possible concentration.

R = The sample results are rejected due to serious deficiences in the ability to analyze the sample and meet quality control criteria.

The presence or absence of the analyte cannot be verified.

pg/l = Picograms per liter.

Data validated by SECOR personnel

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Unfiltered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 2 | U |
| 3-Chlorobiphenyl | 2 | | 1.83 | U |
| 4-Chlorobiphenyl | 3 | | 1.59 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 1215 | BJ |
| 2,3-Dichlorobiphenyl | 5 | | 19.5 | U |
| 2,3'-Dichlorobiphenyl | 6 | 9.33 | 17.9 | QJ |
| 2,4-Dichlorobiphenyl | 7 | | 18.6 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 137 | QUBJ |
| 2,5-Dichlorobiphenyl | 9 | | 18.7 | U |
| 2,6-Dichlorobiphenyl | 10 | 178 | 19.4 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | | 89.5 | QUBJ |
| 3,4-Dichlorobiphenyl | 12 | | 101.5 | QUBCJ |
| 3,4'-Dichlorobiphenyl | 13 | | 101.5 | QUBC12J |
| 3,5-Dichlorobiphenyl | 14 | | 17.9 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 88 | QBJ |
| 2,2',3-Trichlorobiphenyl | 16 | 12.8 | 5.8 | QJ |
| 2,2',4-Trichlorobiphenyl | 17 | 747 | 4.68 | |
| 2,2',5-Trichlorobiphenyl | 18 | 151 | 3.87 | CJ |
| 2,2',6-Trichlorobiphenyl | 19 | 4640 | 5.05 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 42.5 | BCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 14.9 | BCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | 44.2 | 1.86 | J |
| 2,3,5-Trichlorobiphenyl | 23 | | 1.9 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 3.39 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 147 | 1.61 | J |
| 2,3',5-Trichlorobiphenyl | 26 | 47.1 | 1.78 | CJ |
| 2,3',6-Trichlorobiphenyl | 27 | 457 | 3.3 | |
| 2,4,4'-Trichlorobiphenyl | 28 | | 42.5 | BC20J |
| 2,4,5-Trichlorobiphenyl | 29 | | 1.78 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 3.87 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 36.35 | BJ |
| 2,4',6-Trichlorobiphenyl | 32 | 834 | 3.03 | |
| 2,3',4'-Trichlorobiphenyl | 33 | | 14.9 | BC21J |
| 2,3',5'-Trichlorobiphenyl | 34 | | 1.85 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 1.83 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 1.71 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 68.9 | 1.53 | QJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 1.75 | U |
| 3,4',5-Trichlorobiphenyl | 39 | | 1.62 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 1080 | 7.53 | C |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Unfiltered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 7.53 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 141 | 8.35 | J |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 269 | 6.9 | C |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 6.79 | BC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 6810 | 7.88 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 61.6 | 9.19 | QJ |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 6.79 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 29.5 | 7.53 | J |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 4110 | 6.44 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 3840 | 7.58 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 7.88 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 7.23 | B |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 7.58 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 518 | 11.4 | QJ |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 5.68 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 426 | 5.6 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 5.59 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 5.45 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 198 | 5.49 | CJ |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 142 | 5.5 | J |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 28.6 | BCJ |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 5.49 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 15.2 | 5.22 | J |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 238 | 5.46 | J |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 6.79 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 1210 | 5.19 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 16.6 | 4.86 | J |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 46.3 | 5.05 | J |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 6.44 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 28.6 | BC21J |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 7.53 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 8.38 | 5.38 | QRJ |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 6.9 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 28.6 | BC61J |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 5.49 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 28.6 | BC61J |
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 132 | 4.85 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 5.37 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 29.4 | 4.54 | J |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 4.83 | U |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Unfiltered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 4.7 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 365 | 14.9 | QJ |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | | 15.4 | U |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 762 | 15 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 803 | 10.7 | C |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 3590 | 10.7 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 10.7 | C86J |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 793 | 13.3 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 14.4 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 14000 | 11.1 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 13.3 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 2160 | 13.5 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 1080 | 13 | C |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 62.7 | 14.2 | QJ |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | | 13 | B |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 36 | 9.9 | QJ |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 10.7 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 306 | 13.2 | QC |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 3190 | 10.6 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 13 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 11.1 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 13.2 | QC98J |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 275 | 12.2 | QJ |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | 52.2 | 9.61 | QJ |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 3130 | 6.32 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 6.5 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 514 | 5.76 | |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | 242 | 6.4 | CJ |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 10.7 | C86 |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 16100 | 9.43 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 9.07 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 10.6 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 11.1 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 72.9 | 5.17 | QJ |
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 9.43 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 10.7 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 10.7 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | 6350 | 5.38 | |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 10.7 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | 21.9 | 8.73 | QJ |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Unfiltered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 9.5 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | 53 | 6.74 | QJ |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 85.8 | 5.26 | J |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 6.4 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 10.7 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | 74.8 | 6.4 | QJ |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 5.96 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 9210 | 16.6 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | | 17.1 | BC |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 3600 | 21.6 | |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | 385 | 21.8 | |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 29300 | 21.2 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 1010 | 20 | |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 3180 | 21.8 | C |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 27000 | 30.7 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 8490 | 22.7 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 9880 | 16.3 | C |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 17.1 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 307 | 18.3 | C |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 18.3 | C139 |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 27800 | 19.4 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 21.4 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 21.8 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 3320 | 30 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 23.2 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 14600 | 17.5 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | | 17.6 | BC |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 30.5 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 17.6 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 22.2 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 30.7 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 22 | U |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | | 15 | BC |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 255 | 26.2 | QJ |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 21.3 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 4180 | 13.8 | C |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 13.8 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 9260 | 13 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 2240 | 13.7 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 15.2 | U |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Unfiltered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 14.2 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | 167 | 13.7 | J |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 17.1 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 16.3 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 15.5 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 16.6 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 2710 | 11 | |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 15 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | 165 | 13.1 | J |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 53800 | 12 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 18900 | 15.2 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 10100 | 15.4 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 15.2 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 67200 | 14.3 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 2030 | 13.7 | |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 6730 | 10.9 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 37000 | 15.3 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 9710 | 14.7 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 21200 | 10.7 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 128000 | 9.78 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | 130 | 14.3 | QJ |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | 104 | 13.9 | QJ |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 46900 | 13.7 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 10.1 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 13.7 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 11 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 67900 | 12.9 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 10.5 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 1980 | 9.56 | |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 12700 | 11 | |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 2420 | 10.8 | |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 11.6 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 11.6 | C180J |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 30800 | 8.41 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 13800 | 9.21 | |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 17600 | 12.6 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 5100 | 9.2 | C |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 33500 | 12.5 | C |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 12.5 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 9.2 | C197 |

## Dry Weather Surface Water Sample PCB Congener Results
### Outfall Railcar Avenue Unfiltered
### 6/24/2005
### Amtrak Former Fueling Facility
### 4001 Vandever Avenue
### Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 3530 | 9.18 | |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 4530 | 9.7 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 20100 | 11.5 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 9.46 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 1180 | 5.85 | J |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 4810 | 9.46 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 649 | 8.54 | |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 1600 | 8.23 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 3890 | 5.06 | |
| | TOTAL = | 865728.61 | | |

Notes:

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

R = The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

pg/l = Picograms per liter.

Data validated by SECOR personnel

P:\Clients\Amtrak-APU\Phase 2 RI Laboratory Data\Attachments\Attachment F\[dry weather june 2005 PCB cong results validated.xls]railcar unfil validated wo B

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Filtered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 2.2 | U |
| 3-Chlorobiphenyl | 2 | | 2.69 | U |
| 4-Chlorobiphenyl | 3 | | 2.96 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 56 | BJ |
| 2,3-Dichlorobiphenyl | 5 | | 12.3 | U |
| 2,3'-Dichlorobiphenyl | 6 | 7.81 | 10.9 | QJ |
| 2,4-Dichlorobiphenyl | 7 | | 11.3 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 85 | QUBJ |
| 2,5-Dichlorobiphenyl | 9 | | 11 | U |
| 2,6-Dichlorobiphenyl | 10 | 134 | 12 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | | 55.5 | QBJU |
| 3,4-Dichlorobiphenyl | 12 | | 11.6 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 11.6 | U |
| 3,5-Dichlorobiphenyl | 14 | | 9.71 | U |
| 4,4'-Dichlorobiphenyl | 15 | 22.6 | 13.3 | QJ |
| 2,2',3-Trichlorobiphenyl | 16 | | 7.79 | U |
| 2,2',4-Trichlorobiphenyl | 17 | 19.5 | 6.72 | QJ |
| 2,2',5-Trichlorobiphenyl | 18 | | 58 | BUCJ |
| 2,2',6-Trichlorobiphenyl | 19 | 3110 | 7.48 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 79.5 | BUCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 45.6 | BUCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | | 5.39 | U |
| 2,3,5-Trichlorobiphenyl | 23 | | 5.42 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 4.97 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 25.4 | 4.59 | J |
| 2,3',5-Trichlorobiphenyl | 26 | | 5.13 | U |
| 2,3',6-Trichlorobiphenyl | 27 | 186 | 4.66 | J |
| 2,4,4'-Trichlorobiphenyl | 28 | | 79.5 | BUC20J |
| 2,4,5-Trichlorobiphenyl | 29 | | 5.13 | U |
| 2,4,6-Trichlorobiphenyl | 30 | | 58 | BUC18J |
| 2,4',5-Trichlorobiphenyl | 31 | | 62 | BUJ |
| 2,4',6-Trichlorobiphenyl | 32 | | 35 | BJ |
| 2,3',4'-Trichlorobiphenyl | 33 | | 45.6 | BUC21J |
| 2,3',5'-Trichlorobiphenyl | 34 | | 5.34 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 5.59 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 5.48 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 5.56 | U |
| 3,4,5-Trichlorobiphenyl | 38 | | 5.27 | U |
| 3,4',5-Trichlorobiphenyl | 39 | | 4.99 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 123 | 8.38 | CJ |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Filtered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 8.38 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 21.9 | 8.72 | J |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 34.1 | 7.8 | CJ |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 80 | BCJ |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 817 | 8.58 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 39.7 | 10.6 | QJ |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 80 | BC44J |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 8.63 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 269 | 6.77 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 619 | 7.94 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 8.58 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 88 | BJ |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 7.94 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 384 | 7.95 | |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 6.42 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 14.3 | 6.07 | J |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 6.07 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 5.91 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 22.8 | 5.71 | CJ |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | | 6.48 | U |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 34.3 | 5.7 | CJ |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 5.71 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 5.49 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 24.7 | 5.45 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 80 | BC44J |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 25.1 | BJ |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 5.24 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 5.64 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 6.77 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 5.7 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 8.38 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 6.07 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 7.8 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 5.7 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 5.71 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 5.7 | C61 |
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | | 6.34 | U |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 6.59 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 5.04 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 5.61 | U |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Filtered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 5.7 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 38.9 | 9.63 | J |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 233 | 8.2 | C |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 80.4 | 9.59 | J |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 40.4 | 6.61 | QCJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 200 | 6.59 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 6.59 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 84.8 | 8.26 | CJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 9.1 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | | 68 | BCJ |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 8.26 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 119 | 7.98 | J |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 61 | 7.82 | CJ |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 20.6 | 9.03 | QJ |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 483 | 8.01 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 6.24 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 6.59 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 30.5 | 7.71 | QCJ |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | | 8.2 | C83 |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 7.82 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 68 | BC90J |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 7.71 | C98J |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 31.6 | 7.61 | J |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | 7.93 | 5.65 | QJ |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 61.9 | 5 | QJ |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 5.76 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 10.2 | 5.58 | CJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 6.59 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 31 | 5.47 | J |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | | 49.5 | BCJ |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 5.47 | UJ |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 5.89 | U |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 68 | BC90J |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 4.63 | U |
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 49.5 | BC110J |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 6.61 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 6.61 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 26.6 | BJ |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 6.59 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 5.55 | U |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Filtered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 5.74 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 5.8 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 4.9 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 5.58 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 6.59 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 5.69 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 5.21 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 74.7 | 7.39 | CJ |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 822 | 7.54 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 37.5 | 10 | QJ |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 10.1 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 317 | 9.82 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 16.2 | 8.95 | QJ |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 56.5 | 10 | CJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 512 | 8.69 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 176 | 6.31 | J |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 92.3 | 7.36 | CJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 7.54 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 8.4 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 8.4 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 232 | 9.42 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 9.87 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 10 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 52.8 | 8.4 | J |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 6.23 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 162 | 8.07 | J |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 1160 | 8.43 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 8.62 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 8.43 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 6.01 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 8.69 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 5.97 | U |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 792 | 6.5 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 18.4 | 7.08 | J |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 5.63 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 34.7 | 6.76 | CJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 6.76 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 67.7 | 5.81 | QJ |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 14.1 | 6.32 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 7.54 | C129 |

Dry Weather Surface Water Sample PCB Congener Results
Outfall Railcar Avenue Filtered
6/24/2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 6.17 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 6.26 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 7.54 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 7.36 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 7.03 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 7.39 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 17.6 | 4.73 | J |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 6.5 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 6.14 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 171 | 7.06 | J |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 65.8 | 6.93 | CJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 37 | 6.92 | J |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 6.93 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 252 | 6.3 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 6.14 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 31.4 | 4.54 | J |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 128 | 6.63 | J |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 57.3 | 6.61 | J |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 102 | 4.8 | J |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 406 | 5.16 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 5.97 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 5.8 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 134 | 6.11 | CJ |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 4.84 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 6.11 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 4.77 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 257 | 5.67 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 4.39 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 4.09 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 35.7 | 4.73 | QJ |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 6.95 | 4.54 | QJ |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 5.15 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 5.16 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 50.8 | 4.4 | J |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 20.1 | 4.82 | QJ |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 31.8 | 5.29 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 10 | 3.67 | CJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 57.9 | 5.32 | CJ |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 5.32 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 3.67 | C197 |

## Dry Weather Surface Water Sample PCB Congener Results
## Outfall Railcar Avenue Filtered
## 6/24/2005
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/l) | Detection Limit (pg/l) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 3.52 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | | 3.98 | U |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 30.8 | 4.78 | QJ |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 3.74 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 3.57 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | | 7.59 | U |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 5.06 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | | 5.13 | U |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | | 3.61 | U |
| | TOTAL = | 13984.39 | | |

Notes:

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = Not detected.

UJ = The analyte was not detected above the reported sample quanitation limit. However the reported quanitation limit is approximate and may or may not represent the actual liimit of quanitation necessary to accurately and precisely measure the analyte in the sample.

Q = Estimated maximum possible concentration.

R = The sample results are rejected due to serious deficiences in the ability to analyze the sample and meet quality control criteria.

The presence or absence of the analyte cannot be verified.

pg/l = Picograms per liter.

Data validated by SECOR personnel

P:\Clients\Amtrak-APU\Phase 2 RI Laboratory Data\Attachments\Attachment F\[dry weather june 2005 PCB cong results validated.xls]rail fil validated wo B

# Appendix P

## Off-Site Sediment Sample PCB Congener and Grain-Size Results

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-1**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | 214000 | 51100 | QJ |
| 3-Chlorobiphenyl | 2 | | 46700 | U |
| 4-Chlorobiphenyl | 3 | 214000 | 40600 | QJ |
| 2,2'-Dichlorobiphenyl | 4 | 935000 | 583000 | QJ |
| 2,3-Dichlorobiphenyl | 5 | 321000 | 364000 | QJ |
| 2,3'-Dichlorobiphenyl | 6 | 1390000 | 334000 | QJ |
| 2,4-Dichlorobiphenyl | 7 | | 349000 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 334000 | QB |
| 2,5-Dichlorobiphenyl | 9 | | 350000 | U |
| 2,6-Dichlorobiphenyl | 10 | | 362000 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 349000 | U |
| 3,4-Dichlorobiphenyl | 12 | | 338000 | QBCJ |
| 3,4'-Dichlorobiphenyl | 13 | | 338000 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 334000 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 269000 | QBJ |
| 2,2',3-Trichlorobiphenyl | 16 | 3740000 | 251000 | |
| 2,2',4-Trichlorobiphenyl | 17 | 6960000 | 203000 | |
| 2,2',5-Trichlorobiphenyl | 18 | 10200000 | 168000 | C |
| 2,2',6-Trichlorobiphenyl | 19 | 583000 | 219000 | QJ |
| 2,3,3'-Trichlorobiphenyl | 20 | | 74200 | BC |
| 2,3,4-Trichlorobiphenyl | 21 | | 76800 | BC |
| 2,3,4'-Trichlorobiphenyl | 22 | 3930000 | 80500 | |
| 2,3,5-Trichlorobiphenyl | 23 | | 82400 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 147000 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 3560000 | 69900 | |
| 2,3',5-Trichlorobiphenyl | 26 | 5250000 | 77000 | C |
| 2,3',6-Trichlorobiphenyl | 27 | 859000 | 143000 | QJ |
| 2,4,4'-Trichlorobiphenyl | 28 | | 74200 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 77000 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 168000 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 75700 | B |
| 2,4',6-Trichlorobiphenyl | 32 | 3630000 | 131000 | |
| 2,3',4'-Trichlorobiphenyl | 33 | | 76800 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | 230000 | 80100 | QJ |
| 3,3',4-Trichlorobiphenyl | 35 | 330000 | 79500 | J |
| 3,3',5-Trichlorobiphenyl | 36 | | 74200 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 3060000 | 66200 | |
| 3,4,5-Trichlorobiphenyl | 38 | | 76100 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BC SED-1
11/3/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | 293000 | 70400 | QJ |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 13100000 | 154000 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 154000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 9070000 | 170000 | |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 750000 | 141000 | QCJ |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 139000 | BC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 5160000 | 161000 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 1410000 | 187000 | QJ |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 139000 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 4730000 | 154000 | Q |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 24400000 | 131000 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 3910000 | 155000 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 161000 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 38600000 | 148000 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 155000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 233000 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 116000 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 9660000 | 114000 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | 158000 | 114000 | QJ |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | 137000 | 111000 | QJ |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 2370000 | 112000 | QC |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 783000 | 112000 | QJ |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 40300000 | 108000 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 112000 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 1110000 | 107000 | J |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 11300000 | 111000 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 139000 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 25300000 | 106000 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 988000 | 99200 | J |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 546000 | 103000 | J |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 131000 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 108000 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 154000 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 998000 | 110000 | J |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 141000 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 108000 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 112000 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 108000 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-1**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 1620000 | 99000 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 110000 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 751000 | 92600 | J |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 98600 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 101000 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 2550000 | 241000 | Q |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 2470000 | 250000 | |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 10300000 | 244000 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 4270000 | 173000 | QC |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 19000000 | 173000 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 173000 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 7610000 | 215000 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 233000 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 49300000 | 180000 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 215000 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 12000000 | 219000 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 731000 | 211000 | QCJ |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 230000 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 37200000 | 211000 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 424000 | 160000 | QJ |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 173000 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 1830000 | 215000 | CJ |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 21000000 | 172000 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 211000 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 180000 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 215000 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 1860000 | 197000 | J |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 156000 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 5550000 | 98000 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 105000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 803000 | 104000 | QCJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 173000 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 2990000 | 93300 | |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 44200000 | 153000 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 147000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 172000 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 180000 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 296000 | 84400 | QJ |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-1**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 153000 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 173000 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 173000 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 83000 | B |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 173000 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | 633000 | 141000 | J |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 154000 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 109000 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 330000 | 81400 | J |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 104000 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 173000 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | 116000 | 120000 | QJ |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 96600 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 6180000 | 165000 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 55900000 | 169000 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 4180000 | 214000 | |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | 663000 | 216000 | J |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 19700000 | 210000 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 1870000 | 198000 | J |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 3110000 | 216000 | C |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 30800000 | 304000 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 10100000 | 225000 | Q |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 5750000 | 161000 | QC |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 169000 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 1130000 | 181000 | CJ |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 181000 | C139 |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 10700000 | 192000 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 212000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 216000 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 2820000 | 297000 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 230000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 14700000 | 174000 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 55600000 | 174000 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | 607000 | 302000 | J |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 174000 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | 456000 | 220000 | J |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 304000 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 218000 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BC SED-1
11/3/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 60800000 | 148000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 3270000 | 260000 | |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 211000 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 3670000 | 138000 | C |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 138000 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 4880000 | 129000 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 951000 | 135000 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 151000 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 141000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 135000 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 169000 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 161000 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 154000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 165000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 1720000 | 102000 | J |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 148000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 140000 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 15400000 | 159000 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 6380000 | 184000 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 3720000 | 186000 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 184000 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 21800000 | 172000 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 874000 | 165000 | J |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 3430000 | 131000 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 13400000 | 184000 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 5450000 | 177000 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 10800000 | 129000 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 37100000 | 125000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 172000 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 167000 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 14500000 | 165000 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 122000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 165000 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 132000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 28500000 | 156000 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 127000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 772000 | 105000 | J |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 3790000 | 133000 | |

## Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
## BC SED-1
## 11/3/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 734000 | 130000 | QJ |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 140000 | UJ |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 140000 | J |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 10100000 | 158000 | J |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 3880000 | 173000 | J |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 6370000 | 237000 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 2220000 | 173000 | QCJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 17100000 | 235000 | CJ |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 235000 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 173000 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 2030000 | 172000 | J |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 4160000 | 182000 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 7800000 | 217000 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 178000 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 271000 | 110000 | QJ |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 9070000 | 150000 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 804000 | 135000 | J |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 4110000 | 130000 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 48600000 | 177000 | |

**TOTAL CONGENER RESULTS = 1,051,035,000.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-2**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 67200 | U |
| 3-Chlorobiphenyl | 2 | | 61400 | U |
| 4-Chlorobiphenyl | 3 | | 53300 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 967000 | U |
| 2,3-Dichlorobiphenyl | 5 | | 603000 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 554000 | U |
| 2,4-Dichlorobiphenyl | 7 | | 578000 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 554000 | U |
| 2,5-Dichlorobiphenyl | 9 | | 581000 | U |
| 2,6-Dichlorobiphenyl | 10 | | 601000 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 580000 | U |
| 3,4-Dichlorobiphenyl | 12 | | 560000 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 560000 | U |
| 3,5-Dichlorobiphenyl | 14 | | 554000 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 447000 | U |
| 2,2',3-Trichlorobiphenyl | 16 | | 380000 | U |
| 2,2',4-Trichlorobiphenyl | 17 | | 306000 | U |
| 2,2',5-Trichlorobiphenyl | 18 | | 253000 | U |
| 2,2',6-Trichlorobiphenyl | 19 | | 331000 | U |
| 2,3,3'-Trichlorobiphenyl | 20 | | 112000 | BCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 116000 | U |
| 2,3,4'-Trichlorobiphenyl | 22 | | 122000 | U |
| 2,3,5-Trichlorobiphenyl | 23 | | 125000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 222000 | U |
| 2,3',4-Trichlorobiphenyl | 25 | | 106000 | U |
| 2,3',5-Trichlorobiphenyl | 26 | | 116000 | U |
| 2,3',6-Trichlorobiphenyl | 27 | | 216000 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 112000 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 116000 | U |
| 2,4,6-Trichlorobiphenyl | 30 | | 253000 | U |
| 2,4',5-Trichlorobiphenyl | 31 | | 114000 | QBJ |
| 2,4',6-Trichlorobiphenyl | 32 | | 199000 | U |
| 2,3',4'-Trichlorobiphenyl | 33 | | 116000 | U |
| 2,3',5'-Trichlorobiphenyl | 34 | | 121000 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 120000 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 112000 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 100000 | U |
| 3,4,5-Trichlorobiphenyl | 38 | | 115000 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-2**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 106000 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 740000 | 207000 | QCJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 207000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 473000 | 229000 | QJ |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 189000 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 186000 | QBC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | | 216000 | U |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | | 252000 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 186000 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 207000 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 2150000 | 177000 | QCJ |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | | 208000 | U |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 216000 | U |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 5330000 | 198000 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 208000 | U |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 313000 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 156000 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 154000 | J |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 153000 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 150000 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | | 151000 | U |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | | 151000 | U |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 5110000 | 145000 | QC |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 151000 | U |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 143000 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 603000 | 150000 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 186000 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 2780000 | 142000 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 133000 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 139000 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 177000 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 145000 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 207000 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 148000 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 189000 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 145000 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 151000 | U |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 145000 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-2**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | | 133000 | U |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 147000 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 125000 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 133000 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 130000 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | | 281000 | U |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | | 291000 | U |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 2730000 | 284000 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 1300000 | 201000 | QCJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 6210000 | 202000 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 202000 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 1490000 | 250000 | QCJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 271000 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 12300000 | 210000 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 250000 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 2300000 | 255000 | Q |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 246000 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 268000 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 9230000 | 246000 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 187000 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 202000 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 250000 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 5870000 | 200000 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 246000 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 210000 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 250000 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 230000 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 182000 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 2520000 | 113000 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 123000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | | 121000 | U |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 202000 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 825000 | 109000 | QJ |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 12500000 | 178000 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 171000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 200000 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 210000 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 93400 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-2**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 178000 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 201000 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 201000 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 90800 | QB |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 202000 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 165000 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 179000 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 127000 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 109000 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 121000 | U |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 202000 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 140000 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 113000 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 2100000 | 217000 | QCJ |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 17100000 | 222000 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 1110000 | 282000 | J |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 284000 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 5740000 | 277000 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 350000 | 261000 | QJ |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 663000 | 284000 | QCJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 9020000 | 400000 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 3060000 | 297000 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 1870000 | 212000 | QCJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 222000 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 238000 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 238000 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 3440000 | 253000 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 280000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 284000 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 1160000 | 391000 | QJ |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 303000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 3390000 | 229000 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 15800000 | 230000 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 398000 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 230000 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 290000 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 400000 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 287000 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BC SED-2
11/3/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 18500000 | 195000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 454000 | 342000 | QJ |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 278000 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 1420000 | 179000 | CJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 179000 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 1450000 | 170000 | J |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 178000 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 199000 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 185000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 178000 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 222000 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 212000 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 203000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 217000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 539000 | 144000 | QJ |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 195000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 173000 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 3790000 | 182000 | Q |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 1760000 | 253000 | QCJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 1100000 | 257000 | QJ |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 253000 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 8410000 | 238000 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 228000 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 628000 | 181000 | QJ |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 3450000 | 254000 | Q |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 1600000 | 245000 | QJ |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 4230000 | 178000 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 13400000 | 172000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 237000 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 230000 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 6890000 | 228000 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 168000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 228000 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 183000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 13800000 | 215000 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 175000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 162000 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 1410000 | 183000 | J |

## Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
## BC SED-2
## 11/3/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 179000 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 193000 | UJ |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 194000 | J |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 6500000 | 202000 | J |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 1890000 | 221000 | QJ |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 5260000 | 303000 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 1050000 | 221000 | QCJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 16700000 | 301000 | J |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 301000 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 221000 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 2440000 | 220000 | J |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 6080000 | 233000 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 8760000 | 277000 | Q |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 227000 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 141000 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 13300000 | 141000 | Q |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 3020000 | 127000 | |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 10500000 | 123000 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 44600000 | 228000 | |

**TOTAL CONGENER RESULTS = 342,195,000.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

*Analytical data validated by SECOR personnel*

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-3**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | 20900 | 700 | QJ |
| 3-Chlorobiphenyl | 2 | | 600 | U |
| 4-Chlorobiphenyl | 3 | 8470 | 600 | J |
| 2,2'-Dichlorobiphenyl | 4 | 125000 | 10700 | Q |
| 2,3-Dichlorobiphenyl | 5 | | 6700 | U |
| 2,3'-Dichlorobiphenyl | 6 | 46100 | 6100 | Q |
| 2,4-Dichlorobiphenyl | 7 | 9570 | 6400 | QJ |
| 2,4'-Dichlorobiphenyl | 8 | | 6100 | QB |
| 2,5-Dichlorobiphenyl | 9 | 13100 | 6400 | QJ |
| 2,6-Dichlorobiphenyl | 10 | 7620 | 6600 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | | 6400 | QBJ |
| 3,4-Dichlorobiphenyl | 12 | | 6200 | QBC |
| 3,4'-Dichlorobiphenyl | 13 | | 6200 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 6100 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 4900 | B |
| 2,2',3-Trichlorobiphenyl | 16 | 45100 | 6300 | Q |
| 2,2',4-Trichlorobiphenyl | 17 | 172000 | 5100 | |
| 2,2',5-Trichlorobiphenyl | 18 | 220000 | 4200 | C |
| 2,2',6-Trichlorobiphenyl | 19 | 58200 | 5500 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 1800 | BC |
| 2,3,4-Trichlorobiphenyl | 21 | | 1900 | BC |
| 2,3,4'-Trichlorobiphenyl | 22 | 54800 | 2000 | |
| 2,3,5-Trichlorobiphenyl | 23 | | 2000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 3700 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 114000 | 1700 | |
| 2,3',5-Trichlorobiphenyl | 26 | 191000 | 1900 | C |
| 2,3',6-Trichlorobiphenyl | 27 | 80500 | 3600 | |
| 2,4,4'-Trichlorobiphenyl | 28 | | 1800 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 1900 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 4200 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 1900 | B |
| 2,4',6-Trichlorobiphenyl | 32 | 163000 | 3300 | Q |
| 2,3',4'-Trichlorobiphenyl | 33 | | 1900 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 2000 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 2000 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 1800 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 43200 | 1600 | |
| 3,4,5-Trichlorobiphenyl | 38 | | 1900 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-3**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | 4010 | 1700 | QJ |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 329000 | 3300 | QC |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 3300 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 121000 | 3700 | Q |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 19400 | 3000 | QCJ |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 3000 | BC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 173000 | 3500 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 55000 | 4100 | |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 3000 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 36000 | 3300 | Q |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 551000 | 2800 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 165000 | 3300 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 3500 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 730000 | 3200 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 3300 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 5000 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 2500 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 90800 | 2500 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | 5540 | 2400 | QJ |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | 2090 | 2400 | QJ |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 39500 | 2400 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 35400 | 2400 | |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 357000 | 2300 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 2400 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 20000 | 2300 | QJ |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 124000 | 2400 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 3000 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 216000 | 2300 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 13500 | 2100 | QJ |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 10500 | 2200 | J |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 2800 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 2300 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 3300 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 12500 | 2400 | QJ |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 3000 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 2300 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 2400 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 2300 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-3**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 26900 | 2100 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 2400 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 5350 | 2000 | QJ |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 2100 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 2200 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 69900 | 4300 | |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 46200 | 4500 | Q |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 209000 | 4400 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 101000 | 3100 | QC |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 327000 | 3100 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 3100 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 151000 | 3900 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | 10700 | 4200 | J |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 559000 | 3200 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 3900 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 159000 | 3900 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 25300 | 3800 | CJ |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 4100 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 485000 | 3800 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 12900 | 2900 | J |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 3100 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 48800 | 3900 | C |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 267000 | 3100 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 3800 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 3200 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 3900 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 14400 | 3600 | J |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 2800 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 219000 | 1700 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 1900 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 18200 | 1800 | CJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 3100 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 48500 | 1700 | |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 694000 | 2700 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 2600 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 3100 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 3200 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 11700 | 1500 | QJ |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-3**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 2700 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 3100 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 3100 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 1500 | B |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 3100 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 2500 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 2800 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | 9670 | 1900 | QJ |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 9030 | 1500 | QJ |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 1800 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 3100 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | 4990 | 2000 | QJ |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 1700 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 125000 | 3000 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 869000 | 3100 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 54100 | 4000 | |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 4000 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 273000 | 3900 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 15300 | 3700 | J |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 53400 | 4000 | C |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 339000 | 5700 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 124000 | 4200 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 91400 | 3000 | QC |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 3100 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 12900 | 3400 | QCJ |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 3400 | C139 |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 172000 | 3600 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 3900 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 4000 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 41400 | 5500 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 4300 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 133000 | 3200 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 652000 | 3200 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 5600 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 3200 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 4100 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 5700 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 4000 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-3**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 646000 | 2700 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 20500 | 4800 | QJ |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 3900 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 81800 | 2400 | C |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 2400 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 85300 | 2400 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 11400 | 2500 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 2800 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 2600 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 2500 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 3100 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 3000 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 2800 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 3000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 30100 | 2000 | J |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 2700 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 2500 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 185000 | 2300 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 66100 | 2900 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 48000 | 2900 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 2900 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 232000 | 2700 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 7740 | 2600 | QJ |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 26200 | 2000 | J |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 145000 | 2900 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 48000 | 2800 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 106000 | 2000 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 455000 | 2000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 2700 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 2600 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 158000 | 2600 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 1900 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 2600 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 2000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 306000 | 2400 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 1900 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 7830 | 1600 | QJ |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 51100 | 2000 | Q |

## Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
## BC SED-3
## 11/3/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 7890 | 2000 | QJ |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 2200 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 2200 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 154000 | 2800 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 52400 | 3000 | Q |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 85400 | 4200 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 27200 | 3000 | CJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 202000 | 4100 | C |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 4100 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 3000 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 16300 | 3000 | QJ |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 32100 | 3200 | J |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 92900 | 3800 | Q |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 3100 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 4580 | 1900 | QJ |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 44400 | 1400 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 5730 | 1300 | QJ |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 10700 | 1200 | QJ |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 34700 | 1300 | |

**TOTAL CONGENER RESULTS = 14,459,210.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-4**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 1000 | U |
| 3-Chlorobiphenyl | 2 | | 900 | U |
| 4-Chlorobiphenyl | 3 | | 800 | U |
| 2,2'-Dichlorobiphenyl | 4 | 25600 | 15900 | QJ |
| 2,3-Dichlorobiphenyl | 5 | | 9900 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 9100 | U |
| 2,4-Dichlorobiphenyl | 7 | | 9500 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 10000 | QJB |
| 2,5-Dichlorobiphenyl | 9 | | 9500 | U |
| 2,6-Dichlorobiphenyl | 10 | | 9800 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 9500 | U |
| 3,4-Dichlorobiphenyl | 12 | | 9200 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 9200 | U |
| 3,5-Dichlorobiphenyl | 14 | | 9100 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 10000 | QBJ |
| 2,2',3-Trichlorobiphenyl | 16 | | 7100 | U |
| 2,2',4-Trichlorobiphenyl | 17 | 22000 | 5700 | QJ |
| 2,2',5-Trichlorobiphenyl | 18 | 29000 | 4700 | QCJ |
| 2,2',6-Trichlorobiphenyl | 19 | 11500 | 6200 | QJ |
| 2,3,3'-Trichlorobiphenyl | 20 | | 20000 | CJB |
| 2,3,4-Trichlorobiphenyl | 21 | | 2100 | BCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | 27000 | 2200 | J |
| 2,3,5-Trichlorobiphenyl | 23 | | 2300 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 4100 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 9390 | 1900 | J |
| 2,3',5-Trichlorobiphenyl | 26 | 13200 | 2200 | CJ |
| 2,3',6-Trichlorobiphenyl | 27 | | 4000 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 20000 | C20JB |
| 2,4,5-Trichlorobiphenyl | 29 | | 2200 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 4700 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 10000 | JB |
| 2,4',6-Trichlorobiphenyl | 32 | 19000 | 3700 | J |
| 2,3',4'-Trichlorobiphenyl | 33 | | 10000 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 2200 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 2200 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 2100 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 31600 | 1800 | J |
| 3,4,5-Trichlorobiphenyl | 38 | | 2100 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-4**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 2000 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 24500 | 3600 | CJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 3600 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 12700 | 4000 | QJ |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 3300 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 20000 | QCJB |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | | 3800 | U |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | | 4400 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 20000 | QC44JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 3600 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 35000 | 3100 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 10200 | 3600 | QCJ |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 3800 | U |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 53600 | 3500 | Q |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 3600 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 5500 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 2700 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 20600 | 2700 | QJ |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 2700 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 2600 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | | 2600 | U |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 13900 | 2600 | QJ |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 92000 | 2500 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 2600 | U |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 2500 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 22500 | 2600 | J |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 20000 | QC44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 59400 | 2500 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 2300 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 2400 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 3100 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 2500 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 3600 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 2600 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 3300 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 2500 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 2600 | U |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 2500 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-4**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 9210 | 2300 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 2600 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 2200 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 2300 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 2200 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 11100 | 4900 | QJ |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 7380 | 5100 | J |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 23900 | 4900 | QJ |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 13400 | 3500 | QCJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 46600 | 3500 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 3500 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 14400 | 4300 | QCJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 4700 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 95500 | 3600 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 4300 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 15200 | 4400 | J |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 4300 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 4700 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 70100 | 4300 | Q |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 3200 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 3500 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 4300 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 34800 | 3500 | QC |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 4300 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 3600 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 4300 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 4000 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 3100 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 49200 | 1900 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 2100 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | | 2100 | U |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 3500 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 8950 | 1900 | QJ |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 147000 | 3100 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 3000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 3500 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 3600 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 1600 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-4**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 3100 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 3500 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 3500 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 10000 | JB |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 3500 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 2800 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 3100 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 2200 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 1800 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 2100 | U |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 3500 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 2100 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 1900 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 30000 | 3600 | QCJ |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 184000 | 3700 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 10800 | 4700 | QJ |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 4700 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 48500 | 4600 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 4300 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 12000 | 4700 | CJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 56400 | 6600 | QC |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 18800 | 4900 | J |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 19100 | 3500 | QCJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 3700 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 3900 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 3900 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 29400 | 4200 | J |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 4600 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 4700 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | | 6500 | U |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 5000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 21000 | 3800 | QJ |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 109000 | 3800 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 6600 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 3800 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 4800 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 6600 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 4700 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-4**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 136000 | 3200 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 5700 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 4600 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 18800 | 2800 | CJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 2800 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 13700 | 2800 | QJ |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 2900 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 3300 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 3000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 2900 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 3700 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 3500 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 3300 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 3600 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 8750 | 2400 | J |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 3200 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 2900 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 27800 | 3400 | QJ |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 10400 | 4100 | QCJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 6720 | 4200 | QJ |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 4100 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 42800 | 3900 | Q |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 3700 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | | 2900 | U |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 30100 | 4100 | J |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | | 4000 | U |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 22400 | 2900 | J |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 95500 | 2900 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 3900 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 3700 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 30600 | 3700 | CJ |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 2700 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 3700 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 3000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 54700 | 3500 | Q |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 2800 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 2300 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | | 3000 | U |

## Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
## BC SED-4
## 11/3/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 2900 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 3100 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 3100 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 29400 | 3400 | QJ |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 6990 | 3700 | QJ |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 16400 | 5100 | QJ |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | | 3700 | U |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 50500 | 5100 | QC |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 5100 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 3700 | U |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 3700 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 7520 | 3900 | QJ |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 28100 | 4700 | QJ |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 3800 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 2300 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 13200 | 2200 | J |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 2400 | 2000 | QJ |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | | 1900 | U |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 15000 | 1800 | QJ |
| **TOTAL CONGENER RESULTS =** | | **2,286,210.00** | | |

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = *Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).*

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BC SED-5
11/3/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 1200 | U |
| 3-Chlorobiphenyl | 2 | | 1100 | U |
| 4-Chlorobiphenyl | 3 | | 900 | U |
| 2,2'-Dichlorobiphenyl | 4 | 77600 | 20300 | Q |
| 2,3-Dichlorobiphenyl | 5 | 11300 | 12700 | QJ |
| 2,3'-Dichlorobiphenyl | 6 | 33900 | 11600 | Q |
| 2,4-Dichlorobiphenyl | 7 | | 12100 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 10000 | QJB |
| 2,5-Dichlorobiphenyl | 9 | 19400 | 12200 | QJ |
| 2,6-Dichlorobiphenyl | 10 | | 12600 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 12200 | U |
| 3,4-Dichlorobiphenyl | 12 | | 27000 | UBJ |
| 3,4'-Dichlorobiphenyl | 13 | | 27000 | UBJ |
| 3,5-Dichlorobiphenyl | 14 | | 11600 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 10000 | QJB |
| 2,2',3-Trichlorobiphenyl | 16 | 213000 | 10100 | Q |
| 2,2',4-Trichlorobiphenyl | 17 | 216000 | 8100 | |
| 2,2',5-Trichlorobiphenyl | 18 | 414000 | 6700 | C |
| 2,2',6-Trichlorobiphenyl | 19 | 46400 | 8700 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 20000 | CBJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 10000 | CBJ |
| 2,3,4'-Trichlorobiphenyl | 22 | 238000 | 3200 | |
| 2,3,5-Trichlorobiphenyl | 23 | | 3300 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 5800 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 44000 | 2800 | |
| 2,3',5-Trichlorobiphenyl | 26 | 105000 | 3000 | C |
| 2,3',6-Trichlorobiphenyl | 27 | 38000 | 5700 | Q |
| 2,4,4'-Trichlorobiphenyl | 28 | | 20000 | C20JB |
| 2,4,5-Trichlorobiphenyl | 29 | | 3000 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 6700 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | 538000 | 10000 | JB |
| 2,4',6-Trichlorobiphenyl | 32 | 142000 | 5200 | |
| 2,3',4'-Trichlorobiphenyl | 33 | | 10000 | C21JB |
| 2,3',5'-Trichlorobiphenyl | 34 | | 3200 | U |
| 3,3',4-Trichlorobiphenyl | 35 | 6250 | 3100 | QJ |
| 3,3',5-Trichlorobiphenyl | 36 | | 2900 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 191000 | 2600 | |
| 3,4,5-Trichlorobiphenyl | 38 | | 3000 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BC SED-5
11/3/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | 7640 | 2800 | QJ |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 316000 | 4900 | QC |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 4900 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 160000 | 5500 | |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 15500 | 4500 | QCJ |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | 463000 | 20000 | CJB |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 104000 | 5200 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 37300 | 6000 | |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 20000 | C44JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 140000 | 4900 | |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 286000 | 4200 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 77400 | 5000 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 5200 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 429000 | 4700 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 5000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 7500 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | 22600 | 3700 | QJ |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 365000 | 3700 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | 4030 | 3700 | QJ |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 3600 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 59100 | 3600 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 241000 | 3600 | |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 1040000 | 3400 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 3600 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 27900 | 3400 | J |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 238000 | 3600 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 20000 | C44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 610000 | 3400 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 26700 | 3200 | J |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 3300 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 4200 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 3400 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 4900 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 3500 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 4500 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 3400 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 3600 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 3400 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-5**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 91700 | 3200 | |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 3500 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 3000 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 3200 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 3300 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 49800 | 6600 | Q |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 14400 | 6800 | QJ |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 97700 | 6700 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 68600 | 4700 | QC |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 219000 | 4700 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 4700 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 56700 | 5900 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | 9440 | 6400 | QJ |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 313000 | 4900 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 5900 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 63200 | 6000 | Q |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 5800 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 6300 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 221000 | 5800 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 4400 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 4700 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 5900 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 150000 | 4700 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 5800 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 4900 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 5900 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 5400 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 4200 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 190000 | 2700 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 2900 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 12400 | 2800 | QCJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 4700 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 22800 | 2500 | J |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 410000 | 4200 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 4000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 4700 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 4900 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 8040 | 2200 | QJ |

*Brandywine Creek Tidal Area Sediment Sample PCB Congener Results*
**BC SED-5**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 4200 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 4700 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 4700 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 10000 | JB |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 4700 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 3800 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 4200 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 3000 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 8990 | 2300 | QJ |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 2800 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 4700 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 3200 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 2600 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 64400 | 4400 | QC |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 527000 | 4500 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 25500 | 5800 | J |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 5800 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 110000 | 5700 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 5300 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 17300 | 5800 | QCJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 215000 | 8200 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 47200 | 6100 | Q |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 44800 | 4300 | QC |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 4500 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 4900 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 4900 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 127000 | 5200 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 5700 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 5800 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 36300 | 8000 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 6200 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 66700 | 4700 | Q |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 360000 | 4700 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 8200 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 4700 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 5900 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 8200 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 5900 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-5**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 526000 | 4000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 7000 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 5700 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 44100 | 3400 | QC |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 3400 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 50400 | 3500 | Q |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 20400 | 3600 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 4000 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 3800 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 3600 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 4500 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 4300 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 4100 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 4400 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 14900 | 3000 | QJ |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 4000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 3800 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 277000 | 4600 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 125000 | 6100 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 79500 | 6200 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 6100 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 448000 | 5700 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 21000 | 5500 | J |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 57000 | 4300 | Q |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 239000 | 6100 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 105000 | 5900 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 140000 | 4300 | Q |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 1150000 | 4200 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 5700 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 5500 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 429000 | 5500 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 4000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 5500 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 4400 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 699000 | 5200 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 4200 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 10700 | 3700 | QJ |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 123000 | 4400 | |

## Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
## BC SED-5
## 11/3/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 24700 | 4300 | QJ |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 4600 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 4700 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 752000 | 4700 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 245000 | 5100 | |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 599000 | 7100 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 188000 | 5100 | C |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 1180000 | 7000 | C |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 7000 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 5100 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 142000 | 5100 | Q |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 181000 | 5400 | Q |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 862000 | 6400 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 5300 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 43400 | 3300 | |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 392000 | 2200 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 75300 | 2000 | |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 117000 | 1900 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 37600 | 2800 | Q |

**TOTAL CONGENER RESULTS = 20,049,990.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

*Analytical data validated by SECOR personnel*

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-6**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 800 | U |
| 3-Chlorobiphenyl | 2 | | 700 | U |
| 4-Chlorobiphenyl | 3 | | 600 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 19700 | U |
| 2,3-Dichlorobiphenyl | 5 | | 12300 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 11300 | U |
| 2,4-Dichlorobiphenyl | 7 | | 11800 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 11300 | U |
| 2,5-Dichlorobiphenyl | 9 | | 11900 | U |
| 2,6-Dichlorobiphenyl | 10 | | 12300 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 11800 | U |
| 3,4-Dichlorobiphenyl | 12 | | 11400 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 11400 | U |
| 3,5-Dichlorobiphenyl | 14 | | 11300 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 10000 | QBJ |
| 2,2',3-Trichlorobiphenyl | 16 | | 7500 | U |
| 2,2',4-Trichlorobiphenyl | 17 | 14000 | 6100 | QJ |
| 2,2',5-Trichlorobiphenyl | 18 | 18100 | 5000 | QCJ |
| 2,2',6-Trichlorobiphenyl | 19 | | 6500 | U |
| 2,3,3'-Trichlorobiphenyl | 20 | | 20000 | QJB |
| 2,3,4-Trichlorobiphenyl | 21 | | 10000 | BCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | 13700 | 2400 | QJ |
| 2,3,5-Trichlorobiphenyl | 23 | | 2400 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 4400 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 6230 | 2100 | QJ |
| 2,3',5-Trichlorobiphenyl | 26 | 7840 | 2300 | QCJ |
| 2,3',6-Trichlorobiphenyl | 27 | | 4300 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 20000 | C20JB |
| 2,4,5-Trichlorobiphenyl | 29 | | 2300 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 5000 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 10000 | QJB |
| 2,4',6-Trichlorobiphenyl | 32 | | 3900 | U |
| 2,3',4'-Trichlorobiphenyl | 33 | | 10000 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 2400 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 2300 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 2200 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 15800 | 1900 | QJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 2200 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-6**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 2100 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 20900 | 4100 | QCJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 4100 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 11600 | 4600 | J |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 3800 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 20000 | CJB |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | | 4300 | U |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | | 5000 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 20000 | C44JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 4100 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 33300 | 3500 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 14100 | 4100 | QCJ |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 4300 | U |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 81200 | 3900 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 4100 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 6300 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 3100 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 33300 | 3000 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 3000 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 3000 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | | 3000 | U |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 12000 | 3000 | J |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 98600 | 2900 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 3000 | U |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 2800 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 23700 | 3000 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 20000 | C44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 52600 | 2800 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 2600 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 2700 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 3500 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 2900 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 4100 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 2900 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 3800 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 2900 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 3000 | U |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 2900 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-6**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 8560 | 2600 | QJ |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 2900 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 2500 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 2600 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 2500 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 22400 | 6500 | J |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 11000 | 6800 | QJ |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 62200 | 6600 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 26300 | 4700 | QCJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 124000 | 4700 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 4700 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 21100 | 5800 | QCJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 6300 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 190000 | 4900 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 5800 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 37900 | 5900 | Q |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 5700 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 6200 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 182000 | 5700 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 4300 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 4700 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 5800 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 91600 | 4600 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 5700 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 4900 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 5800 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 5400 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 4200 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 67900 | 2600 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 2800 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 8360 | 2800 | CJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 4700 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 12300 | 2500 | J |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 293000 | 4100 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 4000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 4600 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 4900 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 2200 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-6**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 4100 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 4700 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 4700 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 10000 | JB |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 4700 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 3800 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 4200 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 2900 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 2200 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 2800 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 4700 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 3100 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 2600 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 46400 | 4600 | QC |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 327000 | 4800 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 20600 | 6100 | J |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 6100 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 87900 | 5900 | Q |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 5600 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 17300 | 6100 | CJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 100000 | 8600 | QC |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 34900 | 6400 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 36000 | 4500 | QC |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 4800 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 5100 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 5100 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 49700 | 5400 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 6000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 6100 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | | 8400 | U |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 6500 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 30200 | 4900 | QJ |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 202000 | 4900 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 8600 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 4900 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 6200 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 8600 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 6100 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BC SED-6
11/3/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 230000 | 4200 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 7300 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 5900 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 15900 | 3700 | QCJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 3700 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 26400 | 3600 | J |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 3800 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 4200 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 4000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 3800 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 4800 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 4500 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 4300 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 4600 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 10400 | 3000 | QJ |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 4200 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 4100 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 52400 | 4500 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 28500 | 5700 | CJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | | 5800 | U |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 5700 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 53100 | 5300 | Q |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 5100 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | | 4000 | U |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 35300 | 5700 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | | 5500 | U |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 26600 | 4000 | QJ |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 116000 | 3700 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 5300 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 5200 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 41900 | 5100 | QC |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 3700 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 5100 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 4100 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 100000 | 4800 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 3900 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 3500 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 12500 | 4100 | QJ |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BC SED-6**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 4000 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 4300 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 4300 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 28500 | 4600 | QJ |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | | 5000 | U |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 20300 | 6900 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 10000 | 5000 | CJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 66400 | 6800 | QC |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 6800 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 5000 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 5000 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 23400 | 5300 | J |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 43600 | 6300 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 5200 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 3200 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 20300 | 3000 | QJ |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 2700 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 10600 | 2600 | QJ |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 33100 | 2000 | |

**TOTAL CONGENER RESULTS = 3,572,790.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-1B
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | 214000 | 6800 | Q |
| 3-Chlorobiphenyl | 2 | | 6300 | U |
| 4-Chlorobiphenyl | 3 | 60200 | 5400 | J |
| 2,2'-Dichlorobiphenyl | 4 | 972000 | 109000 | Q |
| 2,3-Dichlorobiphenyl | 5 | | 67700 | U |
| 2,3'-Dichlorobiphenyl | 6 | 381000 | 62200 | Q |
| 2,4-Dichlorobiphenyl | 7 | | 64900 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 62300 | QJB |
| 2,5-Dichlorobiphenyl | 9 | | 65300 | U |
| 2,6-Dichlorobiphenyl | 10 | 90600 | 67400 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | | 65100 | QBJ |
| 3,4-Dichlorobiphenyl | 12 | | 62900 | QCJB |
| 3,4'-Dichlorobiphenyl | 13 | | 62900 | QC12JB |
| 3,5-Dichlorobiphenyl | 14 | | 62200 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 50100 | QJB |
| 2,2',3-Trichlorobiphenyl | 16 | 176000 | 59500 | Q |
| 2,2',4-Trichlorobiphenyl | 17 | 893000 | 48000 | |
| 2,2',5-Trichlorobiphenyl | 18 | 773000 | 39700 | C |
| 2,2',6-Trichlorobiphenyl | 19 | 364000 | 51800 | Q |
| 2,3,3'-Trichlorobiphenyl | 20 | | 17600 | JB |
| 2,3,4-Trichlorobiphenyl | 21 | | 18200 | BCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | 174000 | 19100 | Q |
| 2,3,5-Trichlorobiphenyl | 23 | | 19500 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 34800 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 390000 | 16500 | |
| 2,3',5-Trichlorobiphenyl | 26 | 608000 | 18200 | C |
| 2,3',6-Trichlorobiphenyl | 27 | 427000 | 33900 | Q |
| 2,4,4'-Trichlorobiphenyl | 28 | | 17600 | C20JB |
| 2,4,5-Trichlorobiphenyl | 29 | | 18200 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 39700 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 17900 | JB |
| 2,4',6-Trichlorobiphenyl | 32 | 671000 | 31100 | Q |
| 2,3',4'-Trichlorobiphenyl | 33 | | 18200 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 19000 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 18800 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 17600 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 129000 | 15700 | QJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 18000 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-1B
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 16700 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 832000 | 25400 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 25400 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 418000 | 28100 | |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 87400 | 23200 | QCJ |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 22900 | CJB |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 510000 | 26500 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 149000 | 30900 | QJ |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 22900 | C44JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 114000 | 25400 | QJ |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 1390000 | 21700 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 471000 | 25500 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 26500 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 1770000 | 24300 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 25500 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 38400 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 19100 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 252000 | 18800 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 18800 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 18400 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 81100 | 18500 | QCJ |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 85700 | 18500 | QJ |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 1090000 | 17700 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 18500 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 61300 | 17600 | J |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 372000 | 18400 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 22900 | C44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 663000 | 17500 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 40900 | 16400 | QJ |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 17000 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 21700 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 17700 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 25400 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 28500 | 18100 | QJ |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 23200 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 17700 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 18500 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 17700 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-1B**
**11/5/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 55500 | 16300 | QJ |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 18100 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 40200 | 15300 | QJ |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 16300 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 18100 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 135000 | 39900 | QJ |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 74900 | 41300 | QJ |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 459000 | 40300 | Q |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 234000 | 28600 | C |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 766000 | 28600 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 28600 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 251000 | 35500 | QC |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 38500 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 1440000 | 29800 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 35500 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 353000 | 36100 | Q |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 34900 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 38100 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 1180000 | 34900 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 26500 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 28600 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 94600 | 35500 | QCJ |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 667000 | 28400 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 34900 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 29800 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 35500 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 32700 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 25800 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 354000 | 16700 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 17400 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | | 17200 | U |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 28600 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 63800 | 15400 | QJ |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 1630000 | 25300 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 24300 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 28400 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 29800 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 13300 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-1B**
**11/5/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 25300 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 28600 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 28600 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 13700 | JB |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 28600 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 23400 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 25500 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 18100 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 13700 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 17200 | U |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 28600 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 19900 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 16000 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 381000 | 28800 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 3660000 | 29600 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 160000 | 37600 | J |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 37800 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 1010000 | 36900 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 34700 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 145000 | 37800 | CJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 1610000 | 53200 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 497000 | 39500 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 345000 | 28300 | C |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 29600 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 31700 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 31700 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 951000 | 33600 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 37200 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 37800 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 234000 | 52000 | Q |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 40300 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 536000 | 30400 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 2980000 | 30600 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 53000 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 30600 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 38600 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 53200 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 38100 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-1B
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 3530000 | 26000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 45600 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 36900 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 278000 | 21500 | C |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 21500 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 338000 | 22600 | Q |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 78100 | 23700 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 26400 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 24600 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 23700 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 29600 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 28300 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 27000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 28800 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 105000 | 19000 | QJ |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 26000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 29300 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 1460000 | 22100 | Q |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 556000 | 33000 | QC |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 406000 | 33400 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 33000 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 1910000 | 31000 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 57300 | 29600 | QJ |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 267000 | 23500 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 1080000 | 33100 | Q |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 404000 | 31800 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 694000 | 23200 | Q |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 3580000 | 22000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 30900 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 30000 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 1380000 | 29600 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 21800 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 29600 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 23800 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 2220000 | 28000 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 22700 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 82000 | 22500 | J |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 446000 | 23800 | Q |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-1B**
**11/5/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 23300 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 25200 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 25200 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 1220000 | 26900 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 537000 | 29500 | |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 804000 | 40400 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 175000 | 29400 | QC |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 1390000 | 40100 | C |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 40100 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 29400 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 193000 | 29400 | Q |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 204000 | 31000 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 793000 | 36900 | Q |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 30300 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 18700 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 137000 | 13400 | J |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 12100 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | | 11700 | U |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 65100 | 11800 | QJ |

**TOTAL CONGENER RESULTS = 59,435,200.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-2B
11/3/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 23200 | U |
| 3-Chlorobiphenyl | 2 | | 21200 | U |
| 4-Chlorobiphenyl | 3 | | 18400 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 397000 | U |
| 2,3-Dichlorobiphenyl | 5 | | 248000 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 228000 | U |
| 2,4-Dichlorobiphenyl | 7 | | 238000 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 228000 | QBJ |
| 2,5-Dichlorobiphenyl | 9 | | 239000 | U |
| 2,6-Dichlorobiphenyl | 10 | | 247000 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 238000 | U |
| 3,4-Dichlorobiphenyl | 12 | | 230000 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 230000 | U |
| 3,5-Dichlorobiphenyl | 14 | | 228000 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 184000 | U |
| 2,2',3-Trichlorobiphenyl | 16 | | 149000 | U |
| 2,2',4-Trichlorobiphenyl | 17 | 224000 | 121000 | QJ |
| 2,2',5-Trichlorobiphenyl | 18 | 209000 | 99700 | QCJ |
| 2,2',6-Trichlorobiphenyl | 19 | | 130000 | U |
| 2,3,3'-Trichlorobiphenyl | 20 | | 44200 | QBCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 45700 | QBCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | | 47900 | U |
| 2,3,5-Trichlorobiphenyl | 23 | | 49100 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 87500 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 147000 | 41600 | QJ |
| 2,3',5-Trichlorobiphenyl | 26 | 157000 | 45800 | QCJ |
| 2,3',6-Trichlorobiphenyl | 27 | | 85200 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 44200 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 45800 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 99700 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 45100 | QBJ |
| 2,4',6-Trichlorobiphenyl | 32 | 313000 | 78200 | J |
| 2,3',4'-Trichlorobiphenyl | 33 | | 45700 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 47700 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 47300 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 44200 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 36000 | 39400 | QJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 45300 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-2B**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 41900 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 308000 | 68100 | CJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 68100 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | | 75500 | U |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 62400 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 61400 | QBCJ |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | | 71200 | U |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | | 83100 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 61400 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 68100 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 341000 | 58200 | QCJ |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | | 68600 | U |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 71200 | U |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 720000 | 65400 | J |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 68600 | U |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 103000 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 51400 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 50600 | U |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 50500 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 49300 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | | 49600 | U |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | | 49800 | U |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 324000 | 47700 | QCJ |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 49600 | U |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 47200 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 160000 | 49400 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 61400 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 290000 | 46900 | QJ |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 44000 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 45700 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 58200 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 47700 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 68100 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 48600 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 62400 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 47700 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 49600 | U |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 47700 | C61 |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-2B**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | | 43900 | U |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 48600 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 41100 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 43700 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 39500 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | | 96200 | U |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | | 99600 | U |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | | 97200 | U |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | | 68900 | U |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 184000 | 69100 | QCJ |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 69100 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | | 85700 | U |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 92800 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 568000 | 72000 | CJ |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 85700 | U |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | | 87200 | U |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 84100 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 91800 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 291000 | 84100 | QJ |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 64000 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 69100 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 85600 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 232000 | 68500 | QCJ |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 84100 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 72000 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 85600 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 78800 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 62100 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | | 36600 | U |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 42000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | | 41400 | U |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 69100 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 37200 | U |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 504000 | 61000 | QCJ |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 58600 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 68500 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 72000 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 31200 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-2B**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 61000 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 68900 | U |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 68900 | U |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 35100 | QBJ |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 69100 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 56400 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 61400 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 43600 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 35100 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 41400 | U |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 69100 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 48100 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 38500 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | | 55600 | U |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 451000 | 57100 | QCJ |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | | 72400 | U |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 72900 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 150000 | 71100 | QJ |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 66900 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | | 72900 | U |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 344000 | 103000 | CJ |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | | 76100 | U |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | | 54500 | U |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 57100 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 61200 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 61200 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | | 64800 | U |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 71700 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 72900 | U |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | | 100000 | U |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 77700 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 104000 | 58700 | J |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 313000 | 58900 | QCJ |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 102000 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 58900 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 74400 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 103000 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 73500 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-2B**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 317000 | 50100 | QCJ |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 87800 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 71200 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | | 47900 | U |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 47900 | U |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | | 43600 | U |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 45800 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 50900 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 47500 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 45700 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 57100 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 54500 | U |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 52000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 55600 | U |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | | 36900 | U |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 50100 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 41200 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | | 57700 | U |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | | 68600 | U |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | | 69500 | U |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 68600 | U |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | | 64400 | U |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 61700 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | | 48900 | U |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | | 68800 | U |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | | 66200 | U |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | | 48300 | U |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 253000 | 44500 | QCJ |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 64300 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 62400 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | | 61600 | U |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 45400 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 61600 | U |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 49400 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 187000 | 58200 | QJ |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 47300 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 41100 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | | 49600 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-2B**
**11/3/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 48500 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 52300 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 52400 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | | 57500 | U |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | | 63000 | U |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | | 86200 | U |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | | 62900 | U |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 149000 | 85600 | QCJ |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 85600 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 62900 | U |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 62800 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | | 66300 | U |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | | 78900 | U |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 64700 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 40000 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | | 20300 | U |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 18400 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | | 17700 | U |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | | 19700 | U |
| **TOTAL CONGENER RESULTS =** | | **7,276,000.00** | | |

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-2D (blind duplicate of BCT-2B)
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | 141000 | 1400 | |
| 3-Chlorobiphenyl | 2 | 4240 | 1200 | QJ |
| 4-Chlorobiphenyl | 3 | 61200 | 1100 | |
| 2,2'-Dichlorobiphenyl | 4 | 1080000 | 18100 | |
| 2,3-Dichlorobiphenyl | 5 | 16200 | 11300 | QJ |
| 2,3'-Dichlorobiphenyl | 6 | 413000 | 10400 | |
| 2,4-Dichlorobiphenyl | 7 | 33900 | 10800 | Q |
| 2,4'-Dichlorobiphenyl | 8 | | 13000 | BJ |
| 2,5-Dichlorobiphenyl | 9 | 60900 | 10900 | Q |
| 2,6-Dichlorobiphenyl | 10 | 47900 | 11200 | Q |
| 3,3'-Dichlorobiphenyl | 11 | | 20000 | QBJ |
| 3,4-Dichlorobiphenyl | 12 | | 20000 | BCJ |
| 3,4'-Dichlorobiphenyl | 13 | | 20000 | C12BJ |
| 3,5-Dichlorobiphenyl | 14 | | 10400 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 10000 | BJ |
| 2,2',3-Trichlorobiphenyl | 16 | 180000 | 9600 | Q |
| 2,2',4-Trichlorobiphenyl | 17 | 1350000 | 7700 | |
| 2,2',5-Trichlorobiphenyl | 18 | 909000 | 6400 | C |
| 2,2',6-Trichlorobiphenyl | 19 | 505000 | 8400 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 20000 | BJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 10000 | BCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | 182000 | 3000 | |
| 2,3,5-Trichlorobiphenyl | 23 | | 3100 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 5600 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 431000 | 2600 | |
| 2,3',5-Trichlorobiphenyl | 26 | 691000 | 2900 | C |
| 2,3',6-Trichlorobiphenyl | 27 | 573000 | 5500 | |
| 2,4,4'-Trichlorobiphenyl | 28 | | 20000 | C20BJ |
| 2,4,5-Trichlorobiphenyl | 29 | | 2900 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 6400 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 10000 | BJ |
| 2,4',6-Trichlorobiphenyl | 32 | 940000 | 5000 | |
| 2,3',4'-Trichlorobiphenyl | 33 | | 10000 | C21BJ |
| 2,3',5'-Trichlorobiphenyl | 34 | 17500 | 3000 | QJ |
| 3,3',4-Trichlorobiphenyl | 35 | 9430 | 3000 | QJ |
| 3,3',5-Trichlorobiphenyl | 36 | | 2800 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 158000 | 2500 | |
| 3,4,5-Trichlorobiphenyl | 38 | | 2900 | U |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-2D (blind duplicate of BCT-2B)
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | 11000 | 2700 | QJ |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 931000 | 5000 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 5000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 377000 | 5600 | |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 54800 | 4600 | QC |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 20000 | BCJ |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 518000 | 5200 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 151000 | 6100 | |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 20000 | C44BJ |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 148000 | 5000 | |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 1490000 | 4300 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 504000 | 5000 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 5200 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 2020000 | 4800 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 5000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 33800 | 7600 | |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | 10700 | 3800 | J |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 286000 | 3700 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | 18500 | 3700 | QJ |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | 6340 | 3600 | QJ |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 112000 | 3600 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 101000 | 3600 | |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 1190000 | 3500 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 3600 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 69800 | 3500 | |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 446000 | 3600 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 20000 | C44BJ |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 696000 | 3400 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 44600 | 3200 | |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 29400 | 3300 | J |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 4300 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 3500 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 5000 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 34700 | 3600 | |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 4600 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 3500 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 3600 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 3500 | C61 |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-2D (blind duplicate of BCT-2B)
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 77300 | 3200 | |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 3600 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 23200 | 3000 | QJ |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 3200 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 3100 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 122000 | 8400 | |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 56700 | 8700 | Q |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 374000 | 8400 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 211000 | 6000 | C |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 628000 | 6000 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 6000 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 256000 | 7400 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | 19700 | 8100 | QJ |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 1010000 | 6200 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 7400 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 295000 | 7600 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 55800 | 7300 | C |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 28900 | 8000 | QJ |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 910000 | 7300 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 24200 | 5500 | J |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 6000 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 77400 | 7400 | QC |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 489000 | 5900 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 7300 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 6200 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 7400 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 31800 | 6800 | |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 5400 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 302000 | 3500 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 3600 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 59600 | 3200 | |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | 26800 | 3600 | QCJ |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 6000 | C86 |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 1270000 | 5300 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 5100 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 5900 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 6200 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 19500 | 2900 | J |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-2D (blind duplicate of BCT-2B)**
**11/5/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 5300 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 6000 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 6000 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 10000 | BJ |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 6000 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 4900 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 5300 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | 15600 | 3800 | J |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 11600 | 2800 | QJ |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 3600 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 6000 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 3900 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 3300 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 164000 | 5000 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 1150000 | 5100 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 70800 | 6500 | |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 6600 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 388000 | 6400 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 26800 | 6000 | J |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 72400 | 6600 | C |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 511000 | 9300 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 188000 | 6900 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 117000 | 4900 | QC |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 5100 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 18500 | 5500 | QCJ |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 5500 | C139 |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 193000 | 5900 | Q |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 6500 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 6600 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 59200 | 9100 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 7000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 155000 | 5300 | Q |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 994000 | 5300 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 9300 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 5300 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 6700 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 9300 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 6600 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-2D (blind duplicate of BCT-2B)**
**11/5/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 894000 | 4500 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 43500 | 7900 | |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 6400 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 93900 | 4000 | C |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 4000 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 121000 | 3900 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 10800 | 4100 | QJ |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 4600 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 4300 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | 12200 | 4100 | J |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 5100 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 4900 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 4700 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 5000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 38400 | 3500 | |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 4500 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 4100 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 228000 | 4200 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 94500 | 5300 | QC |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 55900 | 5400 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 5300 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 331000 | 5000 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 16300 | 4800 | QJ |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 39800 | 3800 | Q |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 233000 | 5300 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 77500 | 5100 | Q |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 168000 | 3700 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 601000 | 3400 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 5000 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 4800 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 211000 | 4800 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 3500 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 4800 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 3800 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 466000 | 4500 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 3600 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 3300 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 64800 | 3800 | |

## Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
## BCT-2D (blind duplicate of BCT-2B)
## 11/5/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 11800 | 3700 | QJ |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 4000 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 4100 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 170000 | 4200 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 60300 | 4600 | |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 121000 | 6300 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 36900 | 4600 | C |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 247000 | 6300 | QC |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 6300 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 4600 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 32400 | 4600 | Q |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 55800 | 4900 | Q |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 167000 | 5800 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 4800 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 5970 | 2900 | QJ |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 65500 | 2500 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 11100 | 2300 | QJ |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 30400 | 2200 | J |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 75300 | 2000 | |

**TOTAL CONGENER RESULTS = 32,481,780.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-3C
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | 197000 | 5200 | |
| 3-Chlorobiphenyl | 2 | | 4800 | U |
| 4-Chlorobiphenyl | 3 | 55100 | 4200 | QJ |
| 2,2'-Dichlorobiphenyl | 4 | 3700000 | 96700 | |
| 2,3-Dichlorobiphenyl | 5 | | 60400 | U |
| 2,3'-Dichlorobiphenyl | 6 | 688000 | 55400 | Q |
| 2,4-Dichlorobiphenyl | 7 | | 57900 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 55500 | B |
| 2,5-Dichlorobiphenyl | 9 | 121000 | 58200 | QJ |
| 2,6-Dichlorobiphenyl | 10 | 127000 | 60100 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | | 58000 | U |
| 3,4-Dichlorobiphenyl | 12 | | 56100 | QJB |
| 3,4'-Dichlorobiphenyl | 13 | | 56100 | QC12JB |
| 3,5-Dichlorobiphenyl | 14 | | 55400 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 44700 | JB |
| 2,2',3-Trichlorobiphenyl | 16 | 407000 | 51800 | Q |
| 2,2',4-Trichlorobiphenyl | 17 | 2230000 | 41800 | |
| 2,2',5-Trichlorobiphenyl | 18 | 1710000 | 34500 | C |
| 2,2',6-Trichlorobiphenyl | 19 | 1070000 | 45100 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 15300 | CJB |
| 2,3,4-Trichlorobiphenyl | 21 | | 15800 | QCJB |
| 2,3,4'-Trichlorobiphenyl | 22 | 320000 | 16600 | |
| 2,3,5-Trichlorobiphenyl | 23 | | 17000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 30300 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 635000 | 14400 | |
| 2,3',5-Trichlorobiphenyl | 26 | 1010000 | 15900 | C |
| 2,3',6-Trichlorobiphenyl | 27 | 771000 | 29500 | |
| 2,4,4'-Trichlorobiphenyl | 28 | | 15300 | C20JB |
| 2,4,5-Trichlorobiphenyl | 29 | | 15900 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 34500 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 15600 | B |
| 2,4',6-Trichlorobiphenyl | 32 | 1550000 | 27100 | |
| 2,3',4'-Trichlorobiphenyl | 33 | | 15800 | QC21JB |
| 2,3',5'-Trichlorobiphenyl | 34 | 34800 | 16500 | QJ |
| 3,3',4-Trichlorobiphenyl | 35 | | 16400 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 15300 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 213000 | 13700 | |
| 3,4,5-Trichlorobiphenyl | 38 | | 15700 | U |

**Brandywine Creek Tidal Area Sediment Sample PCB Congener Results**
**BCT-3C**
**11/5/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 14500 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 1910000 | 27500 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 27500 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 654000 | 30500 | |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 277000 | 25200 | QC |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 24800 | CJB |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 1700000 | 28800 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 241000 | 33500 | Q |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 24800 | C44JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 187000 | 27500 | Q |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 3280000 | 23500 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 1250000 | 27700 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 28800 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 3160000 | 26400 | |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 27700 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 99800 | 41600 | QJ |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 20700 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 441000 | 20400 | |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | 22300 | 20400 | QJ |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 19900 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 231000 | 20000 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 186000 | 20100 | |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 1960000 | 19200 | C |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 20000 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 134000 | 19100 | J |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 667000 | 20000 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 24800 | C44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 1290000 | 18900 | |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 166000 | 17800 | Q |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 160000 | 18400 | Q |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 23500 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 19200 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 27500 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 90900 | 19600 | QJ |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 25200 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 19200 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 20000 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 19200 | C61 |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-3C
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 99100 | 17700 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 19600 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 48700 | 16600 | QJ |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 17600 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 17400 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 335000 | 48600 | |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | | 50300 | U |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 799000 | 49100 | Q |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 471000 | 34800 | QC |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 4390000 | 34900 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 34900 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 1970000 | 43300 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 46900 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 17600000 | 36400 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 43300 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 8610000 | 44000 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 1080000 | 42500 | QC |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 1400000 | 46400 | |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 4090000 | 42500 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 378000 | 32300 | |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 34900 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 2070000 | 43200 | C |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 18300000 | 34600 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 42500 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 36400 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 43200 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 1590000 | 39800 | |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | 56600 | 31400 | QJ |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 1440000 | 22100 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 21200 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 41200 | 20900 | QCJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 34900 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 1620000 | 18800 | |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 5050000 | 30800 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | 251000 | 29600 | |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 34600 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 36400 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 148000 | 15400 | QJ |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-3C
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 30800 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 34800 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 34800 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 18500 | B |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 34900 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | 742000 | 28500 | |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | 111000 | 31000 | QJ |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 22000 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 15100 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 20900 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 34900 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 23700 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 19500 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 1660000 | 36100 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 19100000 | 37100 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 1930000 | 47000 | |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | 107000 | 47400 | J |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 7680000 | 46200 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 3330000 | 43500 | |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 1590000 | 47400 | QC |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 32600000 | 66700 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 4950000 | 49400 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 2260000 | 35400 | C |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 37100 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 2550000 | 39700 | C |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 39700 | C139 |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 1190000 | 42100 | Q |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 46600 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 47400 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 339000 | 65100 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 50500 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 28500000 | 38100 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 34300000 | 38300 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | 1500000 | 66400 | |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 38300 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | 526000 | 48300 | Q |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 66700 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | 131000 | 47700 | J |

Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
BCT-3C
11/5/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 44600000 | 32500 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 8790000 | 57000 | |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 46200 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 449000 | 28900 | C |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 28900 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 892000 | 28300 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 431000 | 29700 | |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | 51700 | 33100 | QJ |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 30800 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 29700 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 37100 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 35400 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | 210000 | 33800 | Q |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 36100 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 218000 | 24200 | |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 32500 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 30200 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 6520000 | 30500 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 2970000 | 40600 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 2380000 | 41100 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 40600 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 10000000 | 38100 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 551000 | 36500 | |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 2880000 | 29000 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 14600000 | 40800 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 6870000 | 39200 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 10200000 | 28600 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 21800000 | 26200 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 38100 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | 520000 | 36900 | |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 7510000 | 36500 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 26900 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 36500 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 29300 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 29600000 | 34500 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 28000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 427000 | 26200 | |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 2000000 | 29400 | |

## Brandywine Creek Tidal Area Sediment Sample PCB Congener Results
## BCT-3C
## 11/5/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 497000 | 28700 | |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 31000 | UJ |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 31100 | J |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 9570000 | 31200 | J |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 4320000 | 34200 | J |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 6920000 | 46700 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 2490000 | 34100 | J |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 14000000 | 46400 | J |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 46400 | J |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 34100 | J |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 2760000 | 34000 | |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 3160000 | 35900 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 7760000 | 42800 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 35100 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 377000 | 21700 | |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 1300000 | 17800 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 323000 | 16100 | |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 339000 | 15500 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 94800 | 13700 | QJ |

**TOTAL CONGENER RESULTS = 478,260,000.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Analytical data validated by SECOR personnel

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-1
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 25000 | UJB |
| 3-Chlorobiphenyl | 2 | | 93800 | U |
| 4-Chlorobiphenyl | 3 | | 81500 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 11700 | U |
| 2,3-Dichlorobiphenyl | 5 | | 7280 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 70000 | UJB |
| 2,4-Dichlorobiphenyl | 7 | | 6970 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 90000 | UJB |
| 2,5-Dichlorobiphenyl | 9 | | 7010 | U |
| 2,6-Dichlorobiphenyl | 10 | | 7240 | U |
| 3,3'-Dichlorobiphenyl | 11 | 11700 | 6990 | QJ |
| 3,4-Dichlorobiphenyl | 12 | 14100 | 6760 | QCJ |
| 3,4'-Dichlorobiphenyl | 13 | | 6760 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 6680 | U |
| 4,4'-Dichlorobiphenyl | 15 | 23300 | 5380 | QJ |
| 2,2',3-Trichlorobiphenyl | 16 | | 50000 | UJB |
| 2,2',4-Trichlorobiphenyl | 17 | | 20000 | UJB |
| 2,2',5-Trichlorobiphenyl | 18 | | 60000 | UJB |
| 2,2',6-Trichlorobiphenyl | 19 | | 4610 | U |
| 2,3,3'-Trichlorobiphenyl | 20 | | 61000 | UJB |
| 2,3,4-Trichlorobiphenyl | 21 | | 22000 | QBCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | | 30000 | UJB |
| 2,3,5-Trichlorobiphenyl | 23 | | 1740 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 3100 | U |
| 2,3',4-Trichlorobiphenyl | 25 | | 11000 | UJB |
| 2,3',5-Trichlorobiphenyl | 26 | | 16000 | BCJ |
| 2,3',6-Trichlorobiphenyl | 27 | | 3020 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 62000 | UJB |
| 2,4,5-Trichlorobiphenyl | 29 | | 16000 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 60000 | UJB |
| 2,4',5-Trichlorobiphenyl | 31 | | 50000 | UJB |
| 2,4',6-Trichlorobiphenyl | 32 | | 50000 | UJB |
| 2,3',4'-Trichlorobiphenyl | 33 | | 24000 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 1690 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 1670 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 1560 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 8000 | QBJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 1600 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-1
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 1480 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 26300 | 2800 | CJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 2800 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 12100 | 3100 | QJ |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 2560 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 10000 | JBC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 11300 | 2930 | CJ |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | | 3410 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 10000 | JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 6190 | 2800 | QJ |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | | 10000 | JB |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 10300 | 2820 | QCJ |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 2930 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 10000 | JB |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 2820 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 4240 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 2110 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 10000 | BJ |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 2080 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 2030 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 7480 | 2040 | QCJ |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 7200 | 2050 | QJ |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 40000 | JB |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 2040 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 1940 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 21800 | 2030 | J |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 10000 | C44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 20000 | QB |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 7470 | 1810 | QJ |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 1880 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 10000 | C49JB |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 40000 | C61JB |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 2800 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 2000 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 25600 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 40000 | C61JB |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 2040 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 40000 | C61JB |

**Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results**
**BC NT-1**
**12/6/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 4150 | 1800 | QJ |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 2000 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 1690 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 1800 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 1790 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 18500 | 4160 | J |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | | 4310 | U |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 35600 | 4200 | J |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 30500 | 2980 | CJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 86100 | 2980 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 2980 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 19300 | 3700 | CJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 4010 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 131000 | 3110 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 3700 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 25100 | 3770 | QJ |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 3630 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 3970 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 107000 | 3640 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 2760 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 2980 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 3700 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 66900 | 2960 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 3630 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 3110 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 3700 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 3400 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 2680 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 55100 | 1640 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 1820 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 4130 | 1790 | QCJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 2980 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 13000 | 1610 | J |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 217000 | 2630 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 2530 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 2960 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 3110 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 1470 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-1
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 2630 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 2980 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 2980 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | 119000 | 1550 | |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 2980 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 2440 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 2650 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 1880 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 1530 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 1790 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 2980 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 1770 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 1660 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 33500 | 2800 | QCJ |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 224000 | 2870 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 13800 | 3640 | QJ |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 3670 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 73200 | 3570 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 3500 | 3370 | QJ |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 9960 | 3670 | QCJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 76400 | 5160 | QC |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 23500 | 3830 | J |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 21100 | 2740 | QCJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 2870 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 3080 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 3080 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 34900 | 3260 | QJ |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 3610 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 3670 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | | 5040 | U |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 3910 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 34000 | 2950 | J |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 156000 | 2960 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 5140 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 2960 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 3740 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 5160 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 3700 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-1
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 167000 | 2520 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 4420 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 3580 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 22500 | 2180 | CJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 2180 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 20300 | 2190 | QJ |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 2300 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 2560 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 2390 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 2300 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 2870 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 2740 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 2610 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 2800 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 6300 | 1910 | QJ |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 2520 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 2400 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 42100 | 2520 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 21800 | 2920 | CJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 9850 | 2950 | QJ |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 2920 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 51500 | 2740 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 2620 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | | 2080 | U |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 36600 | 2920 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 7000 | 2810 | QJ |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 23500 | 2050 | QJ |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 95600 | 1930 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 2730 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 2650 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 34600 | 2620 | QCJ |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 1930 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 2620 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 2100 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 64900 | 2470 | Q |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 2010 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 1700 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 9380 | 2110 | QJ |

## Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
## BC NT-1
## 12/6/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 2060 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 2220 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 2230 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 32000 | 2710 | J |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 10500 | 2970 | QJ |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 24900 | 4070 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 7340 | 2970 | QCJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 69300 | 4000 | QC |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 4040 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 2970 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 5180 | 2960 | QJ |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 18100 | 3130 | QJ |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 34900 | 3720 | QJ |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 3050 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 1890 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 21100 | 1780 | J |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 1600 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 15400 | 1540 | QJ |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 31300 | 1660 | J |
| **TOTAL CONGENER RESULTS =** | | **2,678,430** | | |

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Data validated by SECOR personnel.

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-10 (Duplicate for BC-NT-1)
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 683 | U |
| 3-Chlorobiphenyl | 2 | | 625 | U |
| 4-Chlorobiphenyl | 3 | | 543 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 11200 | U |
| 2,3-Dichlorobiphenyl | 5 | | 6990 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 6420 | U |
| 2,4-Dichlorobiphenyl | 7 | | 6700 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 90000 | BUJ |
| 2,5-Dichlorobiphenyl | 9 | | 6740 | U |
| 2,6-Dichlorobiphenyl | 10 | | 6960 | U |
| 3,3'-Dichlorobiphenyl | 11 | 12700 | 6720 | QJ |
| 3,4-Dichlorobiphenyl | 12 | 11100 | 6490 | QCJ |
| 3,4'-Dichlorobiphenyl | 13 | | 6490 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 6420 | U |
| 4,4'-Dichlorobiphenyl | 15 | 18900 | 5170 | QJ |
| 2,2',3-Trichlorobiphenyl | 16 | | 50000 | QUBJ |
| 2,2',4-Trichlorobiphenyl | 17 | | 20000 | QUBJ |
| 2,2',5-Trichlorobiphenyl | 18 | | 60000 | QUBJ |
| 2,2',6-Trichlorobiphenyl | 19 | | 4190 | U |
| 2,3,3'-Trichlorobiphenyl | 20 | | 61000 | BCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 22100 | BCJ |
| 2,3,4'-Trichlorobiphenyl | 22 | | 30000 | QUBJ |
| 2,3,5-Trichlorobiphenyl | 23 | | 1580 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 2820 | U |
| 2,3',4-Trichlorobiphenyl | 25 | | 11000 | QUBJ |
| 2,3',5-Trichlorobiphenyl | 26 | | 16000 | BUJ |
| 2,3',6-Trichlorobiphenyl | 27 | | 2740 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 62000 | BC20UJ |
| 2,4,5-Trichlorobiphenyl | 29 | | 16000 | C26BUJ |
| 2,4,6-Trichlorobiphenyl | 30 | | 60000 | C18BU |
| 2,4',5-Trichlorobiphenyl | 31 | | 50000 | QBUJ |
| 2,4',6-Trichlorobiphenyl | 32 | | 50000 | BUJ |
| 2,3',4'-Trichlorobiphenyl | 33 | | 24000 | C21BUJ |
| 2,3',5'-Trichlorobiphenyl | 34 | | 1530 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 1520 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 1420 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 8000 | QBJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 1460 | U |

**Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results**
**BC NT-10 (Duplicate for BC-NT-1)**
**12/6/2004**
**Amtrak Former Fueling Facility**
**4001 Vandever Avenue**
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 1350 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 16100 | 2530 | QCJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 2530 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 12100 | 2800 | QJ |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 2320 | 2320 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 10000 | BCJ |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 9710 | 2650 | QCJ |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 3090 | 3090 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 10000 | C44BJ |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 6420 | 2530 | J |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | | 10000 | QBCJ |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 7110 | 2550 | QCJ |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 2650 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 10000 | BJ |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 2550 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 3830 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 1910 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 10000 | QBJ |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 1880 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 1830 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | | 1840 | U |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 8930 | 1850 | QJ |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 40000 | BCJ |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 1840 | U |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 1750 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 18300 | 1840 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 10000 | C44BJ |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 20000 | BJ |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 1630 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 1700 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 10000 | C49BJ |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 21000 | C61BJ |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 2530 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 1810 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 2320 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 40000 | C61BJ |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 1840 | U |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 40000 | C61BJ |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-10 (Duplicate for BC-NT-1)
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 6330 | 1630 | QJ |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 1810 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 1530 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 1620 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 1710 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | | 3960 | U |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | | 4100 | U |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 22800 | 4000 | QJ |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 20000 | 2840 | CJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 62100 | 2840 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 2840 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 11400 | 3530 | QCJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 3820 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 104000 | 2960 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 3530 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 18700 | 3590 | QJ |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 3460 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 3780 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 82300 | 3460 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 2630 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 2840 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 3520 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 47800 | 2820 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 3460 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 2960 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 3520 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 3240 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 2560 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 50500 | 1620 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 1730 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 9570 | 1530 | J |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | 4200 | 1700 | CJ |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 2840 | C86 |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | | 2510 | BCJ |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 2410 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 2820 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 2960 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 1280 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-10 (Duplicate for BC-NT-1)
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 2510 | C110BJ |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 2840 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 2840 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 1520 | BJ |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 2840 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 2320 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 2530 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | 2090 | 1790 | QJ |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 1530 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 1700 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 2840 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 1630 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 1590 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 38700 | 2650 | QC |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 208000 | 2720 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 7980 | 3460 | QJ |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 3480 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 60700 | 3390 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 3200 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 7280 | 3480 | CJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 65900 | 4900 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 16000 | 3630 | QJ |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 23000 | 2600 | CJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 2720 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 2920 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 2920 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 33400 | 3100 | J |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 3420 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 3480 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 8920 | 4790 | QJ |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 3710 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 29300 | 2800 | J |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 115000 | 2810 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 4880 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 2810 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 3550 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 4900 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 3510 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-10 (Duplicate for BC-NT-1)
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 168000 | 2390 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 4190 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 3400 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 19200 | 2300 | CJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 2300 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 15900 | 2080 | QJ |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 2190 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 2430 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 2270 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 2180 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 2720 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 2600 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 2480 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 2650 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 7920 | 1640 | QJ |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 2390 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 2140 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 41800 | 2180 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 12900 | 2660 | CJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 6820 | 2700 | QJ |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 2660 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 72800 | 2500 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 2390 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 11000 | 1900 | J |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 36900 | 2670 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 11900 | 2570 | QJ |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 23800 | 1870 | J |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 101000 | 1700 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 2490 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 2420 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 41200 | 2390 | QC |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 1760 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 2390 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 1920 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 79000 | 2260 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 1830 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 1640 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 13800 | 1920 | QJ |

## Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
## BC NT-10 (Duplicate for BC-NT-1)
## 12/6/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 1880 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 2030 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 2030 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 31300 | 2620 | QJ |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 19300 | 2880 | QJ |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 28300 | 3940 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 7820 | 2870 | QCJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 76300 | 3910 | QC |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 3910 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 2870 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 2860 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 12600 | 3030 | QJ |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 45900 | 3600 | Q |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 2950 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 1830 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 24200 | 1860 | J |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 1680 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 9020 | 1620 | QJ |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 24600 | 1140 | QJ |
| **TOTAL CONGENER RESULTS =** | | **2,126,030.00** | | |

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Data validated by SECOR personnel.

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-3
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 25000 | UJB |
| 3-Chlorobiphenyl | 2 | | 696 | U |
| 4-Chlorobiphenyl | 3 | | 604 | BJ |
| 2,2'-Dichlorobiphenyl | 4 | 31900 | 9210 | QJ |
| 2,3-Dichlorobiphenyl | 5 | | 5750 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 70000 | UJB |
| 2,4-Dichlorobiphenyl | 7 | | 5510 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 90000 | UJB |
| 2,5-Dichlorobiphenyl | 9 | | 5540 | U |
| 2,6-Dichlorobiphenyl | 10 | 7470 | 5720 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | 14000 | 5520 | QJ |
| 3,4-Dichlorobiphenyl | 12 | 15700 | 5340 | QCJ |
| 3,4'-Dichlorobiphenyl | 13 | | 5340 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 5280 | U |
| 4,4'-Dichlorobiphenyl | 15 | 38800 | 4250 | Q |
| 2,2',3-Trichlorobiphenyl | 16 | | 50000 | UJB |
| 2,2',4-Trichlorobiphenyl | 17 | | 20000 | JB |
| 2,2',5-Trichlorobiphenyl | 18 | | 60000 | JBC |
| 2,2',6-Trichlorobiphenyl | 19 | 12700 | 4050 | J |
| 2,3,3'-Trichlorobiphenyl | 20 | | 61000 | JBC |
| 2,3,4-Trichlorobiphenyl | 21 | | 22000 | JBC |
| 2,3,4'-Trichlorobiphenyl | 22 | | 30000 | QBJ |
| 2,3,5-Trichlorobiphenyl | 23 | | 1530 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 2720 | U |
| 2,3',4-Trichlorobiphenyl | 25 | | 11000 | UJB |
| 2,3',5-Trichlorobiphenyl | 26 | | 16000 | BCJ |
| 2,3',6-Trichlorobiphenyl | 27 | 9660 | 2650 | QJ |
| 2,4,4'-Trichlorobiphenyl | 28 | | 62000 | C20JB |
| 2,4,5-Trichlorobiphenyl | 29 | | 16000 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 60000 | C18JB |
| 2,4',5-Trichlorobiphenyl | 31 | | 50000 | QJB |
| 2,4',6-Trichlorobiphenyl | 32 | | 50000 | UJB |
| 2,3',4'-Trichlorobiphenyl | 33 | | 24000 | C21JB |
| 2,3',5'-Trichlorobiphenyl | 34 | | 1480 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 1470 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 1370 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 8000 | BJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 1410 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-3
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | | 1300 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 25400 | 1990 | QCJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 1990 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 15100 | 2200 | J |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 1820 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 10000 | JBC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 8190 | 2080 | QCJ |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | | 2420 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 10000 | C44JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 6330 | 1990 | QJ |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | | 10000 | QBCJ |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 5630 | 2000 | QCJ |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 2080 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 10000 | JB |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 2000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 3010 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 1500 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 10000 | BJ |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 1480 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 1440 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 3730 | 1450 | QCJ |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 9060 | 1450 | QJ |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 40000 | JBC |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 1450 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 1380 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 17500 | 1440 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 10000 | C44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 20000 | JB |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 1280 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 1330 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 10000 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 40000 | C61JB |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 1990 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 1420 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 1820 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 40000 | C61JB |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 1450 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 40000 | C61JB |

**Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results**
**BC NT-3**
**12/6/2004**
**Amtrak Former Fueling Facility**
***4001 Vandever Avenue***
**Wilmington, Delaware**

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 6020 | 1280 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 1420 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 1200 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 1280 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 1330 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | | 2890 | U |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | | 2990 | U |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 14900 | 2920 | QJ |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 10900 | 2070 | QCJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 33600 | 2070 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 2070 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 10900 | 2570 | CJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 2790 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 53700 | 2160 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 2570 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 9680 | 2620 | J |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 2520 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 2750 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 40900 | 2520 | Q |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 1920 | U |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 2070 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 2570 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 27900 | 2050 | CJ |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 2520 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 2160 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 2570 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 2360 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 1860 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 26300 | 1150 | J |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 1260 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | | 1240 | U |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 2070 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 1120 | U |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 85900 | 1830 | JBC |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 1760 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 2050 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 2160 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 994 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-3
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 1830 | C110JB |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 2070 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 2070 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | 48800 | 1070 | JB |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 2070 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 1690 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 1840 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 1310 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 1120 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 1240 | U |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 2070 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 1190 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 1160 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 14400 | 1850 | CJ |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 78700 | 1890 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | | 2400 | U |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 2420 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 20300 | 2360 | QJ |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | | 2220 | U |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | | 2420 | U |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 32300 | 3410 | CJ |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 7000 | 2530 | QJ |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 10400 | 1810 | QCJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 1890 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 2030 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 2030 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 13500 | 2150 | QJ |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 2380 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 2420 | U |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | | 3330 | U |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 2580 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 13400 | 1950 | J |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 47500 | 1960 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 3390 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 1960 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 2470 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 3410 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 2440 | U |

Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
BC NT-3
12/6/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 67500 | 1660 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 2920 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 2360 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 7540 | 1560 | CJ |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 1560 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 6550 | 1450 | QJ |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 1520 | U |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 1690 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 1580 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 1520 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 1890 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 1810 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 1730 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 1850 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | | 1250 | U |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 1660 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 1370 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 13000 | 1730 | QJ |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 4000 | 2070 | QCJ |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | | 2100 | U |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 2070 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 21500 | 1940 | J |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 1860 | U |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 2370 | 1480 | QJ |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 11500 | 2080 | QJ |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | | 2000 | U |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 9370 | 1460 | QJ |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 48100 | 1380 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 1940 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 1880 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 13200 | 1860 | QCJ |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 1370 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 1860 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 1490 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 28300 | 1760 | QJ |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 1430 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 1220 | U |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | | 1500 | U |

## Brandywine Creek Nontidal Area Sediment Sample PCB Congener Results
## BC NT-3
## 12/6/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 1460 | U |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 1580 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 1580 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 12600 | 1760 | QJ |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | | 1930 | U |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 6770 | 2640 | QJ |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | | 1930 | U |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 28800 | 2630 | QCJ |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 2630 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 1930 | U |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 1930 | U |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 5460 | 2030 | QJ |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 7760 | 2420 | QJ |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 1980 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 1230 | U |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 6310 | 1110 | QJ |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 1490 | 1000 | QJ |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 4510 | 968 | QJ |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 9540 | 827 | J |

**TOTAL CONGENER RESULTS = 1,144,340.00**

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Data validated by SECOR personnel.

City Ditch Sediment Sample PCB Congener Results
CD-3
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 69200 | B |
| 3-Chlorobiphenyl | 2 | | 63300 | U |
| 4-Chlorobiphenyl | 3 | | 55000 | QBJ |
| 2,2'-Dichlorobiphenyl | 4 | 15800000 | 660000 | Q |
| 2,3-Dichlorobiphenyl | 5 | 730000 | 412000 | QJ |
| 2,3'-Dichlorobiphenyl | 6 | | 378000 | B |
| 2,4-Dichlorobiphenyl | 7 | 941000 | 395000 | QJ |
| 2,4'-Dichlorobiphenyl | 8 | | 378000 | B |
| 2,5-Dichlorobiphenyl | 9 | 1280000 | 397000 | QJ |
| 2,6-Dichlorobiphenyl | 10 | 983000 | 410000 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | 1820000 | 396000 | Q |
| 3,4-Dichlorobiphenyl | 12 | 3110000 | 382000 | QC |
| 3,4'-Dichlorobiphenyl | 13 | | 382000 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 378000 | U |
| 4,4'-Dichlorobiphenyl | 15 | 18100000 | 305000 | |
| 2,2',3-Trichlorobiphenyl | 16 | | 381000 | B |
| 2,2',4-Trichlorobiphenyl | 17 | | 307000 | QB |
| 2,2',5-Trichlorobiphenyl | 18 | | 254000 | BC |
| 2,2',6-Trichlorobiphenyl | 19 | 7370000 | 332000 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 113000 | BC |
| 2,3,4-Trichlorobiphenyl | 21 | | 116000 | BC |
| 2,3,4'-Trichlorobiphenyl | 22 | | 122000 | B |
| 2,3,5-Trichlorobiphenyl | 23 | | 125000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | 582000 | 223000 | QJ |
| 2,3',4-Trichlorobiphenyl | 25 | | 106000 | B |
| 2,3',5-Trichlorobiphenyl | 26 | | 117000 | BC |
| 2,3',6-Trichlorobiphenyl | 27 | 5190000 | 217000 | |
| 2,4,4'-Trichlorobiphenyl | 28 | | 113000 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 117000 | C26 |
| 2,4,6-Trichlorobiphenyl | 30 | | 254000 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 115000 | B |
| 2,4',6-Trichlorobiphenyl | 32 | | 199000 | B |
| 2,3',4'-Trichlorobiphenyl | 33 | | 116000 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | 253000 | 121000 | QJ |
| 3,3',4-Trichlorobiphenyl | 35 | 1410000 | 120000 | QJ |
| 3,3',5-Trichlorobiphenyl | 36 | | 112000 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 100000 | B |
| 3,4,5-Trichlorobiphenyl | 38 | | 115000 | U |
| 3,4',5-Trichlorobiphenyl | 39 | 583000 | 107000 | J |

City Ditch Sediment Sample PCB Congener Results
CD-3
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 43000000 | 200000 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 200000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 20800000 | 221000 | |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 2230000 | 183000 | C |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 180000 | BC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 16500000 | 209000 | QC |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 5350000 | 244000 | |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 180000 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 13700000 | 200000 | |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | | 171000 | BC |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 11300000 | 201000 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 209000 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 192000 | B |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 201000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 540000 | 303000 | QJ |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | 722000 | 151000 | QJ |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 148000 | B |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 148000 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 145000 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 6440000 | 146000 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 12000000 | 146000 | |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 140000 | BC |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 146000 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 2320000 | 139000 | |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 30900000 | 145000 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 180000 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 138000 | B |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 1940000 | 129000 | |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 310000 | 134000 | QJ |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 171000 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 140000 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 200000 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 605000 | 143000 | J |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 183000 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 140000 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 146000 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 140000 | C61 |
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 4040000 | 129000 | Q |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 143000 | U |

City Ditch Sediment Sample PCB Congener Results
CD-3
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 666000 | 120000 | QJ |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 128000 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | 274000 | 128000 | QJ |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 10900000 | 354000 | |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 3720000 | 367000 | Q |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 19700000 | 358000 | Q |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 14000000 | 254000 | C |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 51700000 | 254000 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 254000 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 12200000 | 316000 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | 1020000 | 342000 | QJ |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 92100000 | 265000 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 316000 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 19400000 | 321000 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 334000 | 310000 | QCJ |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 766000 | 338000 | J |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 75200000 | 310000 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 805000 | 236000 | QJ |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 254000 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 2340000 | 315000 | QC |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 30600000 | 252000 | C |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 310000 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 265000 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 315000 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 1070000 | 290000 | J |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 229000 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 29200000 | 149000 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 155000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 2940000 | 153000 | C |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 254000 | C86 |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | 4070000 | 137000 | |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 108000000 | 225000 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 216000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 252000 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 265000 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 1590000 | 107000 | J |
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 225000 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 254000 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 254000 | C85 |

City Ditch Sediment Sample PCB Congener Results
CD-3
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | 58900000 | 130000 | |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 254000 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | 383000 | 208000 | QJ |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 226000 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | 1190000 | 161000 | J |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 899000 | 122000 | QJ |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 153000 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 254000 | C86J |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | 591000 | 182000 | J |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 142000 | UJ |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 22500000 | 300000 | CJ |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 193000000 | 308000 | CJ |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 10800000 | 391000 | QJ |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | 1900000 | 394000 | J |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 64000000 | 384000 | J |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 2770000 | 362000 | J |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 10200000 | 394000 | CJ |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 99600000 | 555000 | CJ |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 31600000 | 411000 | J |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 21000000 | 294000 | CJ |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 308000 | C129J |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 2370000 | 331000 | CJ |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 331000 | C139J |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 48300000 | 350000 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 388000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 394000 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 13800000 | 542000 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 420000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 34000000 | 317000 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 169000000 | 318000 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 552000 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 318000 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 402000 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 555000 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 397000 | U |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 192000000 | 271000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 2880000 | 474000 | |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 385000 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 12100000 | 245000 | C |

City Ditch Sediment Sample PCB Congener Results
CD-3
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 245000 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 16800000 | 236000 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 3660000 | 247000 | |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 275000 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 257000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 247000 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 308000 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 294000 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 281000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 300000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 6610000 | 191000 | |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 271000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 261000 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 55400000 | 217000 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 22000000 | 274000 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 13800000 | 277000 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 274000 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 79500000 | 257000 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 2700000 | 246000 | |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 10400000 | 195000 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 46500000 | 275000 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 13800000 | 264000 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 32900000 | 193000 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 130000000 | 182000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 257000 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 249000 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 49800000 | 246000 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 181000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 246000 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 197000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 81700000 | 232000 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 189000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 2390000 | 167000 | |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 13200000 | 198000 | |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 3140000 | 193000 | |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 209000 | UJ |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 209000 | C180J |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 32300000 | 269000 | J |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 17200000 | 295000 | J |

## City Ditch Sediment Sample PCB Congener Results
## CD-3
## 12/8/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 25300000 | 403000 | J |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 7920000 | 294000 | QCJ |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 48800000 | 400000 | CJ |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 400000 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 294000 | C197J |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 6110000 | 294000 | Q |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 10600000 | 310000 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 30800000 | 369000 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 303000 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 1230000 | 187000 | QJ |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 6590000 | 101000 | Q |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 978000 | 91100 | J |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 2200000 | 87800 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 3570000 | 108000 | Q |
| **TOTAL CONGENER RESULTS =** | | 2485125000 | | |

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

UJ = The analyte was not detected above the reported sample quantiation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of reported quanititation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

pg/kg = picograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Data validated by SECOR personnel

City Ditch Sediment Sample PCB Congener Results
CD-30 (Duplicate of CD-3)
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 51500 | B |
| 3-Chlorobiphenyl | 2 | | 47100 | U |
| 4-Chlorobiphenyl | 3 | | 40900 | BJ |
| 2,2'-Dichlorobiphenyl | 4 | | 534000 | JB |
| 2,3-Dichlorobiphenyl | 5 | 433000 | 333000 | QJ |
| 2,3'-Dichlorobiphenyl | 6 | | 306000 | QB |
| 2,4-Dichlorobiphenyl | 7 | 918000 | 320000 | QJ |
| 2,4'-Dichlorobiphenyl | 8 | | 306000 | B |
| 2,5-Dichlorobiphenyl | 9 | 1160000 | 321000 | QJ |
| 2,6-Dichlorobiphenyl | 10 | 1510000 | 332000 | QJ |
| 3,3'-Dichlorobiphenyl | 11 | 1330000 | 320000 | QJ |
| 3,4-Dichlorobiphenyl | 12 | 3320000 | 310000 | QC |
| 3,4'-Dichlorobiphenyl | 13 | | 310000 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 306000 | U |
| 4,4'-Dichlorobiphenyl | 15 | 18200000 | 247000 | |
| 2,2',3-Trichlorobiphenyl | 16 | | 338000 | B |
| 2,2',4-Trichlorobiphenyl | 17 | | 272000 | JB |
| 2,2',5-Trichlorobiphenyl | 18 | | 225000 | JBC |
| 2,2',6-Trichlorobiphenyl | 19 | 7210000 | 294000 | |
| 2,3,3'-Trichlorobiphenyl | 20 | | 99700 | BC |
| 2,3,4-Trichlorobiphenyl | 21 | | 103000 | BC |
| 2,3,4'-Trichlorobiphenyl | 22 | | 108000 | B |
| 2,3,5-Trichlorobiphenyl | 23 | | 111000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | 668000 | 198000 | QJ |
| 2,3',4-Trichlorobiphenyl | 25 | | 93900 | JB |
| 2,3',5-Trichlorobiphenyl | 26 | | 103000 | JB |
| 2,3',6-Trichlorobiphenyl | 27 | 6470000 | 192000 | |
| 2,4,4'-Trichlorobiphenyl | 28 | | 99700 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 103000 | C26JB |
| 2,4,6-Trichlorobiphenyl | 30 | | 225000 | C18 |
| 2,4',5-Trichlorobiphenyl | 31 | | 102000 | B |
| 2,4',6-Trichlorobiphenyl | 32 | | 176000 | JB |
| 2,3',4'-Trichlorobiphenyl | 33 | | 103000 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | 240000 | 108000 | QJ |
| 3,3',4-Trichlorobiphenyl | 35 | 1740000 | 107000 | |
| 3,3',5-Trichlorobiphenyl | 36 | | 99700 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 89000 | B |
| 3,4,5-Trichlorobiphenyl | 38 | | 102000 | U |

City Ditch Sediment Sample PCB Congener Results
CD-30 (Duplicate of CD-3)
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,4',5-Trichlorobiphenyl | 39 | 546000 | 94600 | J |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 57200000 | 257000 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 257000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 27500000 | 285000 | |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 3400000 | 235000 | QC |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 232000 | JBC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | | 269000 | QCJB |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 6800000 | 313000 | Q |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 232000 | C44JB |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | 18400000 | 257000 | Q |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | | 220000 | JBC |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 16700000 | 259000 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 269000 | C45JB |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 247000 | JB |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 259000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 1100000 | 389000 | QJ |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | 1510000 | 194000 | QJ |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | | 191000 | JB |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 191000 | QUJB |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 186000 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 9420000 | 187000 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 15600000 | 188000 | |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 180000 | JBC |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 187000 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 2890000 | 178000 | |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 41400000 | 186000 | |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 232000 | C44JB |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 177000 | JB |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 2460000 | 166000 | |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 451000 | 172000 | QJ |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 220000 | C49JB |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 180000 | C61JB |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 257000 | C40JB |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | 723000 | 183000 | J |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 235000 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 180000 | C61JB |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 187000 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 180000 | C61JB |

City Ditch Sediment Sample PCB Congener Results
CD-30 (Duplicate of CD-3)
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 5750000 | 165000 | |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 183000 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 957000 | 155000 | QJ |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 165000 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 135000 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 11600000 | 404000 | Q |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 4340000 | 418000 | |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | | 408000 | JB |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | | 289000 | JBC |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | | 290000 | QCJB |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 290000 | C86JB |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 16000000 | 360000 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | 1480000 | 390000 | J |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 111000000 | 302000 | JBC |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 360000 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | | 366000 | JB |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 1220000 | 353000 | QCJ |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 868000 | 385000 | QJ |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | | 353000 | JB |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 1140000 | 269000 | QJ |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 290000 | C86JB |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 5190000 | 359000 | C |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | | 288000 | JBC |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 353000 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 302000 | C90JB |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 359000 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 1140000 | 331000 | QJ |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 261000 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | | 171000 | JB |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 176000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 3390000 | 156000 | QC |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | | 174000 | C86JB |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 290000 | JB |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | | 256000 | JBC |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 246000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 288000 | C99JB |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 302000 | C90JB |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 1850000 | 135000 | |

City Ditch Sediment Sample PCB Congener Results
CD-30 (Duplicate of CD-3)
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 256000 | C110JB |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 289000 | C85JB |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 289000 | C85JB |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 144000 | JB |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 290000 | C86JB |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 237000 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 258000 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | 1240000 | 183000 | J |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 1050000 | 136000 | QJ |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 174000 | C108J |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 290000 | C86JB |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | 374000 | 194000 | QJ |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 162000 | UJ |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | | 348000 | JBC |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | | 357000 | JBC |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | | 453000 | JB |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | 2860000 | 456000 | J |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | | 444000 | JB |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 3380000 | 418000 | QJ |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | | 456000 | JBC |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | | 642000 | JBC |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 43500000 | 476000 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | | 340000 | JBC |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 357000 | C129JB |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 3270000 | 382000 | C |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 382000 | C139J |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | | 405000 | JB |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 448000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 456000 | C134JB |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | | 627000 | JB |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 486000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | | 367000 | JB |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | | 368000 | JBC |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 639000 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 368000 | C147JB |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 465000 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 642000 | C135JB |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 459000 | U |

City Ditch Sediment Sample PCB Congener Results
CD-30 (Duplicate of CD-3)
12/8/2004
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | | 313000 | CJB |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 549000 | JB |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 445000 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | | 275000 | JBC |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 275000 | C156JB |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | | 273000 | JB |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | | 286000 | JB |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | 571000 | 318000 | QJ |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 297000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 286000 | JB |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 357000 | C129JB |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 340000 | C137JB |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 325000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 348000 | C128JB |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | | 226000 | QJB |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 313000 | C153JB |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 312000 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | | 296000 | JB |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | | 357000 | JBC |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | | 362000 | JB |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 357000 | C171JB |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | | 335000 | JB |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | | 321000 | JB |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | | 254000 | JB |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | | 358000 | JB |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | | 345000 | JB |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | | 251000 | JB |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | | 227000 | JBC |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 335000 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 325000 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | | 321000 | JBC |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 236000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 321000 | C183JB |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 257000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | | 303000 | JB |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 246000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | | 219000 | QJB |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | | 258000 | QJB |

## City Ditch Sediment Sample PCB Congener Results
## CD-30 (Duplicate of CD-3)
## 12/8/2004
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (ug/kg) | Detection Limit (ug/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | | 252000 | JB |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 272000 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 273000 | C180JB |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | | 317000 | JB |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | | 347000 | JB |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | | 475000 | JB |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | | 347000 | CJB |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | | 472000 | JBC |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 472000 | C198JB |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 347000 | C197JB |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | | 346000 | JB |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | | 366000 | JB |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | | 435000 | JB |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 357000 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | | 221000 | UJB |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | | 168000 | JB |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 1180000 | 152000 | QJ |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 3460000 | 146000 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | | 157000 | JB |
| **TOTAL CONGENER RESULTS =** | | **476,109,000** | | |

Notes:

Sediment sample collected at a depth of 0-3"

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

ug/kg = micrograms per kilogram

PCB congeners analyzed by USEPA Method 1668A.

Data validated by SECOR personnel

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-1
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 108000 | U |
| 3-Chlorobiphenyl | 2 | | 131000 | U |
| 4-Chlorobiphenyl | 3 | | 143000 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 1410000 | U |
| 2,3-Dichlorobiphenyl | 5 | | 1230000 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 1080000 | U |
| 2,4-Dichlorobiphenyl | 7 | | 1130000 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 1080000 | U |
| 2,5-Dichlorobiphenyl | 9 | | 1100000 | U |
| 2,6-Dichlorobiphenyl | 10 | | 1200000 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 1180000 | U |
| 3,4-Dichlorobiphenyl | 12 | | 1150000 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 1150000 | U |
| 3,5-Dichlorobiphenyl | 14 | | 968000 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 1240000 | U |
| 2,2',3-Trichlorobiphenyl | 16 | | 521000 | U |
| 2,2',4-Trichlorobiphenyl | 17 | | 450000 | U |
| 2,2',5-Trichlorobiphenyl | 18 | | 379000 | U |
| 2,2',6-Trichlorobiphenyl | 19 | 1820000 | 500000 | J |
| 2,3,3'-Trichlorobiphenyl | 20 | | 250000 | BCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 249000 | BC |
| 2,3,4'-Trichlorobiphenyl | 22 | | 267000 | U |
| 2,3,5-Trichlorobiphenyl | 23 | | 268000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 332000 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 2730000 | 227000 | |
| 2,3',5-Trichlorobiphenyl | 26 | | 254000 | U |
| 2,3',6-Trichlorobiphenyl | 27 | | 312000 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 250000 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 254000 | U |
| 2,4,6-Trichlorobiphenyl | 30 | | 379000 | U |
| 2,4',5-Trichlorobiphenyl | 31 | | 250000 | QBJ |
| 2,4',6-Trichlorobiphenyl | 32 | 5660000 | 294000 | |
| 2,3',4'-Trichlorobiphenyl | 33 | | 249000 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 264000 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 276000 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 271000 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 666000 | 275000 | QJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 261000 | U |
| 3,4',5-Trichlorobiphenyl | 39 | | 247000 | U |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-1
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 28100000 | 549000 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 549000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 2300000 | 571000 | J |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 6160000 | 511000 | C |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 476000 | BC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 211000000 | 562000 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 3090000 | 694000 | QJ |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 476000 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 565000 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 57600000 | 443000 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 75600000 | 520000 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 562000 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 526000 | B |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 520000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 29100000 | 653000 | |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 421000 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 1260000 | 398000 | J |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 398000 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 387000 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 4440000 | 374000 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | | 424000 | U |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 374000 | BC |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 374000 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 359000 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 1460000 | 357000 | J |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 476000 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 381000 | B |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 1190000 | 343000 | J |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 3260000 | 369000 | |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 443000 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 374000 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 549000 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 397000 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 511000 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 374000 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 374000 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 374000 | C61 |
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 1120000 | 394000 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 431000 | U |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-1
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | 316000 | 330000 | QJ |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 367000 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 394000 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 1790000 | 1030000 | QJ |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 95600000 | 875000 | C |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 8990000 | 1020000 | |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 4430000 | 705000 | QC |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 48600000 | 704000 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 704000 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 36100000 | 882000 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 971000 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 229000000 | 713000 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 882000 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 32400000 | 851000 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 55200000 | 835000 | C |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 14300000 | 964000 | |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 146000000 | 854000 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 7120000 | 666000 | QJ |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 704000 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 36100000 | 822000 | C |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | | 875000 | C83 |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 835000 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 713000 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 822000 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 18100000 | 812000 | J |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | 6610000 | 603000 | QJ |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 11400000 | 407000 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 465000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 4160000 | 441000 | QJ |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | 1850000 | 450000 | CJ |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 704000 | C86 |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 117000000 | 611000 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 584000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 628000 | U |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 713000 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 961000 | 381000 | J |
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 611000 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 705000 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 705000 | C85J |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-1
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 429000 | B |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 704000 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 592000 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 612000 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 468000 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 730000 | 401000 | QJ |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 450000 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 704000 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 418000 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 420000 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 66800000 | 677000 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 877000000 | 691000 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 26400000 | 917000 | |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | 3780000 | 927000 | |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 210000000 | 899000 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 9560000 | 819000 | |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 31400000 | 917000 | C |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 373000000 | 1070000 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 107000000 | 779000 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 73200000 | 674000 | C |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 691000 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 3590000 | 769000 | C |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 769000 | C139 |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 248000000 | 862000 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 903000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 917000 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 49500000 | 1040000 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 770000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 126000000 | 738000 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | | 771000 | BC |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | 2110000 | 1070000 | QJ |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 771000 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | 2950000 | 743000 | J |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 1070000 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | 2470000 | 737000 | J |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 963000000 | 595000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 13700000 | 874000 | |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 696000 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 53100000 | 650000 | C |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-1
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
*Wilmington, Delaware*

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 650000 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 74200000 | 532000 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 22000000 | 579000 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 691000 | C129 |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 565000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 573000 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 691000 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 674000 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 643000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 677000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 24900000 | 460000 | |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 595000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | 1230000 | 475000 | QJR |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 538000000 | 863000 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 164000000 | 867000 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 94200000 | 866000 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 867000 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 510000000 | 788000 | J |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 21000000 | 769000 | |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 58500000 | 568000 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 297000000 | 829000 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 95200000 | 827000 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 189000000 | 600000 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 1280000000 | 645000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | 2200000 | 747000 | J |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 726000 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 384000000 | 765000 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 606000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 765000 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 596000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 584000000 | 710000 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 558000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 19900000 | 475000 | |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 109000000 | 592000 | |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 23900000 | 568000 | |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 644000 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 645000 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 274000000 | 586000 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 122000000 | 641000 | |

## East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
## DD-1
## July 11, 2005
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 156000000 | 750000 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 42400000 | 522000 | C |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 265000000 | 755000 | C |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 755000 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 522000 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 30900000 | 500000 | |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 37200000 | 564000 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 170000000 | 679000 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 530000 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 14100000 | 475000 | |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 42000000 | 682000 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 6660000 | 462000 | |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 6650000 | 474000 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | 1950000 | 517000 | J |

**TOTAL = 10,216,963,000**

Notes:

Data has been validated by SECOR personnel.

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

R= Samples rejected due to defficiencies in ability to analyze and meet quality control

pg/kg = Picograms per kilogram.

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-5 (Blind duplicate of DD-1)
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 118000 | U |
| 3-Chlorobiphenyl | 2 | | 147000 | U |
| 4-Chlorobiphenyl | 3 | | 165000 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 1390000 | U |
| 2,3-Dichlorobiphenyl | 5 | | 1130000 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 992000 | U |
| 2,4-Dichlorobiphenyl | 7 | | 1030000 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 989000 | U |
| 2,5-Dichlorobiphenyl | 9 | | 1010000 | U |
| 2,6-Dichlorobiphenyl | 10 | | 1100000 | U |
| 3,3'-Dichlorobiphenyl | 11 | | 1080000 | U |
| 3,4-Dichlorobiphenyl | 12 | | 1060000 | U |
| 3,4'-Dichlorobiphenyl | 13 | | 1060000 | U |
| 3,5-Dichlorobiphenyl | 14 | | 886000 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 1070000 | U |
| 2,2',3-Trichlorobiphenyl | 16 | | 561000 | U |
| 2,2',4-Trichlorobiphenyl | 17 | | 484000 | U |
| 2,2',5-Trichlorobiphenyl | 18 | | 408000 | U |
| 2,2',6-Trichlorobiphenyl | 19 | 1180000 | 538000 | J |
| 2,3,3'-Trichlorobiphenyl | 20 | | 251000 | QBCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 250000 | BC |
| 2,3,4'-Trichlorobiphenyl | 22 | | 267000 | U |
| 2,3,5-Trichlorobiphenyl | 23 | | 269000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 357000 | U |
| 2,3',4-Trichlorobiphenyl | 25 | 1750000 | 227000 | QJ |
| 2,3',5-Trichlorobiphenyl | 26 | | 255000 | U |
| 2,3',6-Trichlorobiphenyl | 27 | | 335000 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 251000 | C20 J |
| 2,4,5-Trichlorobiphenyl | 29 | | 255000 | U |
| 2,4,6-Trichlorobiphenyl | 30 | | 408000 | U |
| 2,4',5-Trichlorobiphenyl | 31 | | 251000 | QBJ |
| 2,4',6-Trichlorobiphenyl | 32 | 4870000 | 316000 | |
| 2,3',4'-Trichlorobiphenyl | 33 | | 250000 | C21 |
| 2,3',5'-Trichlorobiphenyl | 34 | | 265000 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 277000 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 272000 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | | 276000 | QJB |
| 3,4,5-Trichlorobiphenyl | 38 | | 261000 | U |
| 3,4',5-Trichlorobiphenyl | 39 | | 247000 | U |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-5 (Blind duplicate of DD-1)
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 23700000 | 535000 | C |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 535000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | 1370000 | 557000 | QJR |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | 6160000 | 498000 | C |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | | 465000 | BC |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 158000000 | 548000 | C |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | 3200000 | 677000 | |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 465000 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 551000 | U |
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 47500000 | 432000 | C |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 55200000 | 507000 | C |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 548000 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | | 513000 | QBJ |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 507000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | 20800000 | 667000 | |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 410000 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 1560000 | 388000 | J |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 388000 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 378000 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | 3760000 | 365000 | C |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 833000 | 414000 | J |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | | 364000 | BC |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 365000 | C59 |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | 854000 | 350000 | QJ |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 1240000 | 348000 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 465000 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | | 372000 | B |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | 1200000 | 334000 | QJR |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | 3820000 | 360000 | |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 432000 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 364000 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 535000 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 388000 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 498000 | C43 |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 364000 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 365000 | C59 |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 364000 | C61 |
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 1820000 | 396000 | J |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 421000 | U |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-5 (Blind duplicate of DD-1)
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 322000 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 358000 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 372000 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 2130000 | 857000 | QJ |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 77300000 | 730000 | C |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 6200000 | 854000 | QJ |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 6790000 | 588000 | C |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 40600000 | 587000 | C |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 587000 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 29200000 | 735000 | C |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 810000 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 189000000 | 594000 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 735000 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 26400000 | 710000 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | 53500000 | 696000 | C |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | 11300000 | 804000 | |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 107000000 | 712000 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | 5780000 | 556000 | |
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 587000 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | 26900000 | 686000 | C |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | | 730000 | C83 |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 696000 | C93 |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 594000 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 686000 | C98 |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | 15400000 | 677000 | |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | 6320000 | 503000 | |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 10800000 | 360000 | |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 435000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 5610000 | 413000 | J |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | 1310000 | 421000 | CJ |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 587000 | C86 |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 96100000 | 509000 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 487000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 524000 | U |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 594000 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | 823000 | 363000 | J |
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 509000 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 588000 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 588000 | C85 |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
*DD-5 (Blind duplicate of DD-1)*
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | | 379000 | B |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 587000 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | 1200000 | 493000 | J |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 510000 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 438000 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | | 390000 | U |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 421000 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 587000 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 419000 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 393000 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 55300000 | 721000 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 742000000 | 736000 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 23600000 | 977000 | |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | 3740000 | 989000 | |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 181000000 | 958000 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 9800000 | 873000 | |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 25200000 | 977000 | C |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 313000000 | 1110000 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 91500000 | 806000 | |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 62900000 | 719000 | C |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 736000 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | 2690000 | 820000 | QCJ |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 820000 | C139 |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 203000000 | 919000 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 963000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 977000 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 42200000 | 1070000 | |
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 797000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 103000000 | 787000 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | | 822000 | BC |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | 2890000 | 1100000 | J |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 822000 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | 2630000 | 768000 | J |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 1110000 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | 1760000 | 762000 | QJ |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 770000000 | 634000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | 12800000 | 904000 | |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | 1310000 | 719000 | J |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 47600000 | 695000 | C |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-5 (Blind duplicate of DD-1)
July 11, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 695000 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 62900000 | 567000 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 17100000 | 617000 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 736000 | C129 |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 602000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 611000 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 736000 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 719000 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 686000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 721000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 20700000 | 482000 | |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 634000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | 1060000 | 515000 | QJR |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 411000000 | 783000 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 123000000 | 814000 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 68800000 | 813000 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 814000 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 389000000 | 739000 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 14700000 | 722000 | |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 44100000 | 533000 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 227000000 | 778000 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 73900000 | 777000 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 148000000 | 564000 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 951000000 | 606000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | 1580000 | 701000 | J |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | 1690000 | 682000 | J |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 285000000 | 718000 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 569000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 718000 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 560000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 441000000 | 667000 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 536000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 15100000 | 452000 | |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 87800000 | 556000 | |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 17200000 | 533000 | |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 605000 | U |
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 606000 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 209000000 | 574000 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 92900000 | 629000 | |

## East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
## DD-5 (Blind duplicate of DD-1)
## July 11, 2005
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 112000000 | 723000 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 29000000 | 503000 | C |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 195000000 | 727000 | C |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 727000 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 503000 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 20900000 | 481000 | |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 26400000 | 544000 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 125000000 | 654000 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 511000 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 11400000 | 466000 | |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 34200000 | 720000 | |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | 5040000 | 476000 | |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 5100000 | 480000 | |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphen | 209 | 1570000 | 622000 | J |
| | | **TOTAL = 8,025,540,000** | | |

NOTES:

Data has been validated by SECOR personnel.

B = Analyte is present in the associated method blank at a reportable level.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = Estimated value.

U = Not detected.

Q = Estimated maximum possible concentration.

R= Samples rejected due to defficiencies in ability to analyze and meet quality control

pg/kg = Picograms per kilogram.

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-2
April 13, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2-Chlorobiphenyl | 1 | | 483000 | U |
| 3-Chlorobiphenyl | 2 | | 442000 | U |
| 4-Chlorobiphenyl | 3 | | 384000 | U |
| 2,2'-Dichlorobiphenyl | 4 | | 6310000 | U |
| 2,3-Dichlorobiphenyl | 5 | | 3940000 | U |
| 2,3'-Dichlorobiphenyl | 6 | | 3610000 | U |
| 2,4-Dichlorobiphenyl | 7 | | 3770000 | U |
| 2,4'-Dichlorobiphenyl | 8 | | 3620000 | U |
| 2,5-Dichlorobiphenyl | 9 | | 3790000 | U |
| 2,6-Dichlorobiphenyl | 10 | | 3920000 | U |
| 3,3'-Dichlorobiphenyl | 11 | 6640000 | 3780000 | QJ |
| 3,4-Dichlorobiphenyl | 12 | | 3660000 | BQCJ |
| 3,4'-Dichlorobiphenyl | 13 | | 3660000 | C12 |
| 3,5-Dichlorobiphenyl | 14 | | 3620000 | U |
| 4,4'-Dichlorobiphenyl | 15 | | 2910000 | QBJ |
| 2,2',3-Trichlorobiphenyl | 16 | | 2620000 | U |
| 2,2',4-Trichlorobiphenyl | 17 | | 2120000 | U |
| 2,2',5-Trichlorobiphenyl | 18 | | 1750000 | U |
| 2,2',6-Trichlorobiphenyl | 19 | | 2280000 | U |
| 2,3,3'-Trichlorobiphenyl | 20 | 4050000 | 774000 | QCJ |
| 2,3,4-Trichlorobiphenyl | 21 | | 801000 | U |
| 2,3,4'-Trichlorobiphenyl | 22 | | 840000 | U |
| 2,3,5-Trichlorobiphenyl | 23 | | 860000 | U |
| 2,3,6-Trichlorobiphenyl | 24 | | 1530000 | U |
| 2,3',4-Trichlorobiphenyl | 25 | | 729000 | U |
| 2,3',5-Trichlorobiphenyl | 26 | | 803000 | U |
| 2,3',6-Trichlorobiphenyl | 27 | | 1490000 | U |
| 2,4,4'-Trichlorobiphenyl | 28 | | 774000 | C20 |
| 2,4,5-Trichlorobiphenyl | 29 | | 803000 | U |
| 2,4,6-Trichlorobiphenyl | 30 | | 1750000 | U |
| 2,4',5-Trichlorobiphenyl | 31 | 3260000 | 790000 | J |
| 2,4',6-Trichlorobiphenyl | 32 | | 1370000 | U |
| 2,3',4'-Trichlorobiphenyl | 33 | | 801000 | U |
| 2,3',5'-Trichlorobiphenyl | 34 | | 836000 | U |
| 3,3',4-Trichlorobiphenyl | 35 | | 829000 | U |
| 3,3',5-Trichlorobiphenyl | 36 | | 774000 | U |
| 3,4,4'-Trichlorobiphenyl | 37 | 1130000 | 691000 | QJ |
| 3,4,5-Trichlorobiphenyl | 38 | | 794000 | U |
| 3,4',5-Trichlorobiphenyl | 39 | | 735000 | U |
| 2,2',3,3'-Tetrachlorobiphenyl | 40 | 6050000 | 1760000 | QCJ |
| 2,2',3,4-Tetrachlorobiphenyl | 41 | | 1760000 | C40 |
| 2,2',3,4'-Tetrachlorobiphenyl | 42 | | 1960000 | U |
| 2,2',3,5-Tetrachlorobiphenyl | 43 | | 1610000 | U |
| 2,2',3,5'-Tetrachlorobiphenyl | 44 | 23100000 | 1590000 | CJ |
| 2,2',3,6-Tetrachlorobiphenyl | 45 | 6730000 | 1840000 | CJ |
| 2,2',3,6'-Tetrachlorobiphenyl | 46 | | 2150000 | U |
| 2,2',4,4'-Tetrachlorobiphenyl | 47 | | 1590000 | C44 |
| 2,2',4,5-Tetrachlorobiphenyl | 48 | | 1760000 | U |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-2
April 13, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',4,5'-Tetrachlorobiphenyl | 49 | 14300000 | 1510000 | CJ |
| 2,2',4,6-Tetrachlorobiphenyl | 50 | 4400000 | 1780000 | CJ |
| 2,2',4,6'-Tetrachlorobiphenyl | 51 | | 1840000 | C45 |
| 2,2',5,5'-Tetrachlorobiphenyl | 52 | 22800000 | 1690000 | QJ |
| 2,2',5,6'-Tetrachlorobiphenyl | 53 | | 1780000 | C50 |
| 2,2',6,6'-Tetrachlorobiphenyl | 54 | | 2670000 | U |
| 2,3,3',4-Tetrachlorobiphenyl | 55 | | 1330000 | U |
| 2,3,3',4'-Tetrachlorobiphenyl | 56 | 4950000 | 1310000 | QJ |
| 2,3,3',5-Tetrachlorobiphenyl | 57 | | 1310000 | U |
| 2,3,3',5'-Tetrachlorobiphenyl | 58 | | 1280000 | U |
| 2,3,3',6-Tetrachlorobiphenyl | 59 | | 1290000 | U |
| 2,3,4,4'-Tetrachlorobiphenyl | 60 | 2590000 | 1290000 | QJ |
| 2,3,4,5-Tetrachlorobiphenyl | 61 | 27000000 | 1230000 | CJ |
| 2,3,4,6-Tetrachlorobiphenyl | 62 | | 1290000 | U |
| 2,3,4',5-Tetrachlorobiphenyl | 63 | | 1220000 | U |
| 2,3,4',6-Tetrachlorobiphenyl | 64 | 3940000 | 1280000 | QJ |
| 2,3,5,6-Tetrachlorobiphenyl | 65 | | 1590000 | C44 |
| 2,3',4,4'-Tetrachlorobiphenyl | 66 | 13100000 | 1220000 | J |
| 2,3',4,5-Tetrachlorobiphenyl | 67 | | 1140000 | U |
| 2,3',4,5'-Tetrachlorobiphenyl | 68 | | 1180000 | U |
| 2,3',4,6-Tetrachlorobiphenyl | 69 | | 1510000 | C49 |
| 2,3',4',5-Tetrachlorobiphenyl | 70 | | 1230000 | C61 |
| 2,3',4',6-Tetrachlorobiphenyl | 71 | | 1760000 | C40 |
| 2,3',5,5'-Tetrachlorobiphenyl | 72 | | 1260000 | U |
| 2,3',5',6-Tetrachlorobiphenyl | 73 | | 1610000 | U |
| 2,4,4',5-Tetrachlorobiphenyl | 74 | | 1230000 | C61 |
| 2,4,4',6-Tetrachlorobiphenyl | 75 | | 1290000 | U |
| 2,3',4',5'-Tetrachlorobiphenyl | 76 | | 1230000 | C61 |
| 3,3',4,4'-Tetrachlorobiphenyl | 77 | 3540000 | 1140000 | QJ |
| 3,3',4,5-Tetrachlorobiphenyl | 78 | | 1260000 | U |
| 3,3',4,5'-Tetrachlorobiphenyl | 79 | | 1060000 | U |
| 3,3',5,5'-Tetrachlorobiphenyl | 80 | | 1130000 | U |
| 3,4,4',5-Tetrachlorobiphenyl | 81 | | 1120000 | U |
| 2,2',3,3',4-Pentachlorobiphenyl | 82 | 6870000 | 2810000 | J |
| 2,2',3,3',5-Pentachlorobiphenyl | 83 | 5130000 | 2920000 | QJ |
| 2,2',3,3',6-Pentachlorobiphenyl | 84 | 13200000 | 2840000 | QJ |
| 2,2',3,4,4'-Pentachlorobiphenyl | 85 | 8130000 | 2020000 | QCJ |
| 2,2',3,4,5-Pentachlorobiphenyl | 86 | 53400000 | 2020000 | QC |
| 2,2',3,4,5'-Pentachlorobiphenyl | 87 | | 2020000 | C86 |
| 2,2',3,4,6-Pentachlorobiphenyl | 88 | 13100000 | 2510000 | QCJ |
| 2,2',3,4,6'-Pentachlorobiphenyl | 89 | | 2720000 | U |
| 2,2',3,4',5-Pentachlorobiphenyl | 90 | 273000000 | 2110000 | C |
| 2,2',3,4',6-Pentachlorobiphenyl | 91 | | 2510000 | C88 |
| 2,2',3,5,5'-Pentachlorobiphenyl | 92 | 42900000 | 2550000 | |
| 2,2',3,5,6-Pentachlorobiphenyl | 93 | | 2460000 | U |
| 2,2',3,5,6'-Pentachlorobiphenyl | 94 | | 2690000 | U |
| 2,2',3,5',6-Pentachlorobiphenyl | 95 | 214000000 | 2460000 | |
| 2,2',3,6,6'-Pentachlorobiphenyl | 96 | | 1870000 | U |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-2
April 13, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,4',5'-Pentachlorobiphenyl | 97 | | 2020000 | C86 |
| 2,2',3,4',6'-Pentachlorobiphenyl | 98 | | 2500000 | U |
| 2,2',4,4',5-Pentachlorobiphenyl | 99 | 31200000 | 2000000 | CJ |
| 2,2',4,4',6-Pentachlorobiphenyl | 100 | | 2460000 | U |
| 2,2',4,5,5'-Pentachlorobiphenyl | 101 | | 2110000 | C90 |
| 2,2',4,5,6'-Pentachlorobiphenyl | 102 | | 2500000 | U |
| 2,2',4,5',6-Pentachlorobiphenyl | 103 | | 2300000 | U |
| 2,2',4,6,6'-Pentachlorobiphenyl | 104 | | 1820000 | U |
| 2,3,3',4,4'-Pentachlorobiphenyl | 105 | 34200000 | 1160000 | J |
| 2,3,3',4,5-Pentachlorobiphenyl | 106 | | 1230000 | U |
| 2,3,3',4',5-Pentachlorobiphenyl | 107 | 7930000 | 1090000 | J |
| 2,3,3',4,5'-Pentachlorobiphenyl | 108 | 3200000 | 1210000 | QCJ |
| 2,3,3',4,6-Pentachlorobiphenyl | 109 | | 2020000 | C86 |
| 2,3,3',4',6-Pentachlorobiphenyl | 110 | 195000000 | 1780000 | C |
| 2,3,3',5,5'-Pentachlorobiphenyl | 111 | | 1720000 | U |
| 2,3,3',5,6-Pentachlorobiphenyl | 112 | | 2000000 | C99 |
| 2,3,3',5',6-Pentachlorobiphenyl | 113 | | 2110000 | C90 |
| 2,3,4,4',5-Pentachlorobiphenyl | 114 | | 984000 | U |
| 2,3,4,4',6-Pentachlorobiphenyl | 115 | | 1780000 | C110 |
| 2,3,4,5,6-Pentachlorobiphenyl | 116 | | 2020000 | C85 |
| 2,3,4',5,6-Pentachlorobiphenyl | 117 | | 2020000 | C85 |
| 2,3',4,4',5-Pentachlorobiphenyl | 118 | 95200000 | 1020000 | |
| 2,3',4,4',6-Pentachlorobiphenyl | 119 | | 2020000 | C86 |
| 2,3',4,5,5'-Pentachlorobiphenyl | 120 | | 1650000 | U |
| 2,3',4,5',6-Pentachlorobiphenyl | 121 | | 1800000 | U |
| 2,3,3',4',5'-Pentachlorobiphenyl | 122 | | 1280000 | U |
| 2,3',4,4',5'-Pentachlorobiphenyl | 123 | 1180000 | 997000 | QJ |
| 2,3',4',5,5'-Pentachlorobiphenyl | 124 | | 1210000 | C108 |
| 2,3',4',5',6-Pentachlorobiphenyl | 125 | | 2020000 | C86 |
| 3,3',4,4',5-Pentachlorobiphenyl | 126 | | 1230000 | U |
| 3,3',4,5,5'-Pentachlorobiphenyl | 127 | | 1130000 | U |
| 2,2',3,3',4,4'-Hexachlorobiphenyl | 128 | 71500000 | 2420000 | C |
| 2,2',3,3',4,5-Hexachlorobiphenyl | 129 | 1060000000 | 2480000 | C |
| 2,2',3,3',4,5'-Hexachlorobiphenyl | 130 | 37900000 | 3150000 | J |
| 2,2',3,3',4,6-Hexachlorobiphenyl | 131 | | 3170000 | U |
| 2,2',3,3',4,6'-Hexachlorobiphenyl | 132 | 292000000 | 3090000 | |
| 2,2',3,3',5,5'-Hexachlorobiphenyl | 133 | 10700000 | 2910000 | QJ |
| 2,2',3,3',5,6-Hexachlorobiphenyl | 134 | 39200000 | 3170000 | QC |
| 2,2',3,3',5,6'-Hexachlorobiphenyl | 135 | 411000000 | 4460000 | C |
| 2,2',3,3',6,6'-Hexachlorobiphenyl | 136 | 139000000 | 3310000 | Q |
| 2,2',3,4,4',5-Hexachlorobiphenyl | 137 | 98300000 | 2370000 | QC |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 138 | | 2480000 | C129 |
| 2,2',3,4,4',6-Hexachlorobiphenyl | 139 | | 2660000 | U |
| 2,2',3,4,4',6'-Hexachlorobiphenyl | 140 | | 2660000 | U |
| 2,2',3,4,5,5'-Hexachlorobiphenyl | 141 | 281000000 | 2820000 | |
| 2,2',3,4,5,6-Hexachlorobiphenyl | 142 | | 3120000 | U |
| 2,2',3,4,5,6'-Hexachlorobiphenyl | 143 | | 3170000 | C134 |
| 2,2',3,4,5',6-Hexachlorobiphenyl | 144 | 62800000 | 4360000 | |

East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
DD-2
April 13, 2005
Amtrak Former Fueling Facility
4001 Vandever Avenue
Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,2',3,4,6,6'-Hexachlorobiphenyl | 145 | | 3380000 | U |
| 2,2',3,4',5,5'-Hexachlorobiphenyl | 146 | 143000000 | 2550000 | |
| 2,2',3,4',5,6-Hexachlorobiphenyl | 147 | 874000000 | 2560000 | C |
| 2,2',3,4',5,6'-Hexachlorobiphenyl | 148 | | 4440000 | U |
| 2,2',3,4',5',6-Hexachlorobiphenyl | 149 | | 2560000 | C147 |
| 2,2',3,4',6,6'-Hexachlorobiphenyl | 150 | | 3240000 | U |
| 2,2',3,5,5',6-Hexachlorobiphenyl | 151 | | 4460000 | C135 |
| 2,2',3,5,6,6'-Hexachlorobiphenyl | 152 | | 3200000 | U |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 153 | 1070000000 | 2180000 | C |
| 2,2',4,4',5,6'-Hexachlorobiphenyl | 154 | | 3820000 | U |
| 2,2',4,4',6,6'-Hexachlorobiphenyl | 155 | | 3100000 | U |
| 2,3,3',4,4',5-Hexachlorobiphenyl | 156 | 66400000 | 1960000 | C |
| 2,3,3',4,4',5'-Hexachlorobiphenyl | 157 | | 1960000 | C156 |
| 2,3,3',4,4',6-Hexachlorobiphenyl | 158 | 91500000 | 1900000 | |
| 2,3,3',4,5,5'-Hexachlorobiphenyl | 159 | 22200000 | 1990000 | J |
| 2,3,3',4,5,6-Hexachlorobiphenyl | 160 | | 2220000 | U |
| 2,3,3',4,5',6-Hexachlorobiphenyl | 161 | | 2070000 | U |
| 2,3,3',4',5,5'-Hexachlorobiphenyl | 162 | | 1990000 | U |
| 2,3,3',4',5,6-Hexachlorobiphenyl | 163 | | 2480000 | C129 |
| 2,3,3',4',5',6-Hexachlorobiphenyl | 164 | | 2370000 | C137 |
| 2,3,3',5,5',6-Hexachlorobiphenyl | 165 | | 2260000 | U |
| 2,3,4,4',5,6-Hexachlorobiphenyl | 166 | | 2420000 | C128 |
| 2,3',4,4',5,5'-Hexachlorobiphenyl | 167 | 30500000 | 1740000 | J |
| 2,3',4,4',5',6-Hexachlorobiphenyl | 168 | | 2180000 | C153 |
| 3,3',4,4',5,5'-Hexachlorobiphenyl | 169 | | 1800000 | U |
| 2,2',3,3',4,4',5-Heptachlorobiphenyl | 170 | 466000000 | 2290000 | |
| 2,2',3,3',4,4',6-Heptachlorobiphenyl | 171 | 154000000 | 2780000 | C |
| 2,2',3,3',4,5,5'-Heptachlorobiphenyl | 172 | 89600000 | 2810000 | |
| 2,2',3,3',4,5,6-Heptachlorobiphenyl | 173 | | 2780000 | C171 |
| 2,2',3,3',4,5,6'-Heptachlorobiphenyl | 174 | 512000000 | 2610000 | |
| 2,2',3,3',4,5',6-Heptachlorobiphenyl | 175 | 19700000 | 2500000 | J |
| 2,2',3,3',4,6,6'-Heptachlorobiphenyl | 176 | 61100000 | 1980000 | |
| 2,2',3,3',4,5',6'-Heptachlorobiphenyl | 177 | 296000000 | 2790000 | |
| 2,2',3,3',5,5',6-Heptachlorobiphenyl | 178 | 86200000 | 2680000 | |
| 2,2',3,3',5,6,6'-Heptachlorobiphenyl | 179 | 183000000 | 1960000 | |
| 2,2',3,4,4',5,5'-Heptachlorobiphenyl | 180 | 1120000000 | 2060000 | C |
| 2,2',3,4,4',5,6-Heptachlorobiphenyl | 181 | | 2600000 | U |
| 2,2',3,4,4',5,6'-Heptachlorobiphenyl | 182 | | 2530000 | U |
| 2,2',3,4,4',5',6-Heptachlorobiphenyl | 183 | 337000000 | 2490000 | C |
| 2,2',3,4,4',6,6'-Heptachlorobiphenyl | 184 | | 1840000 | U |
| 2,2',3,4,5,5',6-Heptachlorobiphenyl | 185 | | 2490000 | C183 |
| 2,2',3,4,5,6,6'-Heptachlorobiphenyl | 186 | | 2000000 | U |
| 2,2',3,4',5,5',6-Heptachlorobiphenyl | 187 | 523000000 | 2360000 | |
| 2,2',3,4',5,6,6'-Heptachlorobiphenyl | 188 | | 1910000 | U |
| 2,3,3',4,4',5,5'-Heptachlorobiphenyl | 189 | 21800000 | 1540000 | J |
| 2,3,3',4,4',5,6-Heptachlorobiphenyl | 190 | 112000000 | 2010000 | |
| 2,3,3',4,4',5',6-Heptachlorobiphenyl | 191 | 22400000 | 1960000 | QJ |
| 2,3,3',4,5,5',6-Heptachlorobiphenyl | 192 | | 2120000 | U |

## East Ditch Area Adjacent Drainage Ditches Sediment Sample PCB Congener Results
## DD-2
## April 13, 2005
## Amtrak Former Fueling Facility
## 4001 Vandever Avenue
## Wilmington, Delaware

| COMPOUND | IUPAC | Result (pg/kg) | Detection Limit (pg/kg) | Data Qualifier |
|---|---|---|---|---|
| 2,3,3',4',5,5',6-Heptachlorobiphenyl | 193 | | 2120000 | C180 |
| 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | 194 | 279000000 | 2460000 | |
| 2,2',3,3',4,4',5,6-Octachlorobiphenyl | 195 | 117000000 | 2700000 | |
| 2,2',3,3',4,4',5,6'-Octachlorobiphenyl | 196 | 154000000 | 3690000 | |
| 2,2',3,3',4,4',6,6'-Octachlorobiphenyl | 197 | 46000000 | 2700000 | C |
| 2,2',3,3',4,5,5',6-Octachlorobiphenyl | 198 | 274000000 | 3670000 | C |
| 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | 199 | | 3670000 | C198 |
| 2,2',3,3',4,5,6,6'-Octachlorobiphenyl | 200 | | 2700000 | C197 |
| 2,2',3,3',4,5',6,6'-Octachlorobiphenyl | 201 | 25200000 | 2690000 | QJ |
| 2,2',3,3',5,5',6,6'-Octachlorobiphenyl | 202 | 39900000 | 2840000 | |
| 2,2',3,4,4',5,5',6-Octachlorobiphenyl | 203 | 173000000 | 3380000 | |
| 2,2',3,4,4',5,6,6'-Octachlorobiphenyl | 204 | | 2770000 | U |
| 2,3,3',4,4',5,5',6-Octachlorobiphenyl | 205 | 12300000 | 1710000 | QJ |
| 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl | 206 | 30900000 | 2540000 | J |
| 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl | 207 | | 2290000 | U |
| 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl | 208 | 7080000 | 2210000 | J |
| 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl | 209 | | 1720000 | U |
| | **TOTAL =** | **11,108,400,000** | | |

Notes:

*Data has been validated by SECOR personnel.*

B = The analyte was detected in the method, field and/or trip blank.

C = Co-eluting congener. Reported value is the total sum of the co-eluting congener(s).

Cx = Corresponding number (x) represents the co-eluting congener. See (x) for the summed results.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

Q = Estimated maximum possible concentration.

pg/kg = Picograms per kilogram.

P:\Clients\Amtrak-APU\Phase 2 RI Laboratory Data\Attachments\Attachment D\[east ditch drainage ditches PCB cong results validated.xls]DD-2 validated wo B

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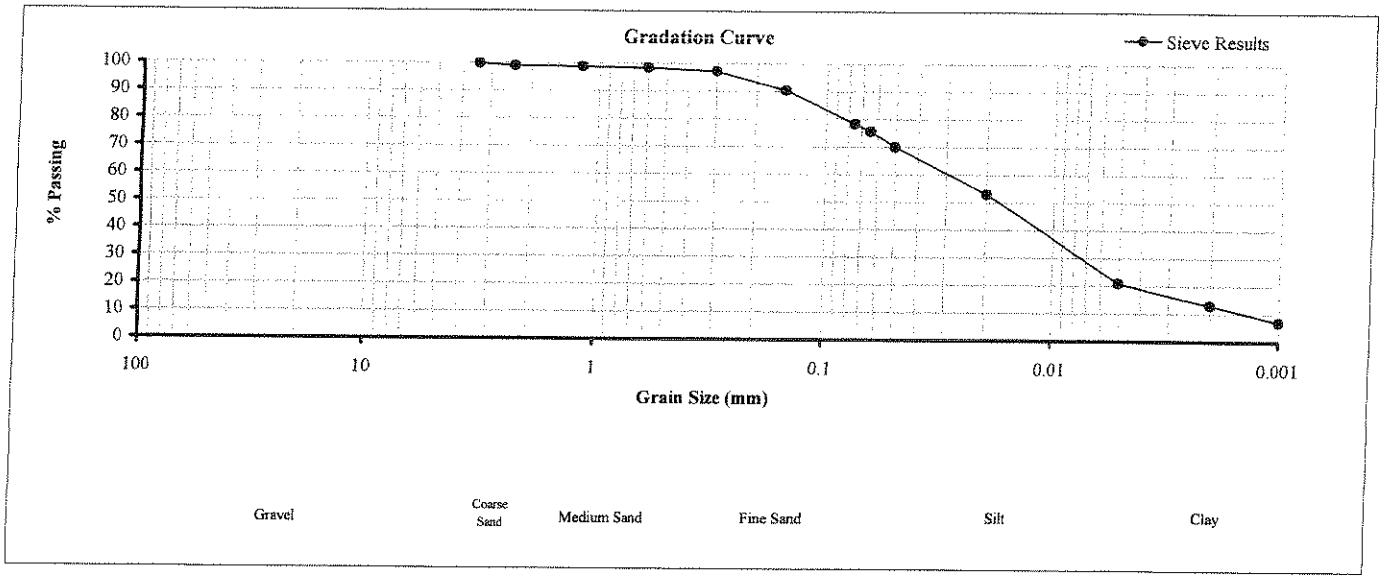
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BC SED-1** |
| **Date:** | **11/3/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.1 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 21.5 |
| Silt | .075mm to .005mm | 57.4 |
| Clay | Material smaller than .005mm | 21.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0015 |
| $D_{30}$ = | 0.0075 |
| $D_{60}$ = | 0.0298 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 19.9 |
| **Coefficient Of Curvature, $C_c$** | 1.3 |

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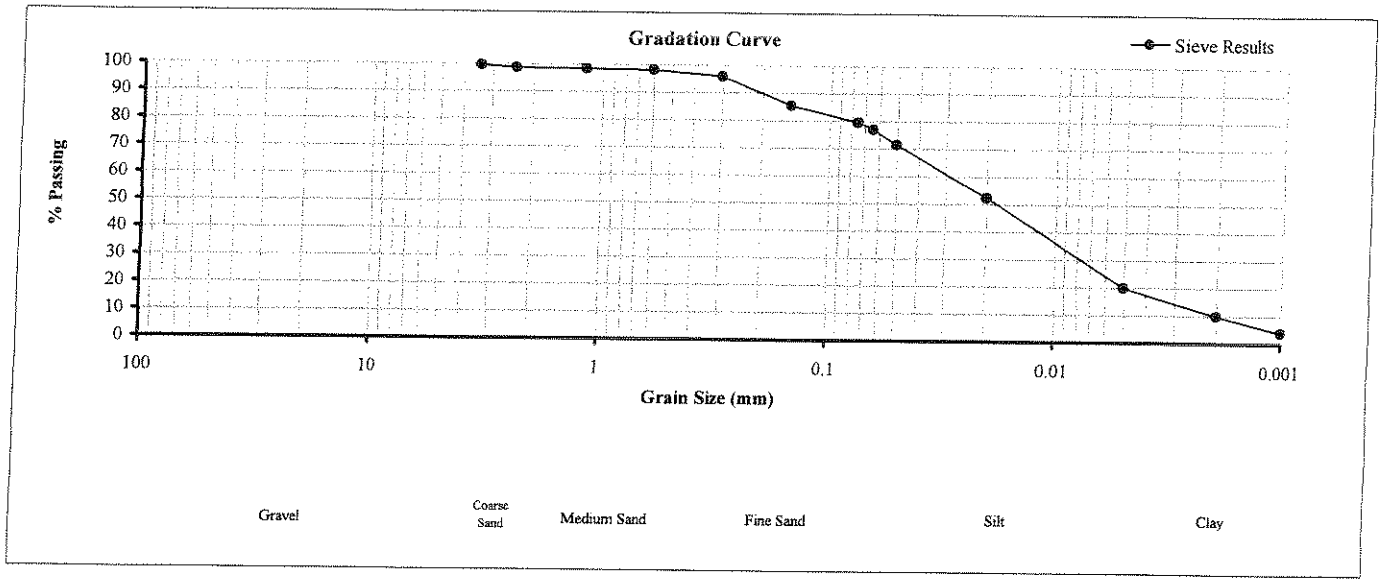
## GRAIN SIZE ANALYSIS

| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BC SED-2** |
| **Date:** | **11/3/2004** |

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.1 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 20.3 |
| Silt | .075mm to .005mm | 59.6 |
| Clay | Material smaller than .005mm | 20.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0020 |
| $D_{30}$ = | 0.0078 |
| $D_{60}$ = | 0.029 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | *14.5* |
| **Coefficient Of Curvature, $C_c$** | 1.0 |

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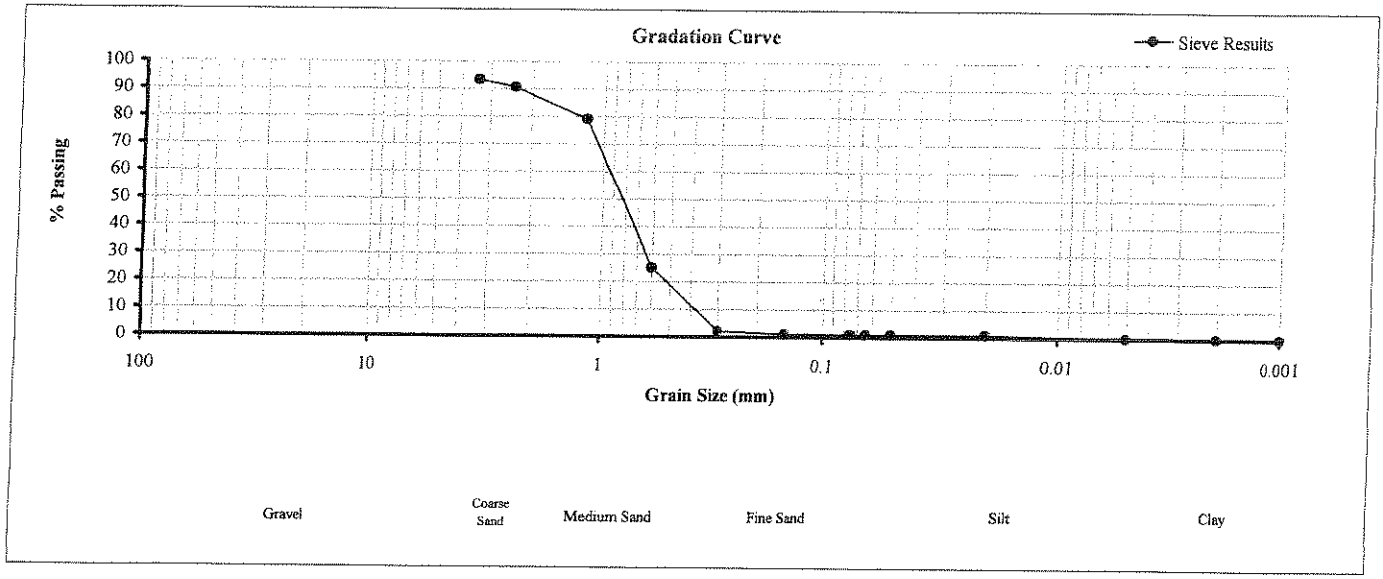
## GRAIN SIZE ANALYSIS

| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BC SED-3** |
| **Date:** | **11/3/2004** |

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 4.6 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 94.4 |
| Silt | .075mm to .005mm | 1.0 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3900 |
| $D_{30}$ = | 0.6500 |
| $D_{60}$ = | 0.9500 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 2.4 |
| **Coefficient Of Curvature, $C_c$** | 1.1 |

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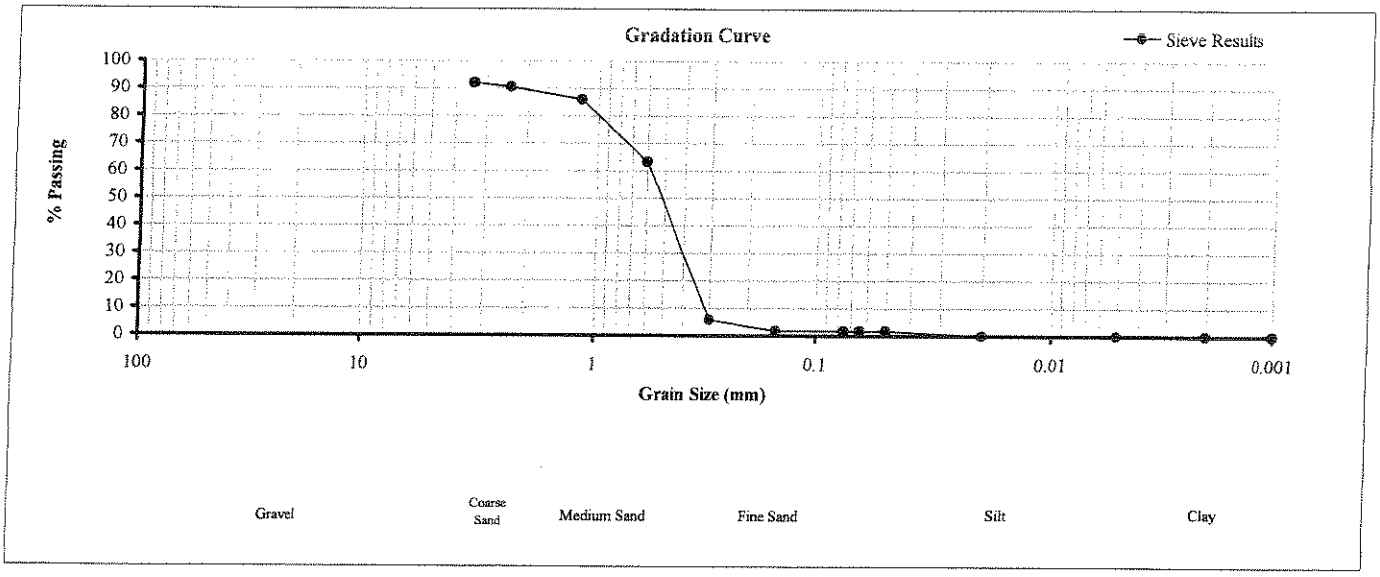
| | |
|---|---|
| Client: | Amtrak-APU |
| Project: | Former Fueling Facility |
| Sample ID: | BC SED-4 |
| Date: | 11/3/2004 |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 6.3 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 91.9 |
| Silt | .075mm to .005mm | 1.8 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3100 |
| $D_{30}$ = | 0.4000 |
| $D_{60}$ = | 0.5900 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity***, $C_u$ | 1.9 |
| **Coefficient Of Curvature**, $C_c$ | 0.9 |

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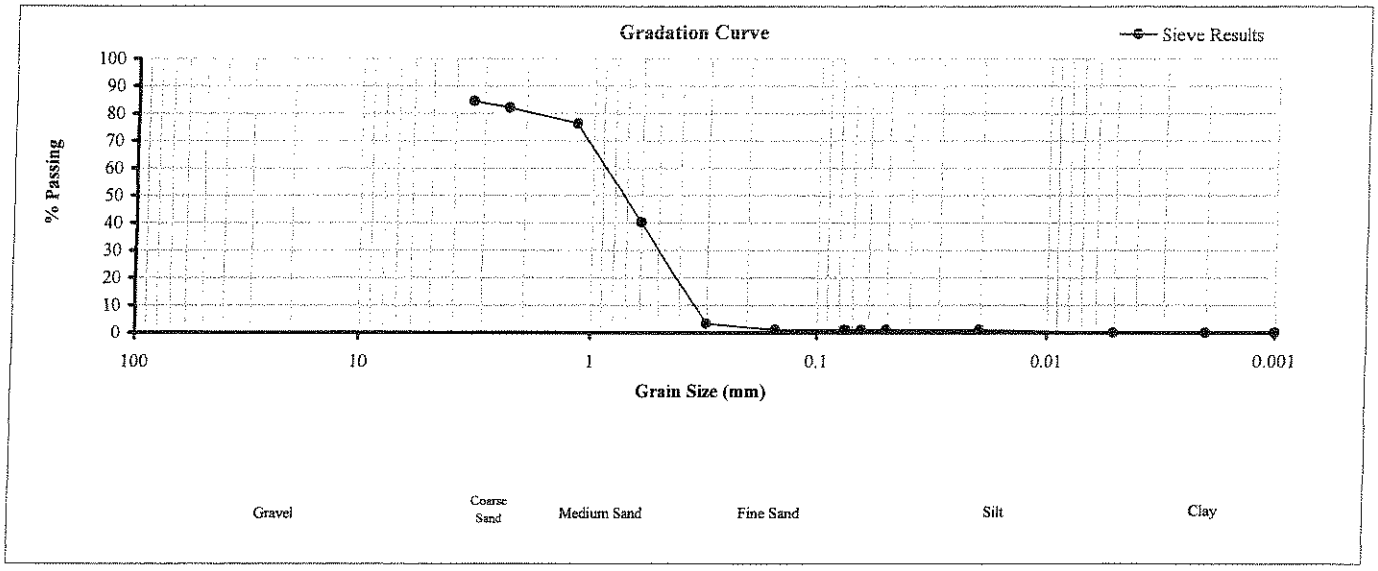
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BC SED-5** |
| **Date:** | **11/3/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 13.7 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 85.3 |
| Silt | .075mm to .005mm | 1.0 |
| Clay | *Material smaller than .005mm* | *0.0* |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3500 |
| $D_{30}$ = | 0.5000 |
| $D_{60}$ = | 0.8900 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 2.5 |
| **Coefficient Of Curvature, $C_c$** | 0.8 |

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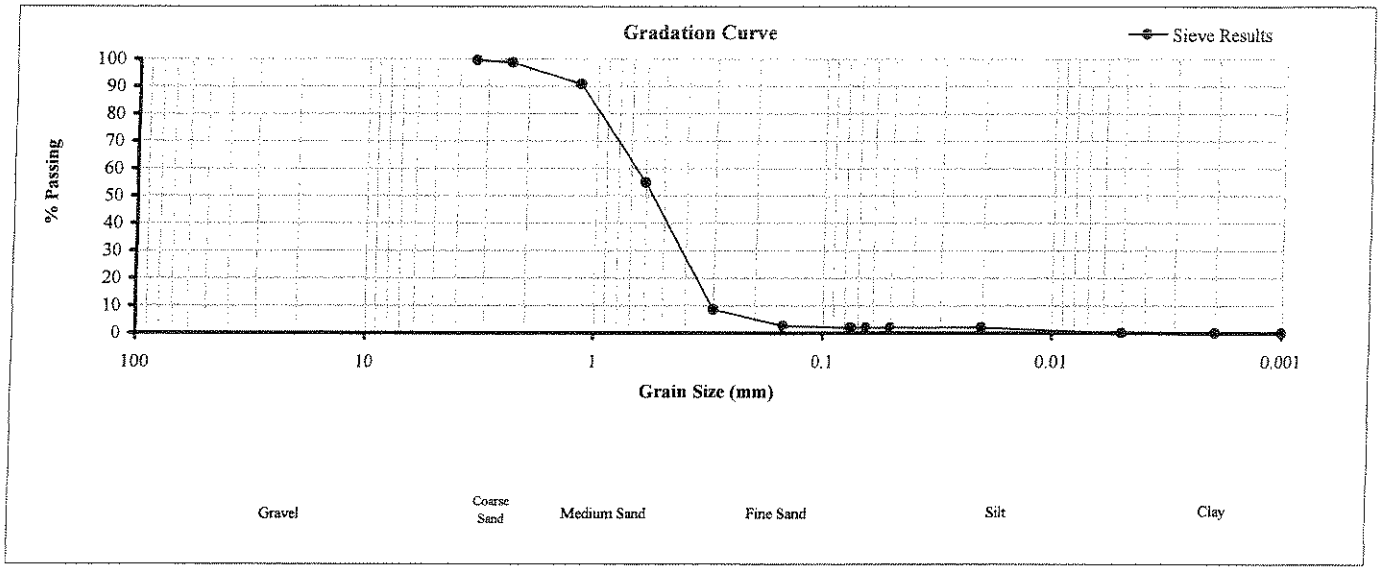
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BC SED-6** |
| **Date:** | **11/3/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.2 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 97.8 |
| Silt | .075mm to .005mm | 2.0 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3100 |
| $D_{30}$ = | 0.4100 |
| $D_{60}$ = | 0.6800 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 2.2 |
| **Coefficient Of Curvature, $C_c$** | 0.8 |

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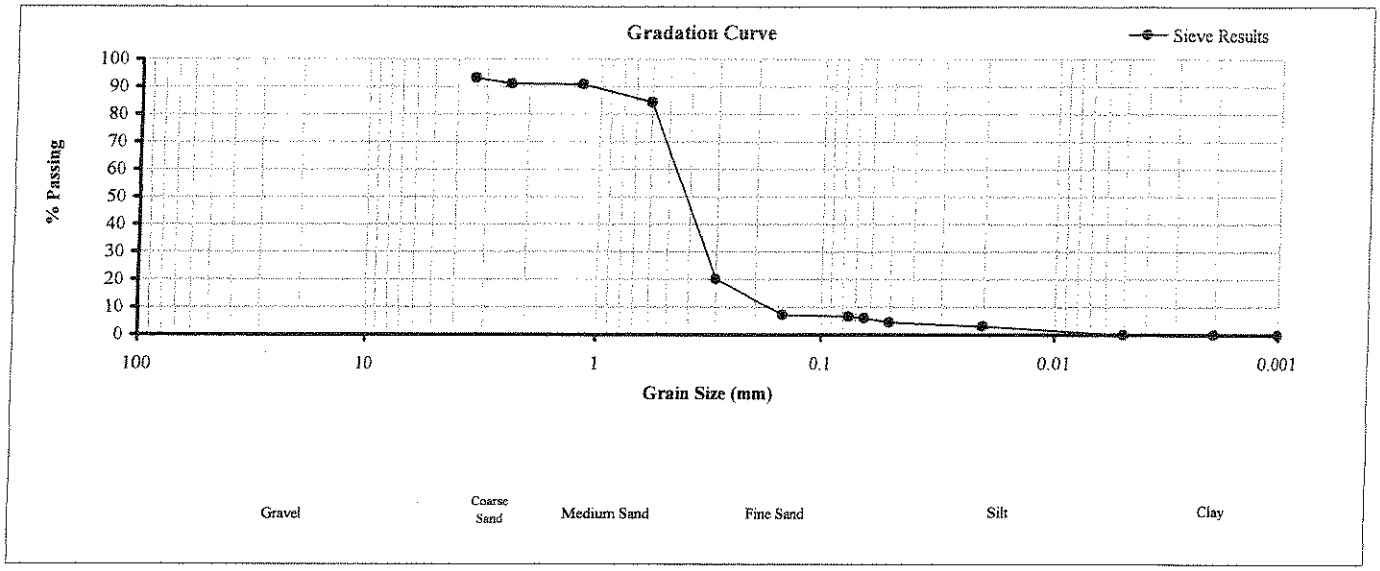
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-1A** |
| **Date:** | **11/5/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 3.1 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 90.3 |
| Silt | .075mm to .005mm | 6.6 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.1850 |
| $D_{30}$ = | 0.3450 |
| $D_{60}$ = | 0.46 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 2.5 |
| **Coefficient Of Curvature, $C_c$** | 1.4 |

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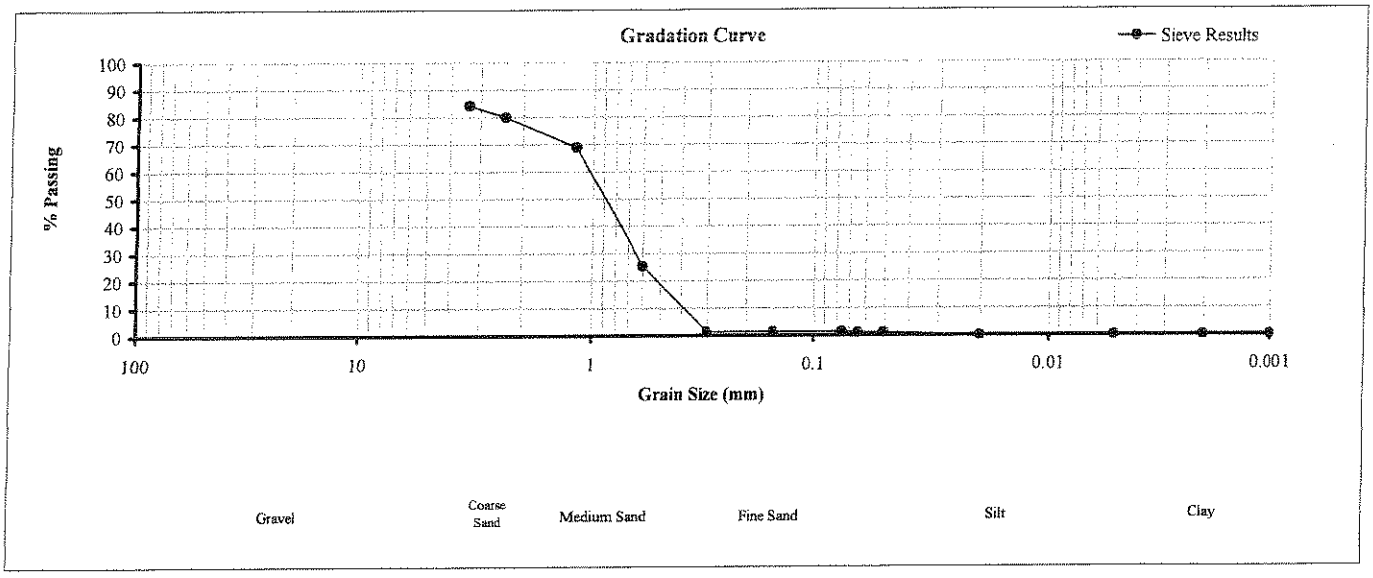
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-1B** |
| **Date:** | **11/5/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 12.0 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 86.6 |
| Silt | .075mm to .005mm | 1.4 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3900 |
| $D_{30}$ = | 0.6500 |
| $D_{60}$ = | 1.1000 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 2.8 |
| **Coefficient Of Curvature, $C_c$** | 1.0 |

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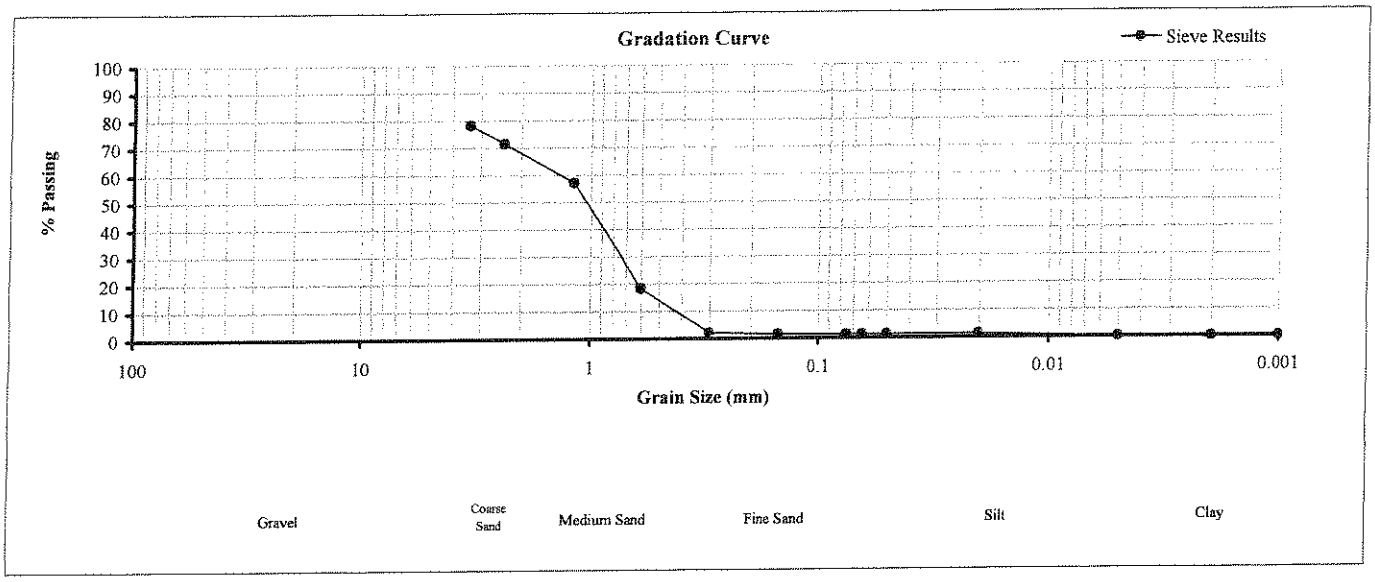
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-1C** |
| **Date:** | **11/5/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 15.7 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 83.0 |
| Silt | .075mm to .005mm | 1.3 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.4100 |
| $D_{30}$ = | 0.7500 |
| $D_{60}$ = | 1.5000 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 3.7 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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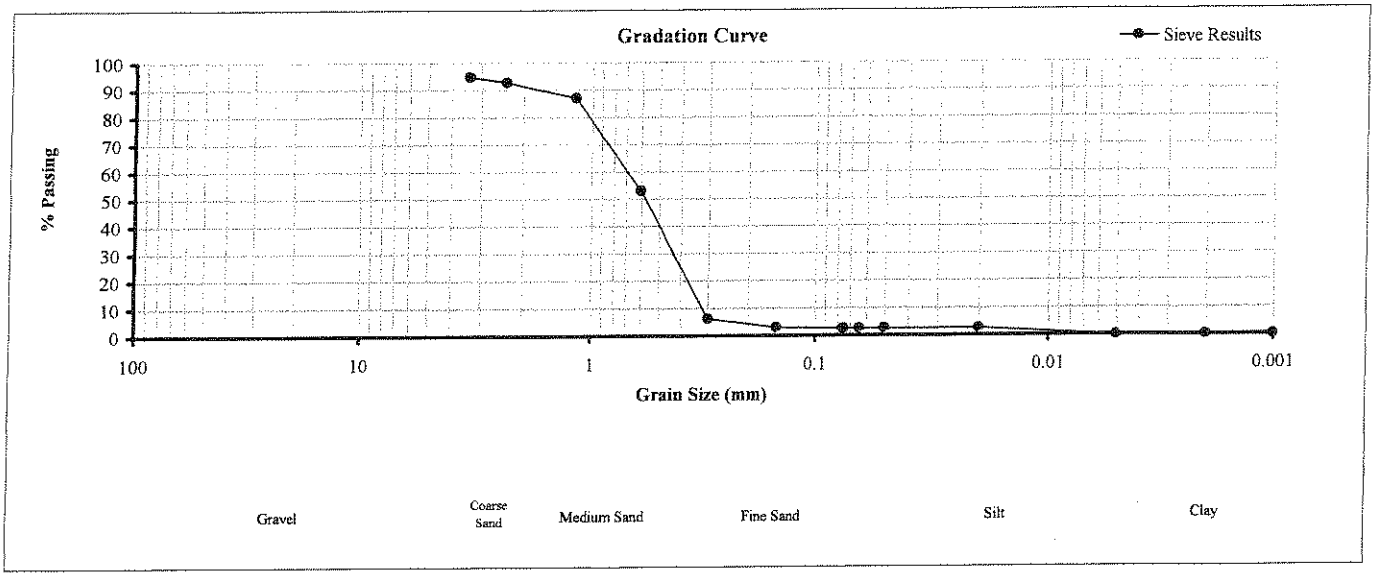
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | ***Former Fueling Facility*** |
| **Sample ID:** | **BCT-2A** |
| **Date:** | **11/3/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 3.7 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 93.7 |
| Silt | .075mm to .005mm | 2.6 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3300 |
| $D_{30}$ = | 0.4400 |
| $D_{60}$ = | 0.7000 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 2.1 |
| **Coefficient Of Curvature, $C_c$** | 0.8 |

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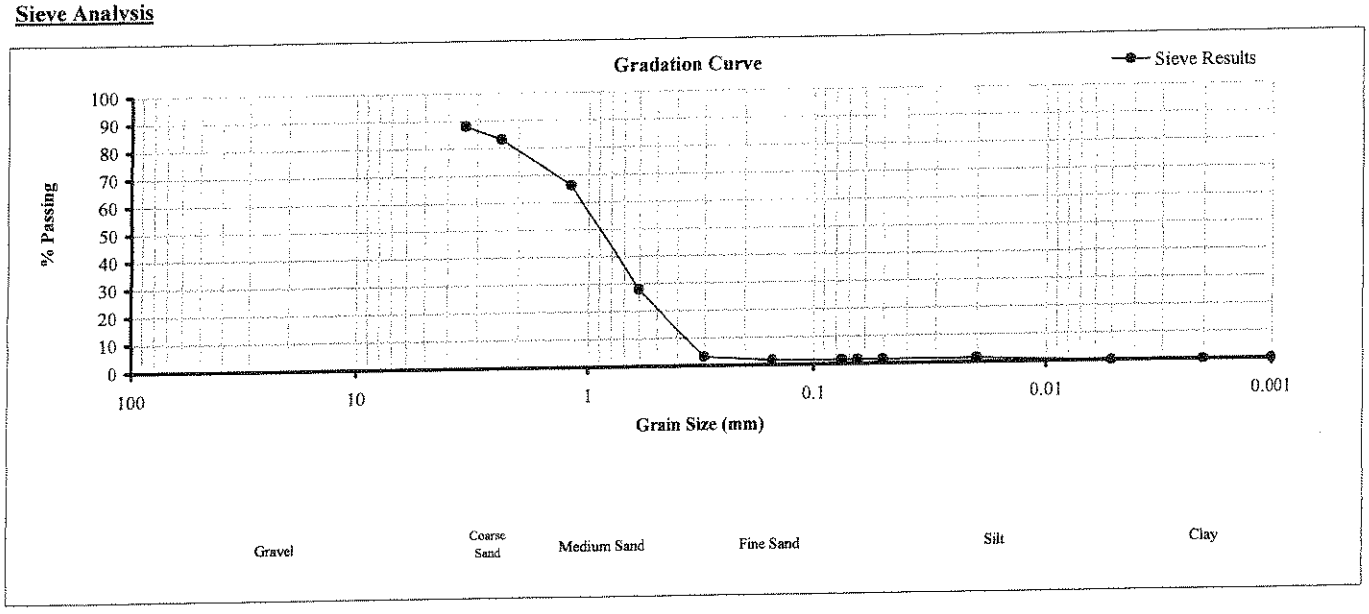
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-2B** |
| **Date:** | **11/3/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 8.5 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 90.0 |
| Silt | .075mm to .005mm | 1.5 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3700 |
| $D_{30}$ = | 0.6100 |
| $D_{60}$ = | 1.1000 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 3.0 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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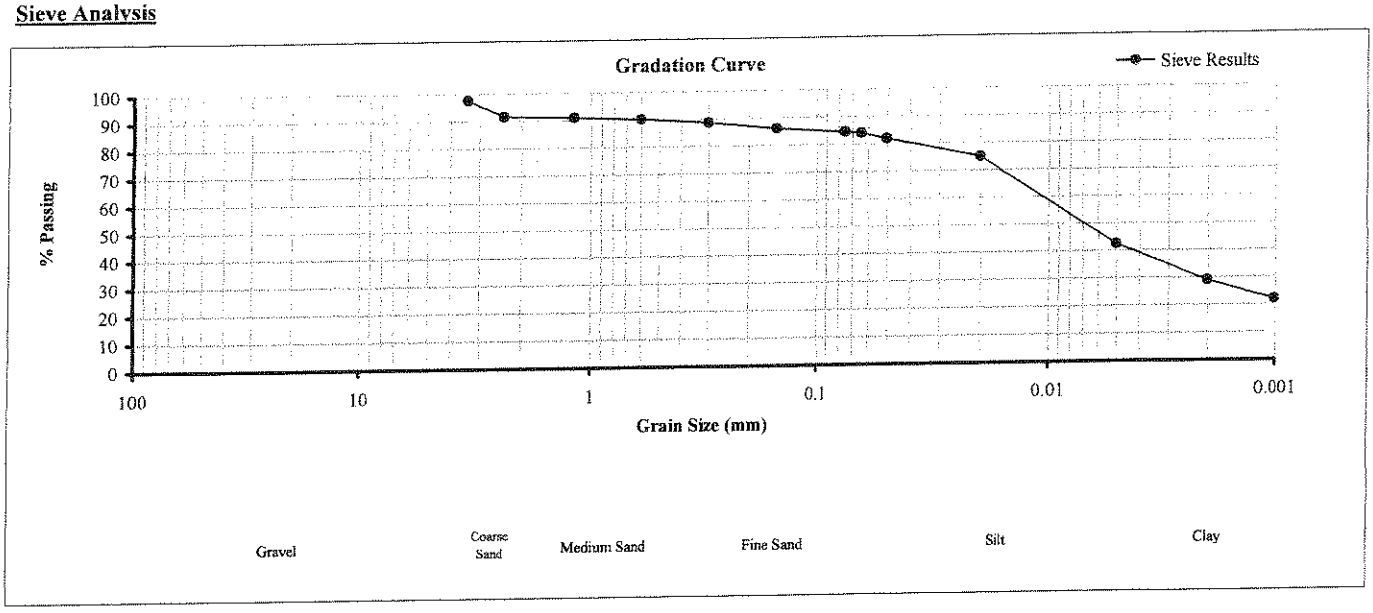
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-2C** |
| **Date:** | **11/3/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 1.8 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 13.7 |
| Silt | .075mm to .005mm | 42.0 |
| Clay | Material smaller than .005mm | 42.5 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0 |
| $D_{30}$ = | 0.0023 |
| $D_{60}$ = | 0.0125 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | #DIV/0! |
| **Coefficient Of Curvature, $C_c$** | #DIV/0! |

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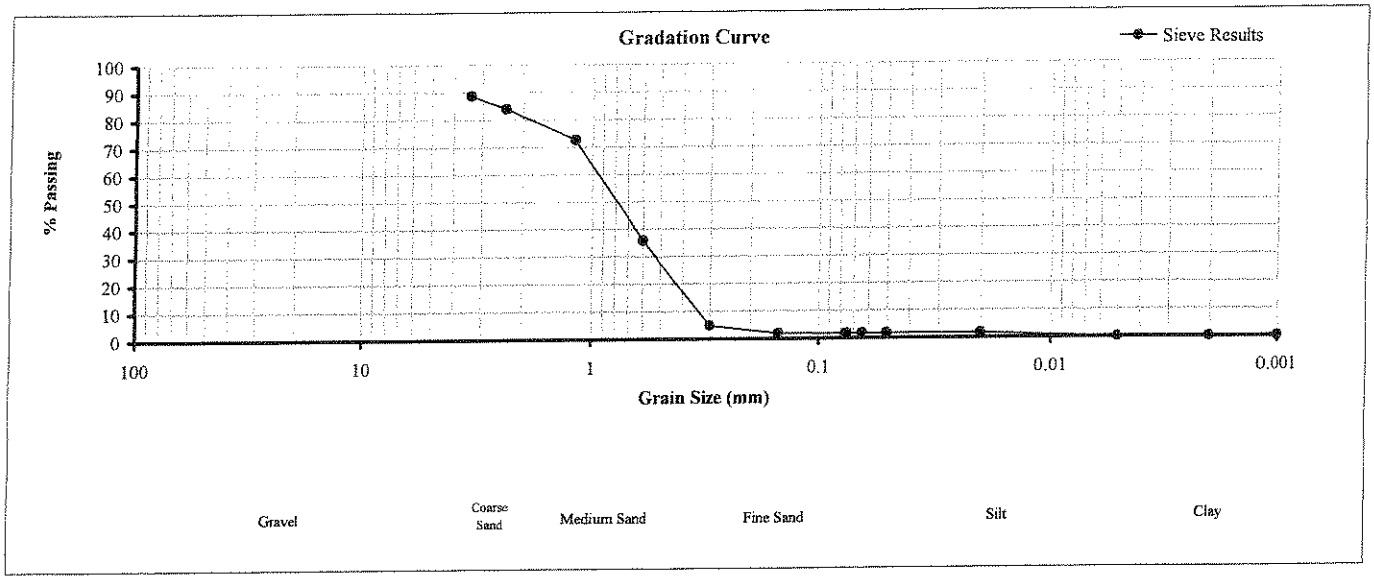
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-2D** |
| **Date:** | **11/3/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 8.1 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 90.2 |
| Silt | .075mm to .005mm | 1.7 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3500 |
| $D_{30}$ = | 0.5400 |
| $D_{60}$ = | 0.9500 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 2.7 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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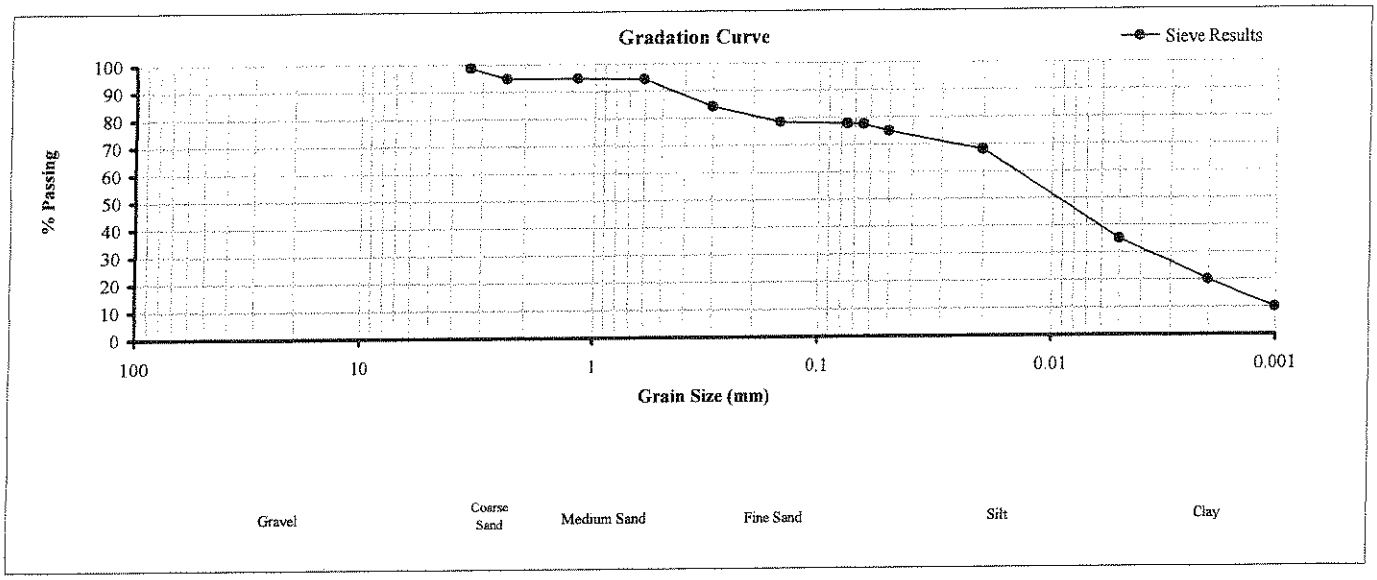
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-3A** |
| **Date:** | **11/5/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.4 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 21.9 |
| Silt | .075mm to .005mm | 42.7 |
| Clay | Material smaller than .005mm | 35.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0010 |
| $D_{30}$ = | 0.0037 |
| $D_{60}$ = | 0.0155 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 15.5 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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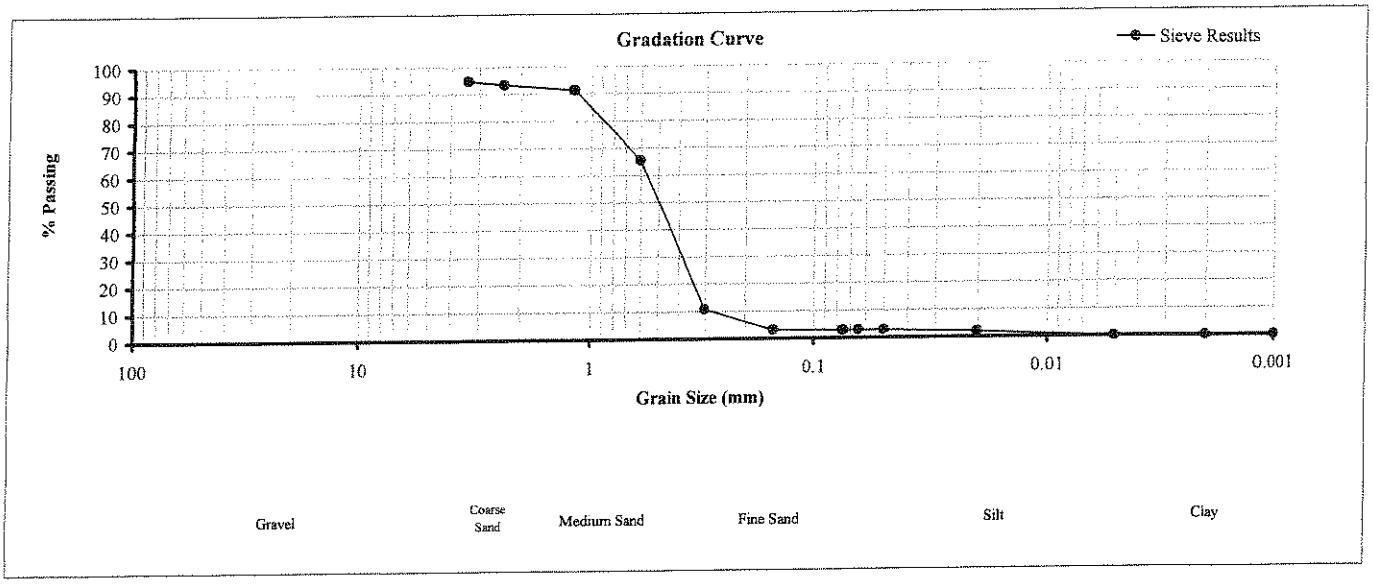
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCT-3B** |
| **Date:** | **11/5/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 3.6 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 93.6 |
| Silt | .075mm to .005mm | 2.8 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.2900 |
| $D_{30}$ = | 0.3900 |
| $D_{60}$ = | 0.5600 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 1.9 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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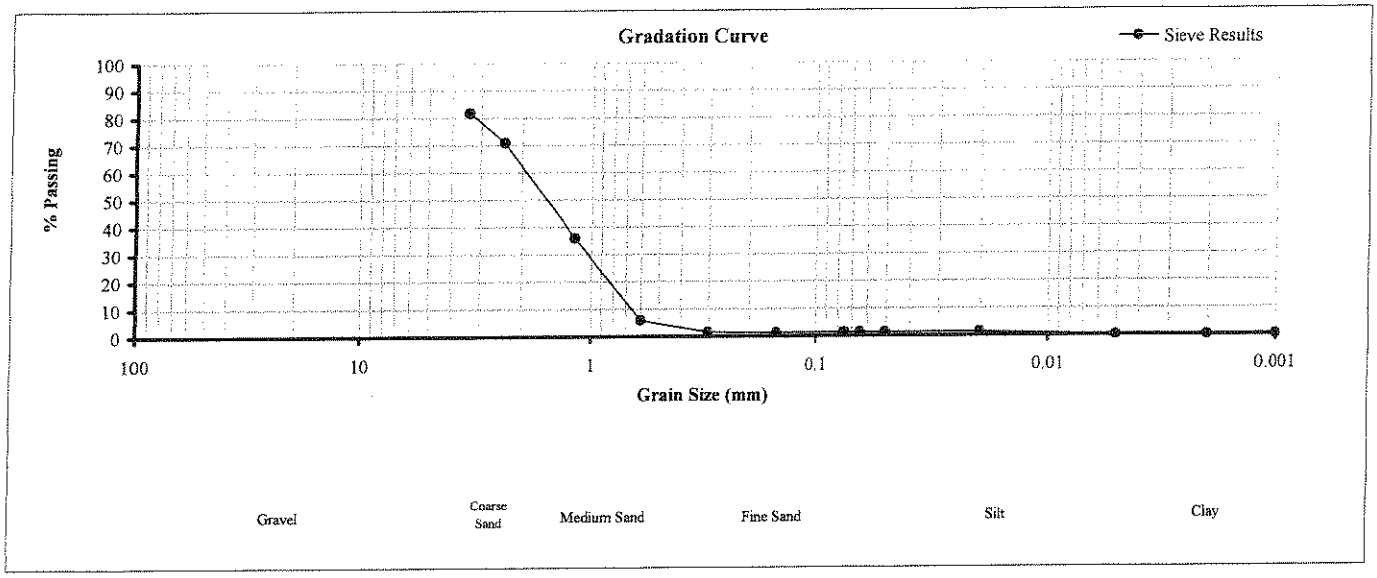
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | ***Former Fueling Facility*** |
| **Sample ID:** | **BCT-3C** |
| **Date:** | **11/5/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 11.8 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 86.9 |
| Silt | .075mm to .005mm | 1.3 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.6600 |
| $D_{30}$ = | 1.1000 |
| $D_{60}$ = | 1.9000 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 2.9 |
| **Coefficient Of Curvature, $C_c$** | 1.0 |

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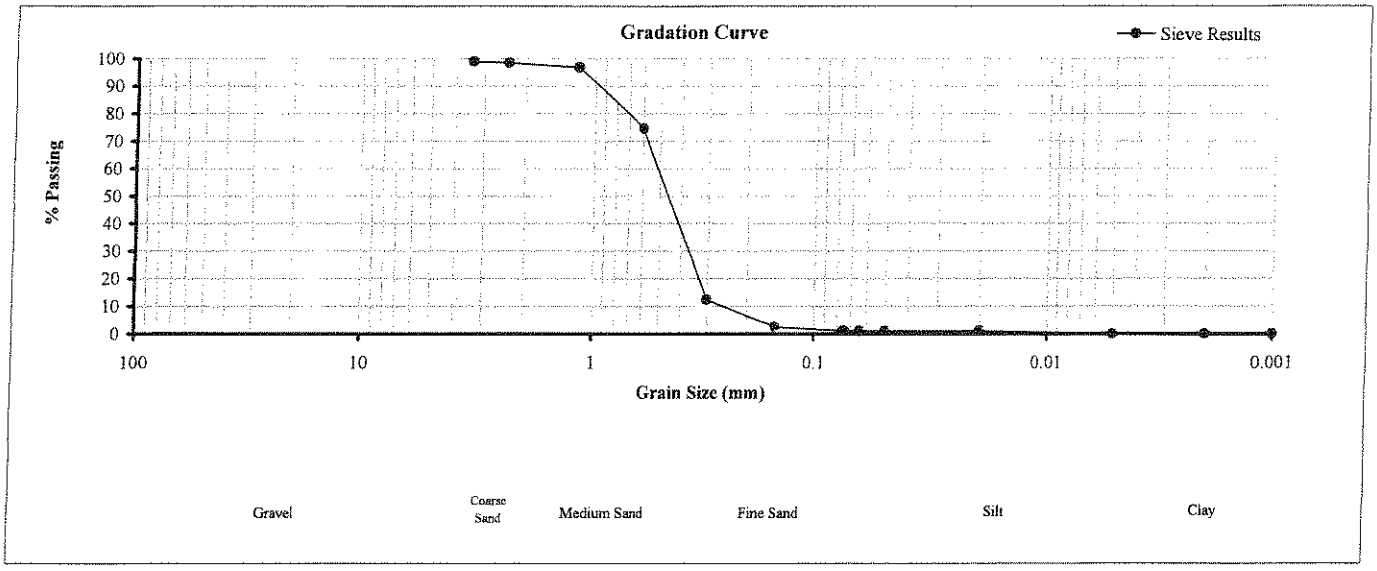
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCNT-1** |
| **Date:** | **12/6/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.8 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 98.0 |
| Silt | .075mm to .005mm | 1.2 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.2500 |
| $D_{30}$ = | 0.380 |
| $D_{60}$ = | 0.510 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 2.0 |
| **Coefficient Of Curvature, $C_c$** | 1.1 |

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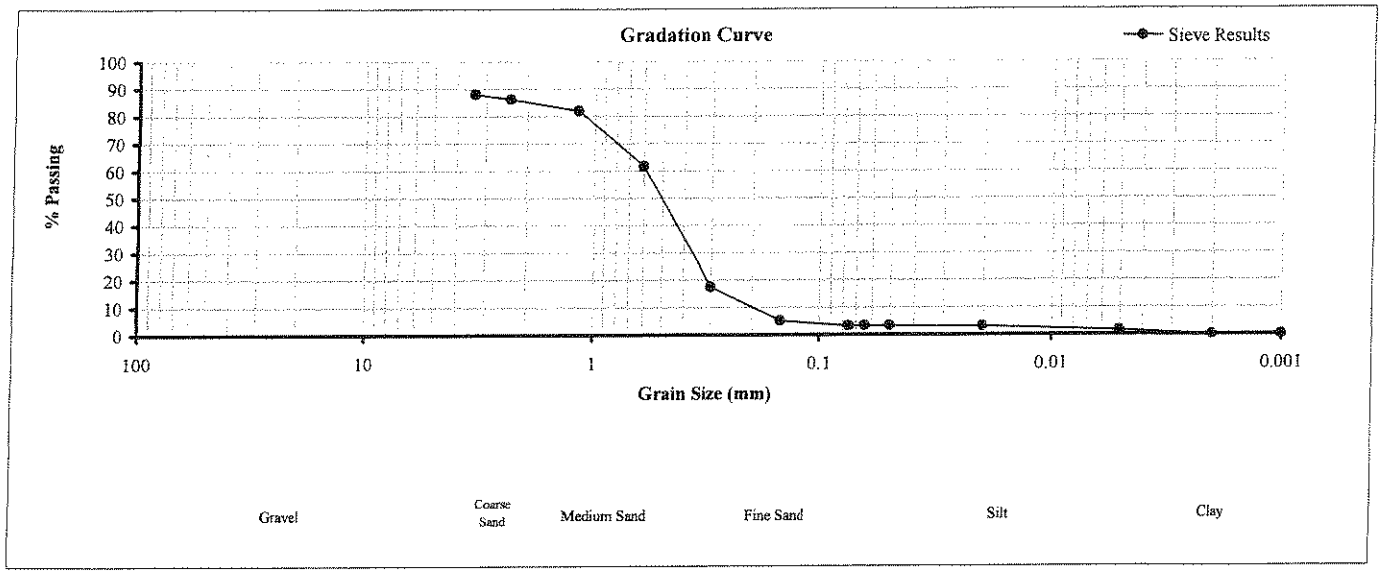
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCNT-1(3-8)** |
| **Date:** | **12/6/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 10.9 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 85.8 |
| Silt | .075mm to .005mm | 1.8 |
| Clay | Material smaller than .005mm | 1.5 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.2000 |
| $D_{30}$ = | 0.380 |
| $D_{60}$ = | 0.590 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 3.0 |
| **Coefficient Of Curvature, $C_c$** | 1.2 |

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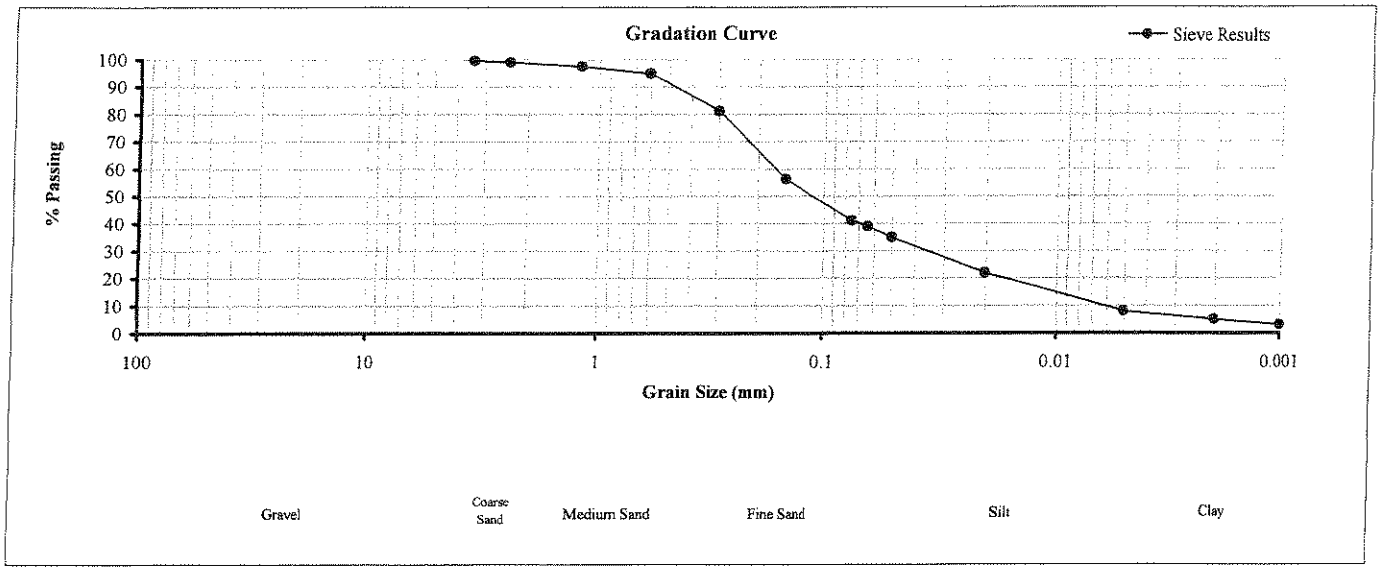
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCNT-2 (3-12)** |
| **Date:** | **12/6/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.2 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 58.7 |
| Silt | .075mm to .005mm | 33.1 |
| Clay | Material smaller than .005mm | 8.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0063 |
| $D_{30}$ = | 0.035 |
| $D_{60}$ = | 0.175 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 27.8 |
| **Coefficient Of Curvature, $C_c$** | 1.1 |

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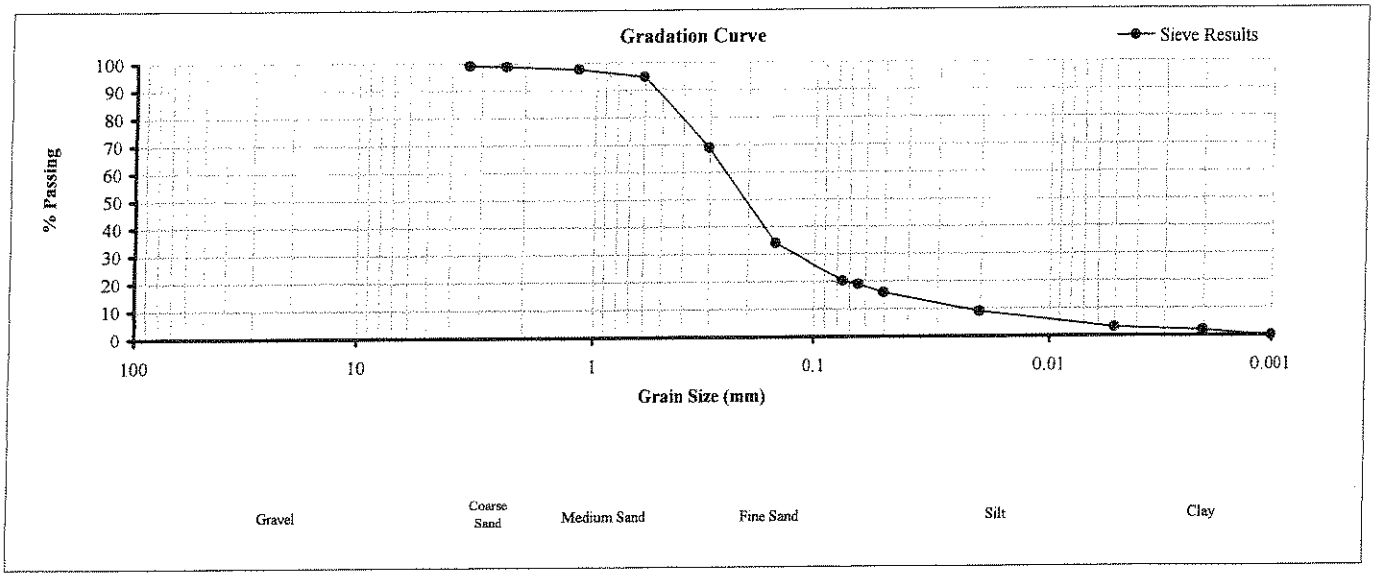
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCNT-2 (12-18)** |
| **Date:** | **12/6/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.7 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 79.1 |
| Silt | .075mm to .005mm | 17.2 |
| Clay | Material smaller than .005mm | 3.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0240 |
| $D_{30}$ = | 0.14 |
| $D_{60}$ = | 0.26 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 10.8 |
| **Coefficient Of Curvature, $C_c$** | 3.1 |

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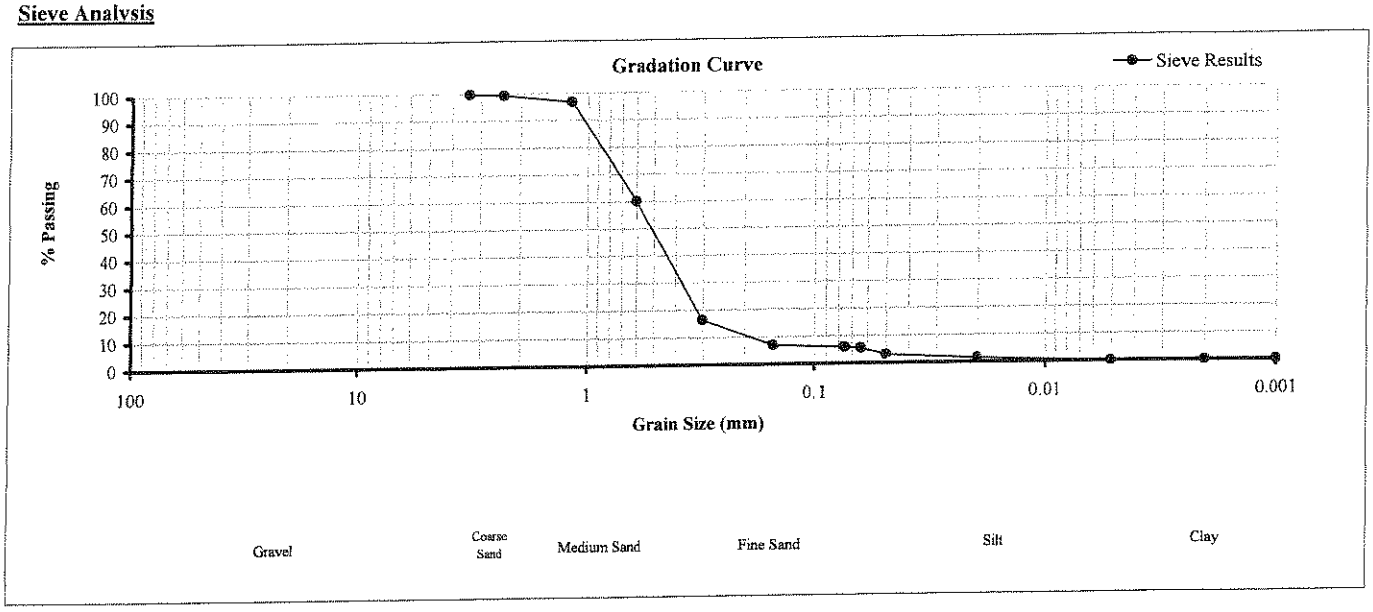
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCNT-2** |
| **Date:** | **12/6/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.0 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 94.0 |
| Silt | .075mm to .005mm | 6.0 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.1980 |
| $D_{30}$ = | 0.380 |
| $D_{60}$ = | 0.6 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 3.0 |
| **Coefficient Of Curvature, $C_c$** | 1.2 |

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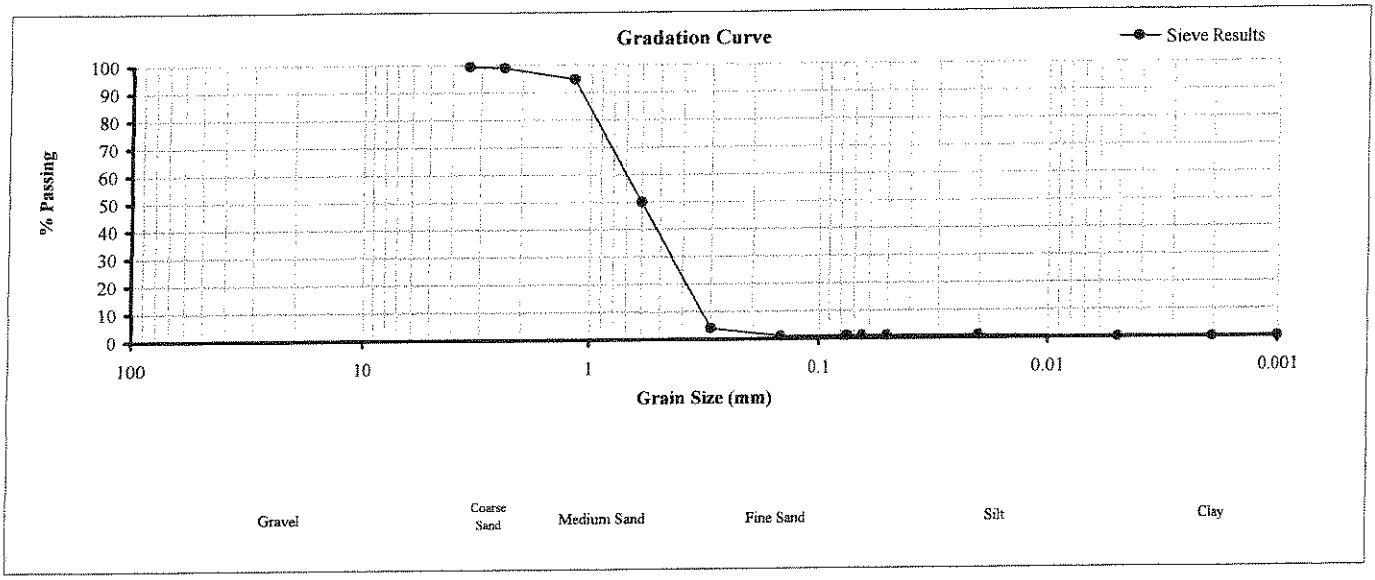
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCNT-3** |
| **Date:** | **12/6/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.3 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 98.7 |
| Silt | .075mm to .005mm | 1.0 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3400 |
| $D_{30}$ = | 0.510 |
| $D_{60}$ = | 0.700 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 2.1 |
| **Coefficient Of Curvature, $C_c$** | 1.1 |

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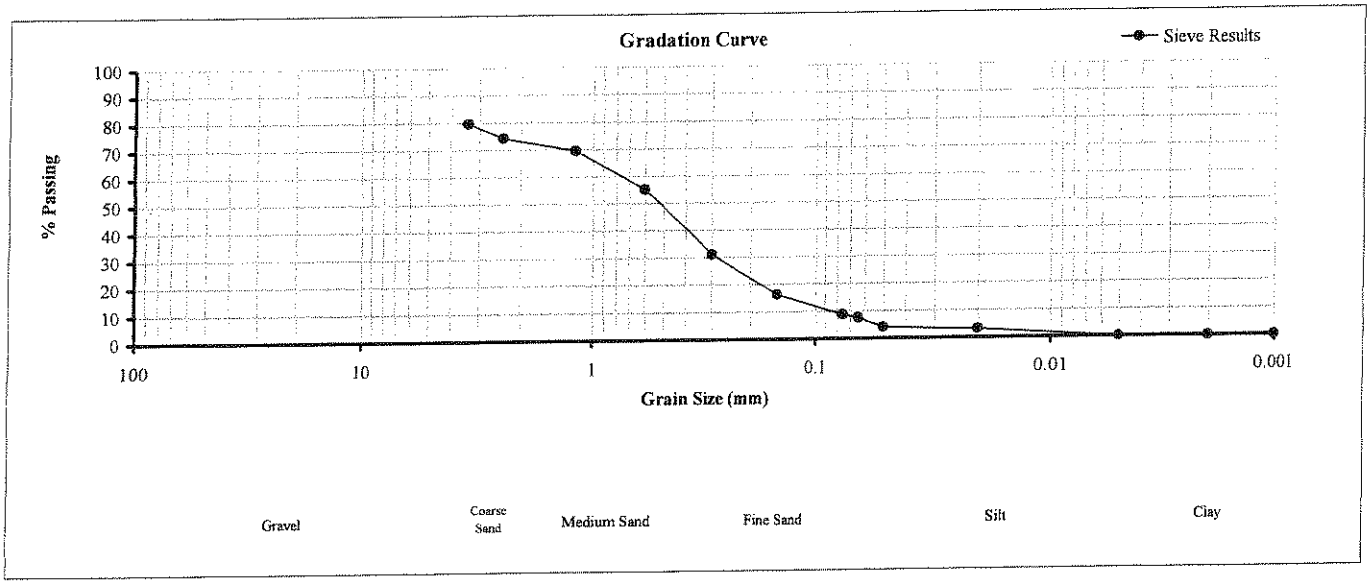
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **BCNT-3 (3-12)** |
| **Date:** | **12/6/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 14.1 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 77.1 |
| Silt | .075mm to .005mm | 8.8 |
| Clay | *Material smaller than .005mm* | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0860 |
| $D_{30}$ = | 0.299 |
| $D_{60}$ = | 0.79 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 9.2 |
| **Coefficient Of Curvature, $C_c$** | 1.3 |

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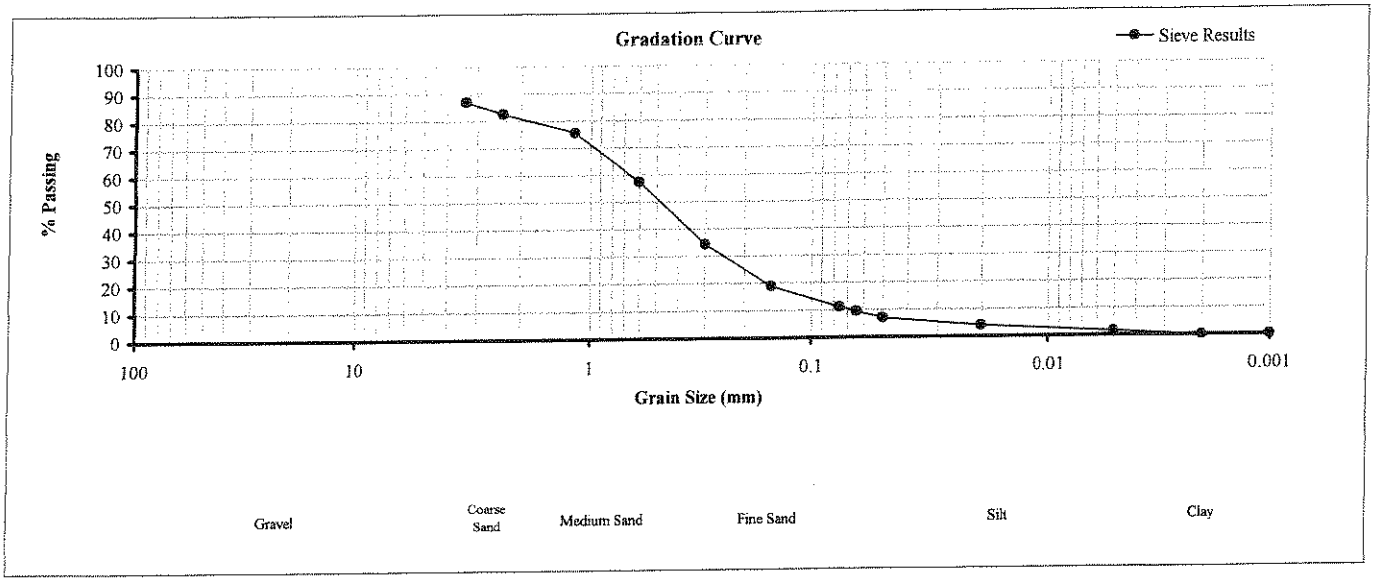
| | |
|---|---|
| Client: | Amtrak-APU |
| Project: | Former Fueling Facility |
| Sample ID: | BCNT-3 (12-24) |
| Date: | 12/6/2004 |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 10.5 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 78.4 |
| Silt | .075mm to .005mm | 9.6 |
| Clay | Material smaller than .005mm | 1.5 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0700 |
| $D_{30}$ = | 0.26 |
| $D_{60}$ = | 0.68 |

**Shape Parameters**

| | |
|---|---|
| Coefficient Of Uniformity, $C_u$ | 9.7 |
| Coefficient Of Curvature, $C_c$ | 1.4 |

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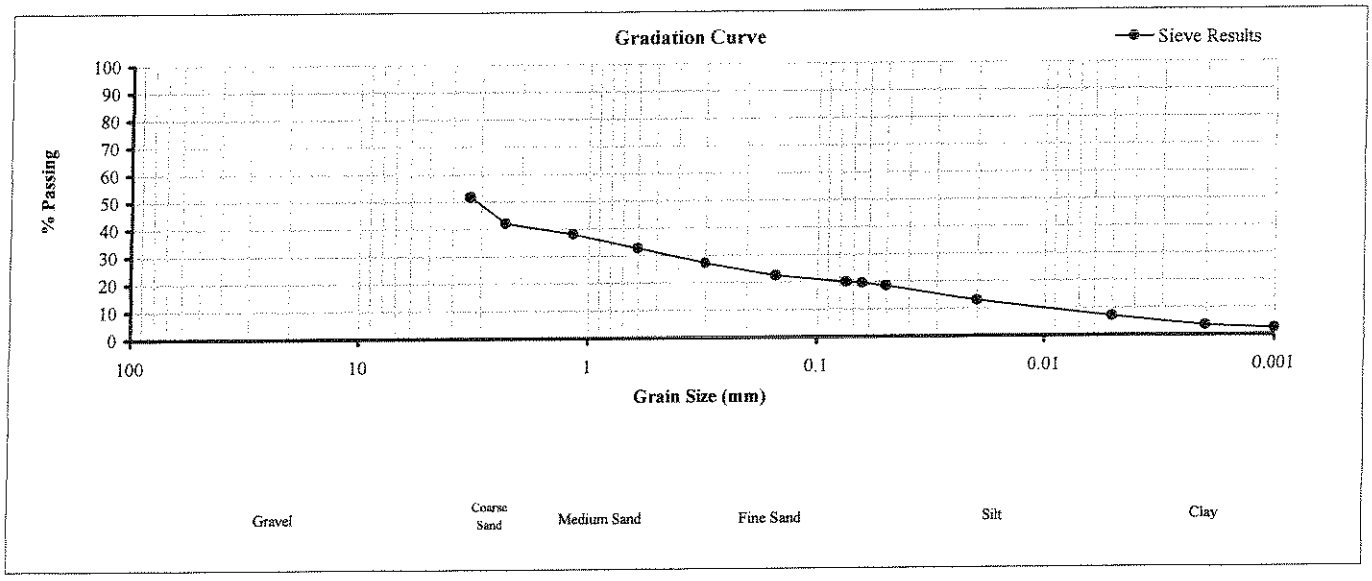
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-1 (Surface)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 40.2 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 39.8 |
| Silt | .075mm to .005mm | 13.0 |
| Clay | Material smaller than .005mm | 7.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0115 |
| $D_{30}$ = | 0.430 |
| $D_{60}$ = | 0.000 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 0.0 |
| **Coefficient Of Curvature, $C_c$** | #DIV/0! |

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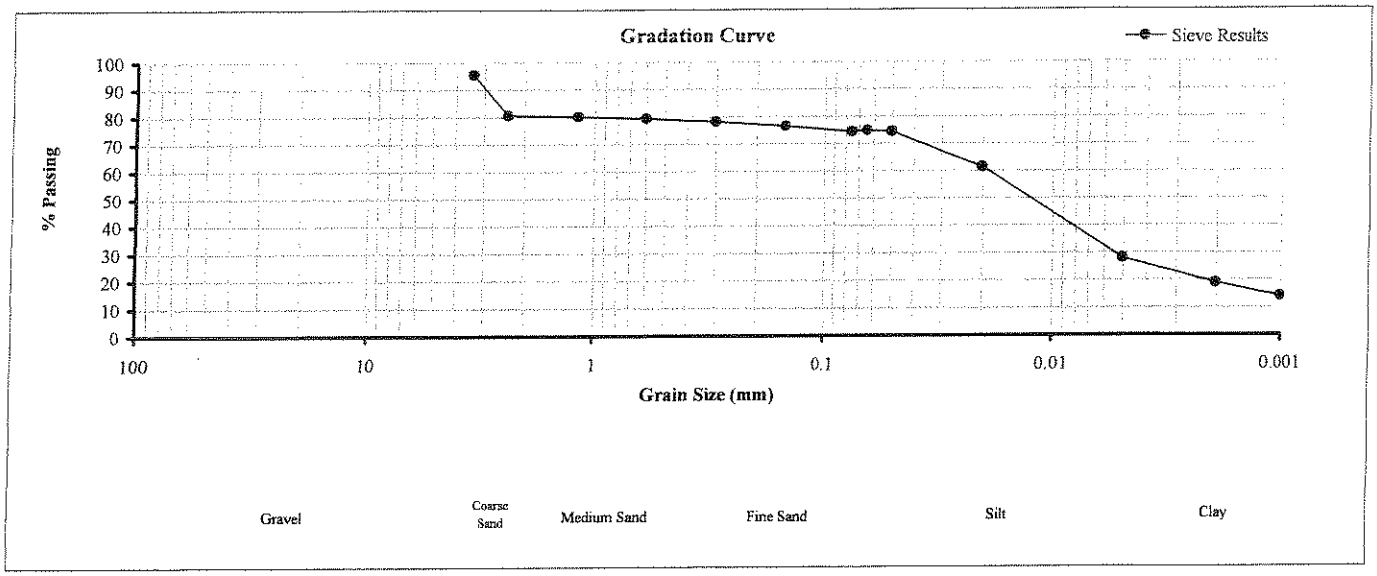
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-2 (18-24)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 1.0 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 24.5 |
| Silt | .075mm to .005mm | 46.5 |
| Clay | Material smaller than .005mm | 28.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0000 |
| $D_{30}$ = | 0.0050 |
| $D_{60}$ = | 0.019 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | #DIV/0! |
| **Coefficient Of Curvature, $C_c$** | #DIV/0! |

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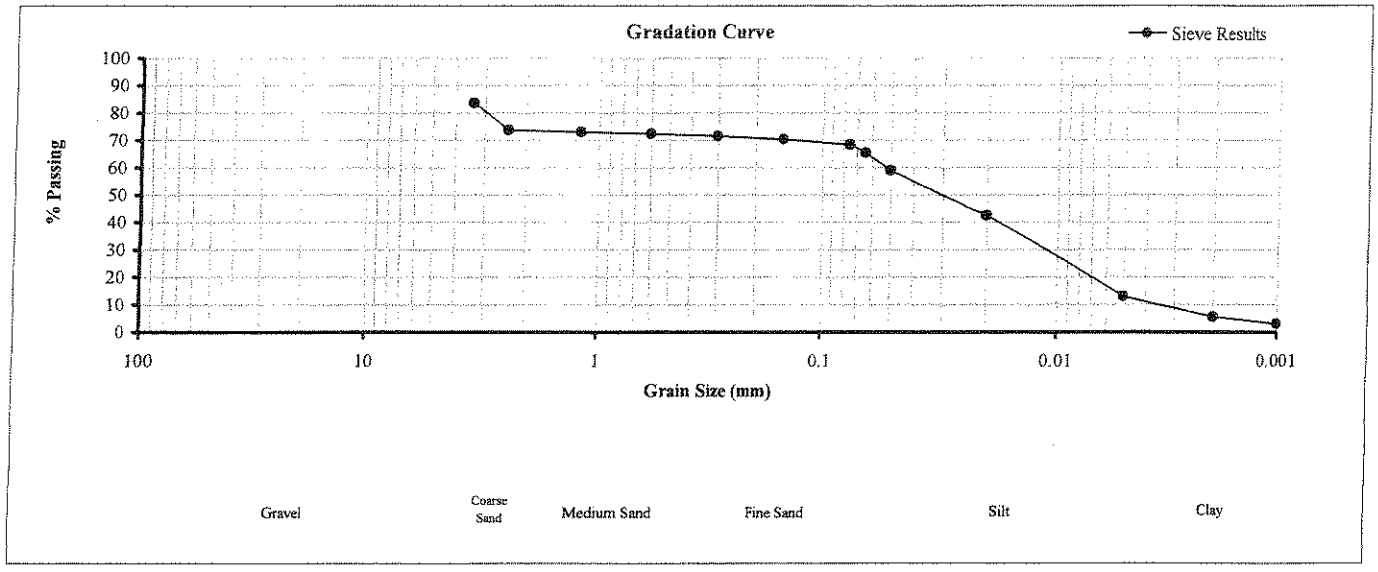
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-2 (Surface)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 12.0 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 19.6 |
| Silt | .075mm to .005mm | 55.4 |
| Clay | Material smaller than .005mm | 13.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0035 |
| $D_{30}$ = | 0.0130 |
| $D_{60}$ = | 0.053 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity***, $C_u$ | 15.1 |
| **Coefficient Of Curvature**, $C_c$ | 0.9 |

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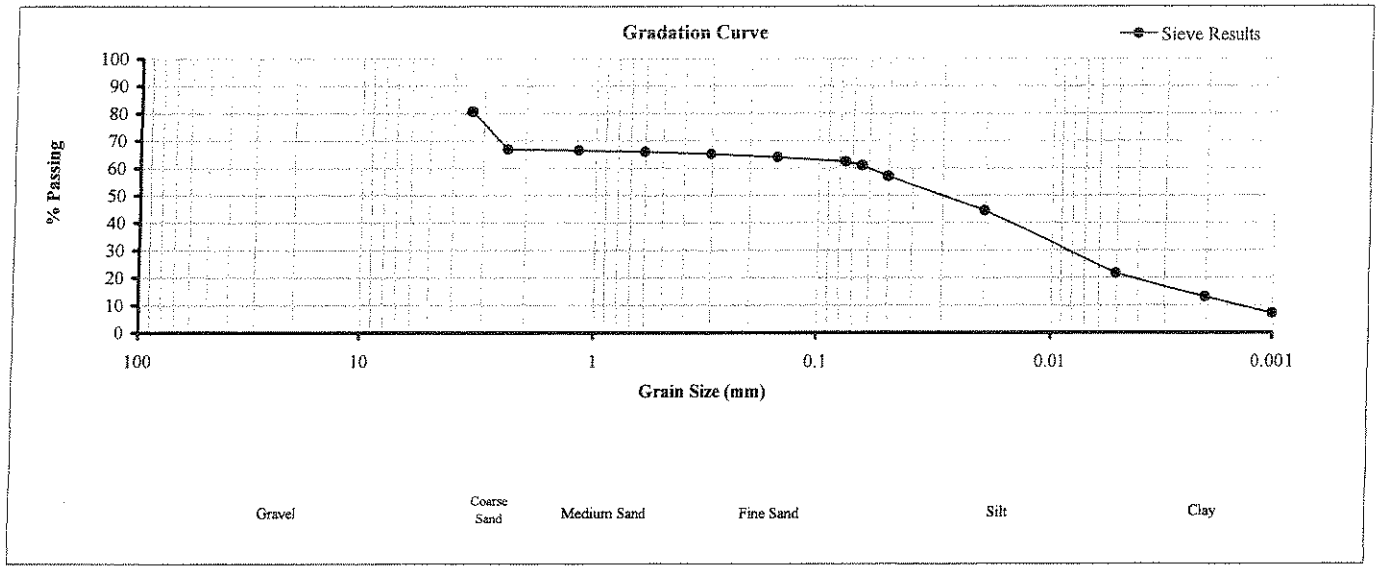
## GRAIN SIZE ANALYSIS

| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-3 (16-22)** |
| **Date:** | **12/8/2004** |

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 8.9 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 28.7 |
| Silt | .075mm to .005mm | 40.9 |
| Clay | Material smaller than .005mm | 21.5 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0016 |
| $D_{30}$ = | 0.0089 |
| $D_{60}$ = | 0.063 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity*, $C_u$** | 39.4 |
| **Coefficient Of Curvature, $C_c$** | 0.8 |

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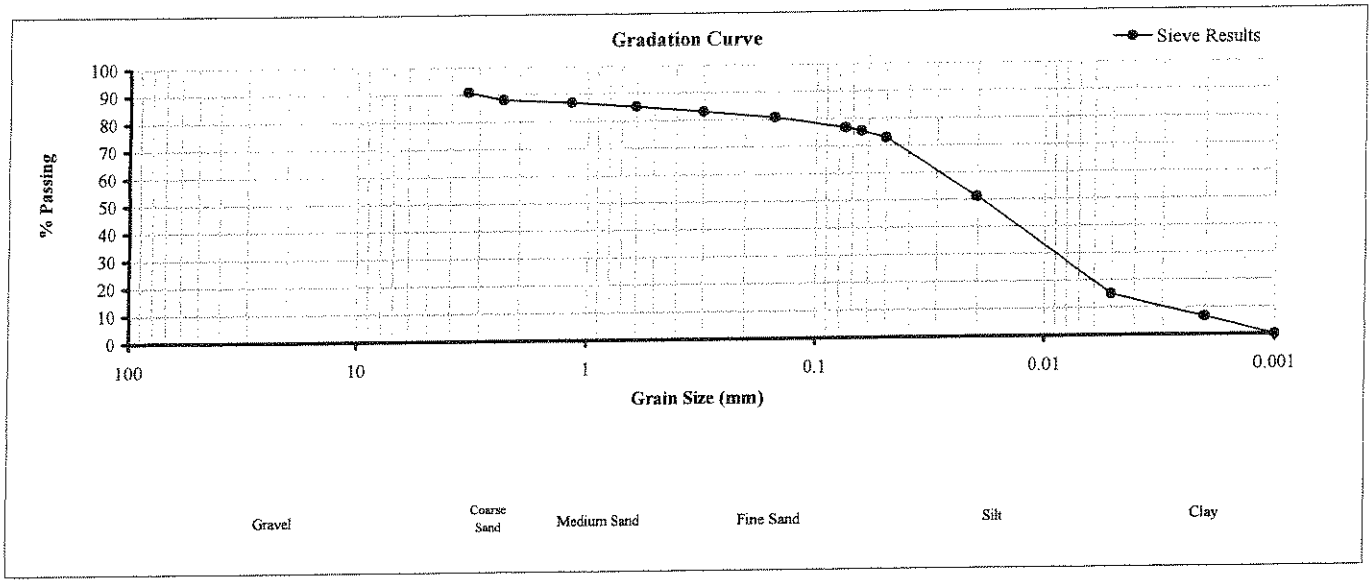
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-3 (Surface)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 7.8 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 15.4 |
| Silt | .075mm to .005mm | 61.8 |
| Clay | Material smaller than .005mm | 15.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0030 |
| $D_{30}$ = | 0.0090 |
| $D_{60}$ = | 0.030 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 10.0 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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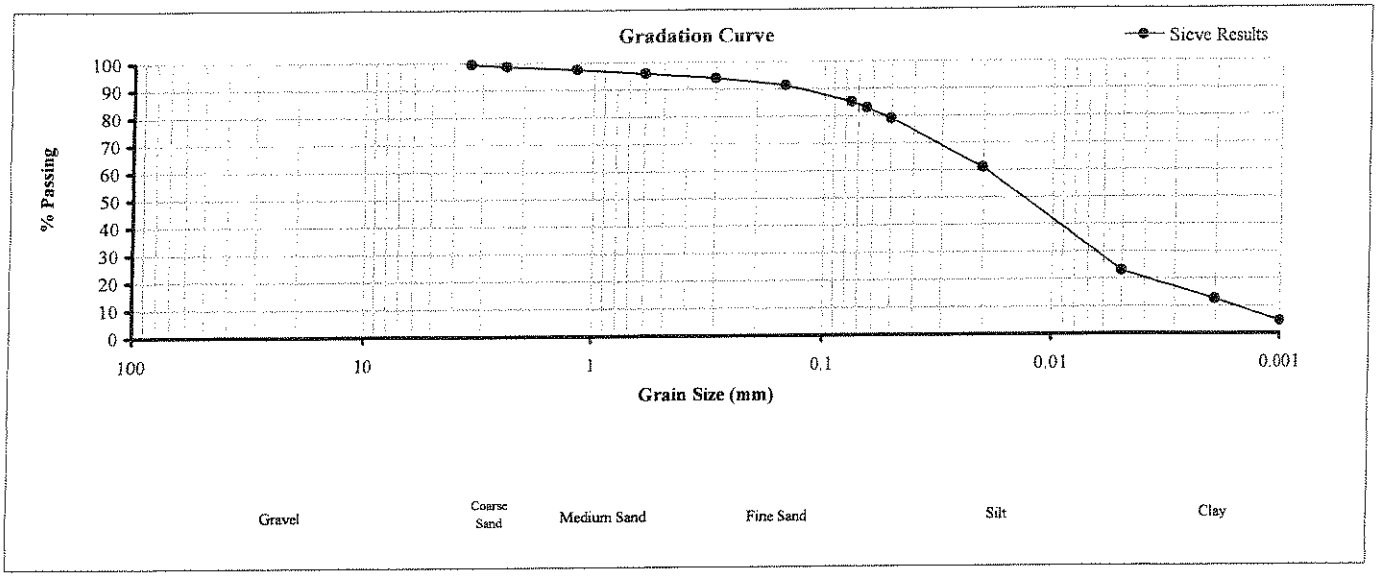
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-4 (9-15)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.4 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 14.4 |
| Silt | .075mm to .005mm | 62.2 |
| Clay | Material smaller than .005mm | 23.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.00175 |
| $D_{30}$ = | 0.0065 |
| $D_{60}$ = | 0.020 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 11.4 |
| **Coefficient Of Curvature, $C_c$** | 1.2 |

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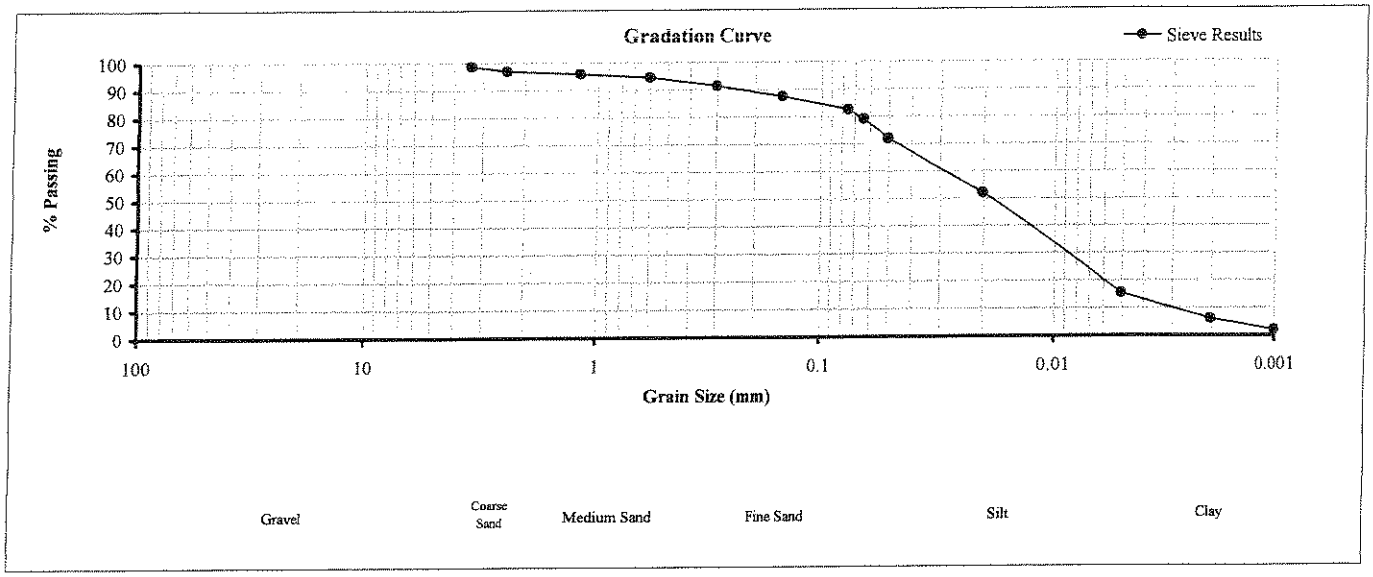
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-4 (Surface)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 0.5 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 17.0 |
| Silt | .075mm to .005mm | 67.0 |
| Clay | Material smaller than .005mm | 15.5 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.0031 |
| $D_{30}$ = | 0.0089 |
| $D_{60}$ = | 0.029 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 9.4 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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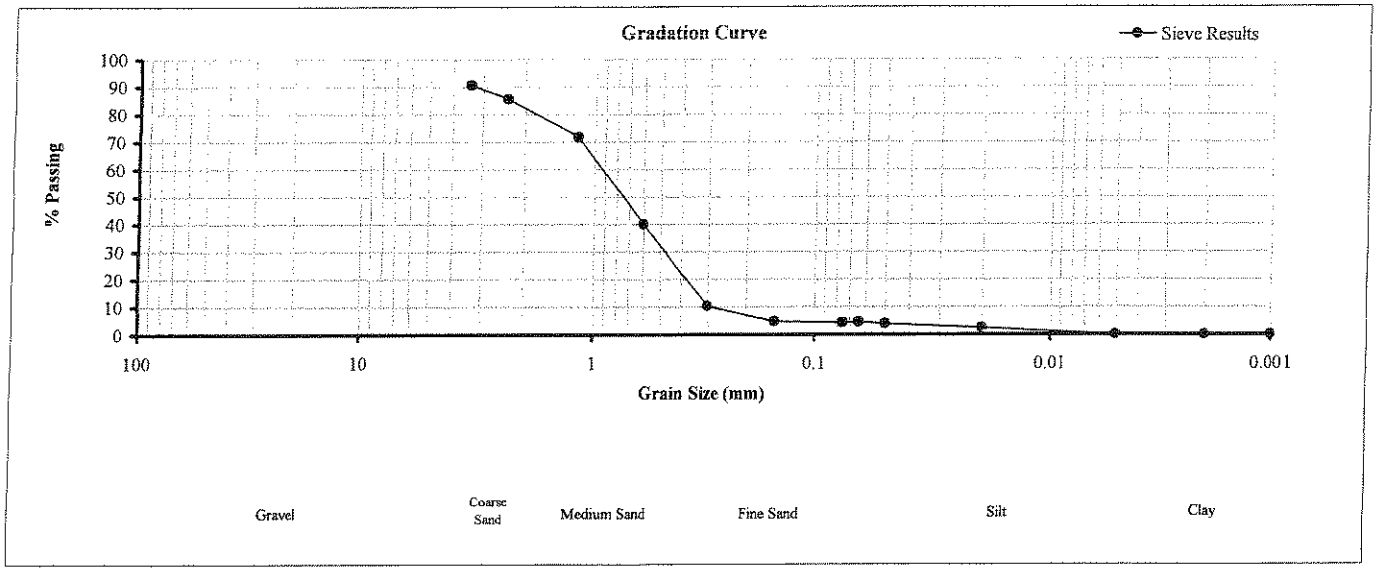
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-5 (3-23)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 5.6 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 90.1 |
| Silt | .075mm to .005mm | 4.3 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.3000 |
| $D_{30}$ = | 0.49 |
| $D_{60}$ = | 0.92 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 3.1 |
| **Coefficient Of Curvature, $C_c$** | 0.9 |

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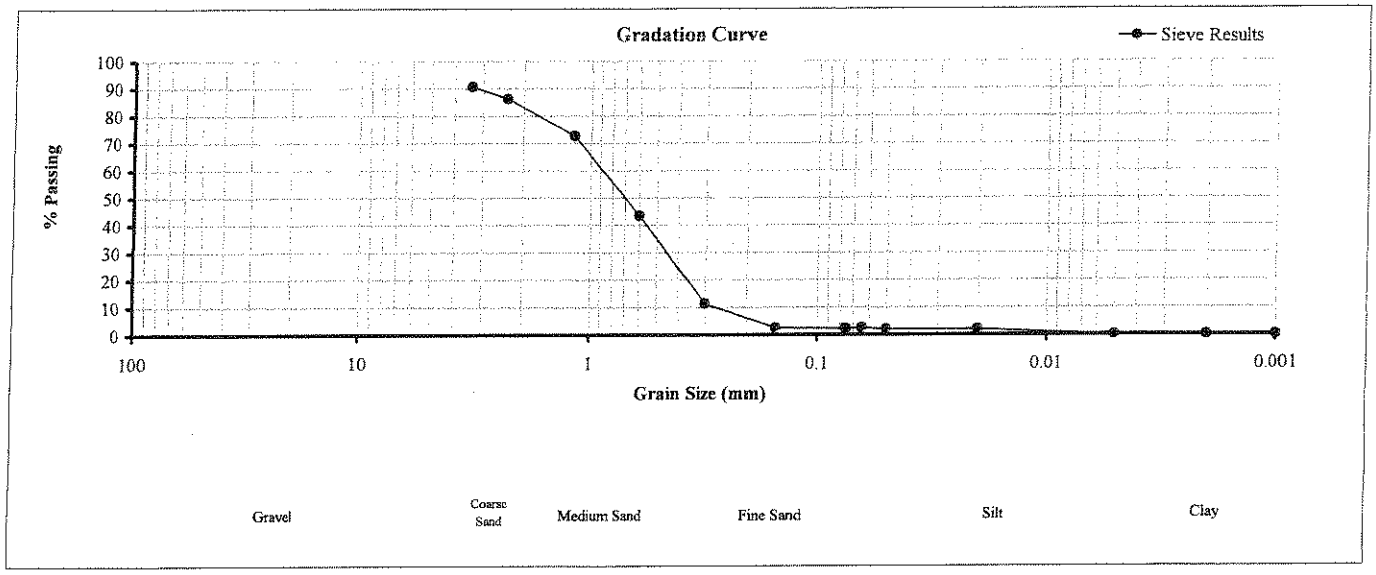
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-5 (Surface)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 6.1 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 91.7 |
| Silt | .075mm to .005mm | 2.2 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.2900 |
| $D_{30}$ = | 0.45 |
| $D_{60}$ = | 0.9 |

**Shape Parameters**

| | |
|---|---|
| ***Coefficient Of Uniformity, $C_u$*** | 3.1 |
| **Coefficient Of Curvature, $C_c$** | 0.8 |

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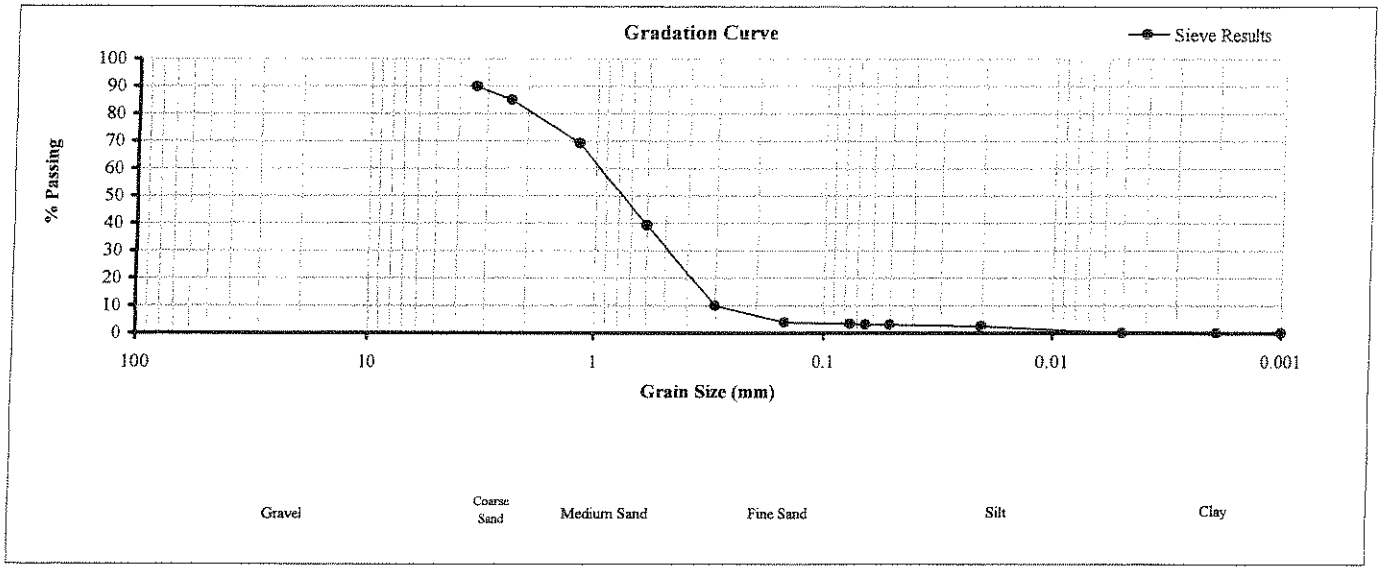
| | |
|---|---|
| **Client:** | **Amtrak-APU** |
| **Project:** | **Former Fueling Facility** |
| **Sample ID:** | **CD-50 (3-23)** |
| **Date:** | **12/8/2004** |

## GRAIN SIZE ANALYSIS

**Sieve Analysis**




**Soil Grain Size Distribution By Sieve Analysis**

| Soil Fraction | Size Range | % of Total |
|---|---|---|
| Gravel | 75mm to 4.75mm | 6.1 |
| Coarse to Fine Sand | 4.75mm to 0.075mm | 90.5 |
| Silt | .075mm to .005mm | 3.4 |
| Clay | Material smaller than .005mm | 0.0 |

| Diameters Corresponding To % Passing (mm) | |
|---|---|
| $D_{10}$ = | 0.30 |
| $D_{30}$ = | 0.49 |
| $D_{60}$ = | 0.99 |

**Shape Parameters**

| | |
|---|---|
| **Coefficient Of Uniformity, $C_u$** | 3.3 |
| **Coefficient Of Curvature, $C_c$** | 0.8 |

# Appendix Q

## Data Sets used for the Human Health Risk Assessment

**Sitewide Data All Depths**

| Sample Location | MW-1 | MW-1 (a) | MW-2 (a) | MW-2 (a) | MW-3 (a) | MW-3 (a) | MW-4 (a) | MW-4 (a) | MW-5 (a) | MW-6 (a) | MW-6A | MW-6A | MW-7 (a) | MW-8 (a) | MW-8 (a) | MW-8A | MW-8A DUP | MW-8A | MW-9 (a) | MW-10 (a) | MW-10A | MW-10A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (feet) | 0-2 | 2-4 | 0-2 | 2-4 | 6-8 | 8-10 | 0-2 | 2-4 | 0-2 | 0-2 | 0-1 | 4-6 | 0-2 | 0-2 | 2-4 | 0-1 | 0-1 | 2-4 | 0-2 | 0-2 | 0-1 | 2-4 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1221 | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1232 | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1242 | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1254 | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1260 | 2.03 | --- | 1.97 | --- | --- | --- | 0.641 | --- | 0.301 | 0.586 | --- | --- | 0.406 | --- | 0.0551 | --- | --- | --- | 0.484 | 0.15 | --- | --- |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | 33.88 | 5.6 | 73.2 | 56 | 9.36 | 13.32 | 18.52 | 8.52 | 7040 | 3276 | 8400 | 5600 | 608 | 244.4 | 2164 | 2760 | 1640 | 440 | 7760 | 3352 | 348 | 5200 |
| C19 to C36 Aliphatics | | | | | | | | | | | | | | | | | | | | | | |
| C22 aromatics | 50.82 | 8.4 | 109.8 | 84 | 14.04 | 19.98 | 27.78 | 12.78 | 10560 | 4914 | 12600 | 8400 | 912 | 366.6 | 3246 | 4140 | 2460 | 660 | 11640 | 5028 | 522 | 7800 |
| ***VPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | | | |
| C9-C10 Aromatic Hydrocarbons | | | | | | | | | | | | | | | | | | | | | | |

**Notes:**
FDGTI = Fluor Daniel GTI, Inc.
--- = not analyzed
J = analyte prese---, reported value may not be accurate or precise
[ ] = analyte prese---, as values approach the IDL, the qua---itiation may not be accurate
K = analyte prese--- reported value may be biased high, acutal value is expected to be lower
L = analyte prese---, reported value may be biased low actual value is expected to be higher
--- = not tested
DUP = duplicate
(a) = Analytical data reported by Smith Environme---al (1995)

**Sitewide Data All Depths**

| Sample Location | MW-11 (a) | MW-11 (a) | MW-12 (a) | MW-12 (a) | MW-13 | MW-13 | MW-14 | MW-14 | MW-15 | MW-15 | MW-16 | MW-16 | MW-17 | MW-17 | SB-16 | SB-16 | SB-16 | SB-16 | SB-16 | SB-16 | SB-17 | SB-17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (feet) | 0-2 | 2-4 | 0-1 | 2-4 | 0-1 | 2-4 | 0-1 | 2-4 | 0-1 | 2-4 | 0-1 | 2-4 | 0-1 | 2-4 | 0-0.25 | 0.25-1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 2-3 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.076 | <0.076 | <0.079 | <0.15 | <0.074 |
| PCB-1221 | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.076 | <0.076 | <0.079 | <0.15 | <0.074 |
| PCB-1232 | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.076 | <0.076 | <0.079 | <0.15 | <0.074 |
| PCB-1242 | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.076 | <0.076 | <0.079 | <0.15 | <0.074 |
| PCB-1248 | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.076 | <0.076 | <0.079 | <0.15 | <0.074 |
| PCB-1254 | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.076 | <0.076 | <0.079 | <0.15 | <0.074 |
| PCB-1260 | 0.271 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1.6 | 10 | 0.32 | <0.076 | <0.076 | <0.079 | 2.8 | <0.074 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | 1552 | 568 | 74 | 7.32 | 2400 | 2240 | 108 | 336 | 14400 | 22400 | 2440 | 7200 | 360 | 18000 | NS | NS | NS | NS | NS | 16 | NS | NS |
| C19 to C36 Aliphatics | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | <1.1 | NS | NS |
| C22 aromatics | 2328 | 852 | 111 | 10.98 | 3600 | 3360 | 162 | 504 | 21600 | 33600 | 3660 | 10800 | 540 | 27000 | NS | NS | NS | NS | NS | <1.1 | NS | NS |
| ***VPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | 21 | NS | NS |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | 23 | NS | NS |
| C9-C10 Aromatic Hydrocarbons | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | <15 | NS | NS |

**Notes:**

FDGTI = Fluor Daniel GTI, Inc.

--- = not analyzed

J = analyte prese---, reported value may no

[ ] = analyte prese---, as values approach t

K = analyte prese--- reported value may be

L = analyte prese---, reported value may be

--- = not tested

DUP = duplicate

(a) = Analytical data reported by Smith Envi

**Sitewide Data All Depths**

| Sample Location | SB-17 | SB-18 | SB-18 | SB-18 | SB-18 | SB-18 | SB-19 | SB-19 | SB-19 | SB-19 | SB-19 | SB-19 | SB-20 | SB-20 | SB-20 | SB-20 | SB-21 | SB-21 | SB-21 | SB-22 | SB-22 | SB-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (feet) | 4-5 | 0-0.25 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 1-2 | 2-3 | 3-4 | 0-0.25 | 1-2 | 2-3 | 0-0.25 | 1-2 | 2-3 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | <0.079 | <1.9 | <0.15 | <0.074 | <0.079 | <0.16 | <0.38 | <0.072 | <0.073 | <0.075 | <0.072 | <0.073 | <1.9 | <0.36 | <0.071 | <0.08 | <1.5 | <0.073 | <0.075 | <0.38 | <0.078 | <0.072 |
| PCB-1221 | <0.079 | <1.9 | <0.15 | <0.074 | <0.079 | <0.16 | <0.38 | <0.072 | <0.073 | <0.075 | <0.072 | <0.073 | <1.9 | <0.36 | <0.071 | <0.08 | <1.5 | <0.073 | <0.075 | <0.38 | <0.078 | <0.072 |
| PCB-1232 | <0.079 | <1.9 | <0.15 | <0.074 | <0.079 | <0.16 | <0.38 | <0.072 | <0.073 | <0.075 | <0.072 | <0.073 | <1.9 | <0.36 | <0.071 | <0.08 | <1.5 | <0.073 | <0.075 | <0.38 | <0.078 | <0.072 |
| PCB-1242 | <0.079 | <1.9 | <0.15 | <0.074 | <0.079 | 0.31 | <0.38 | <0.072 | <0.073 | <0.075 | <0.072 | <0.073 | <1.9 | **5.4** | <0.071 | <0.08 | <1.5 | <0.073 | <0.075 | <0.38 | <0.078 | <0.072 |
| PCB-1248 | <0.079 | **8.5** | <0.15 | <0.074 | <0.079 | <0.16 | <0.38 | <0.072 | <0.073 | <0.075 | <0.072 | <0.073 | **14** | <0.36 | <0.071 | <0.08 | <1.5 | <0.073 | <0.075 | <0.38 | <0.078 | <0.072 |
| PCB-1254 | <0.079 | <1.9 | <0.15 | <0.074 | <0.079 | <0.16 | <0.38 | <0.072 | <0.073 | <0.075 | <0.072 | <0.073 | <1.9 | <0.36 | <0.071 | <0.08 | <1.5 | <0.073 | <0.075 | <0.38 | <0.078 | <0.072 |
| PCB-1260 | <0.079 | **33** | 2 | 1 | 0.38 | 2.1 | **3.7** | 1.6 | 0.53 | 0.11 | <0.072 | 0.094 | **27** | **3.1** | <0.071 | <0.08 | **15** | 0.5 | <0.075 | **4.7** | 1.8 | 0.19 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | **14000** | NS | NS | NS | **7.2** | NS | NS | NS | NS | NS | NS | **6100** | NS | 18 | NS | NS | NS | 50 | NS | NS | NS | 29 |
| C19 to C36 Aliphatics | **5800** | NS | NS | NS | **6.5** | NS | NS | NS | NS | NS | NS | 1700 | NS | 200 | NS | NS | NS | 270 | NS | NS | NS | 37 |
| ?22 aromatics | **3800** | NS | NS | NS | 1000 | NS | NS | NS | NS | NS | NS | 1400 | NS | 34 | NS | NS | NS | 22 | NS | NS | NS | 24 |
| ***√PH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | <0.75 | NS | NS | NS | <0.64 | NS | NS | NS | NS | NS | NS | <1.1 | NS | 37 | NS | NS | NS | 50 | NS | NS | NS | 41 |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | 1400 | NS | NS | NS | 680 | NS | NS | NS | NS | NS | NS | 1900 | NS | 36 | NS | NS | NS | 66 | NS | NS | NS | 60 |
| C9-C10 Aromatic Hydrocarbons | 470 | NS | NS | NS | 240 | NS | NS | NS | NS | NS | NS | **630** | NS | <14 | NS | NS | NS | 18 | NS | NS | NS | <15 |

**Notes:**

FDGTI = Fluor Daniel GTI, Inc.
--- = not analyzed
J = analyte prese---, reported value may no
[ ] = analyte prese---, as values approach t
K = analyte prese--- reported value may be
L = analyte prese---, reported value may be
--- = not tested
DUP = duplicate
(a) = Analytical data reported by Smith Envi

**Sitewide Data All Depths**

| Sample Location | SB-23 | SB-23 | SB-23 | SB-23 | SB-23 | SB-33 | SB-33 | SB-33 | SB-33 | SB-33 | SB-33 | SB-34 | SB-34 | SB-34 | SB-34 | SB-34 | SB-34 | SB-35 | SB-35 | SB-35 | SB-35 | SB-35 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (feet) | 0-0.25 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1.0 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1 | 1-2 | 2-3 | 3-4 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | <0.071 | <0.37 | <0.073 | <0.079 | <0.075 | <0.17 | <0.083 | <0.074 | <0.082 | <0.082 | <0.083 | <0.1 | <0.075 | <0.082 | <0.085 | <0.086 | <0.088 | <0.081 | <0.077 | <0.097 | <0.088 | <0.076 |
| PCB-1221 | <0.071 | <0.37 | <0.073 | <0.079 | <0.075 | <0.17 | <0.083 | <0.074 | <0.082 | <0.082 | <0.083 | <0.1 | <0.075 | <0.082 | <0.085 | <0.086 | <0.088 | <0.081 | <0.077 | <0.097 | <0.088 | <0.076 |
| PCB-1232 | <0.071 | <0.37 | <0.073 | <0.079 | <0.075 | <0.17 | <0.083 | <0.074 | <0.082 | <0.082 | <0.083 | <0.1 | <0.075 | <0.082 | <0.085 | <0.086 | <0.088 | <0.081 | <0.077 | <0.097 | <0.088 | <0.076 |
| PCB-1242 | <0.071 | <0.37 | <0.073 | <0.079 | <0.075 | <0.17 | <0.083 | <0.074 | <0.082 | <0.082 | <0.083 | <0.1 | <0.075 | <0.082 | <0.085 | <0.086 | <0.088 | <0.081 | <0.077 | <0.097 | <0.088 | <0.076 |
| PCB-1248 | <0.071 | <0.37 | <0.073 | <0.079 | <0.075 | <0.17 | <0.083 | <0.074 | <0.082 | <0.082 | <0.083 | <0.1 | <0.075 | <0.082 | <0.085 | <0.086 | <0.088 | <0.081 | <0.077 | <0.097 | <0.088 | <0.076 |
| PCB-1254 | <0.071 | <0.37 | <0.073 | <0.079 | <0.075 | <0.17 | <0.083 | <0.074 | <0.082 | <0.082 | <0.083 | <0.1 | <0.075 | <0.082 | <0.085 | <0.086 | <0.088 | <0.081 | <0.077 | <0.097 | <0.088 | <0.076 |
| PCB-1260 | 0.53 | 4.6 | <0.073 | <0.079 | <0.075 | 2 | 0.22 | <0.074 | 0.15 | <0.082 | <0.083 | 1.8 | 0.63 | 1.1 | 0.73 | 0.55 | 0.45 | 0.26 | 0.38 | 0.61 | 0.92 | 0.27 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | NS | NS | NS | NS | 34 | | | | | | | | | | | | | | | | | |
| C19 to C36 Aliphatics | NS | NS | NS | NS | 38 | | | | | | | | | | | | | | | | | |
| C22 aromatics | NS | NS | NS | NS | 30 | | | | | | | | | | | | | | | | | |
| ***VPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | NS | NS | NS | NS | 26 | | | | | | | | | | | | | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | NS | NS | NS | NS | 30 | | | | | | | | | | | | | | | | | |
| C9-C10 Aromatic Hydrocarbons | NS | NS | NS | NS | 30 | | | | | | | | | | | | | | | | | |

**Notes:**

FDGTI = Fluor Daniel GTI, Inc.

--- = not analyzed

J = analyte prese---, reported value may no

[ ] = analyte prese---, as values approach t

K = analyte prese--- reported value may be

L = analyte prese---, reported value may be

--- = not tested

DUP = duplicate

(a) = Analytical data reported by Smith Envi

**Sitewide Data All Depths**

| Sample Location | SB-35 | SB-36 | SB-36 | SB-36 | SB-36 | SB-36 | SB-36 | SB-37 | SB-37 | SB-37 | SB-37 | SB-37 | SB-37 | SB-38 | SB-38 | SB-38 | SB-38 | SB-38 | SB-38 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (feet) | 4-5 | 0-0.25 | 0.25-1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1.0 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1.0 | 1-2 | 2-3 | 3-4 | 4-5 | Area 5 | Area 6 | Area 7 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | <0.075 | <0.16 | <0.16 | <0.08 | <0.081 | <0.078 | <0.076 | <0.17 | <0.084 | <0.083 | <0.084 | <0.076 | <0.074 | <0.075 | <0.079 | <0.076 | <0.076 | <0.083 | <0.076 | <0.076 | <0.19 | <0.31 |
| PCB-1221 | <0.075 | <0.16 | <0.16 | <0.08 | <0.081 | <0.078 | <0.076 | <0.17 | <0.084 | <0.083 | <0.084 | <0.076 | <0.074 | <0.075 | <0.079 | <0.076 | <0.076 | <0.083 | <0.076 | <0.13 | <0.32 | <0.27 |
| PCB-1232 | <0.075 | <0.16 | <0.16 | <0.08 | <0.081 | <0.078 | <0.076 | <0.17 | <0.084 | <0.083 | <0.084 | <0.076 | <0.074 | <0.075 | <0.079 | <0.076 | <0.076 | <0.083 | <0.076 | <0.16 | <0.39 | <0.21 |
| PCB-1242 | <0.075 | <0.16 | <0.16 | <0.08 | <0.081 | <0.078 | <0.076 | <0.17 | <0.084 | <0.083 | <0.084 | <0.076 | <0.074 | <0.075 | <0.079 | <0.076 | <0.076 | <0.083 | <0.076 | <0.074 | <0.18 | <0.21 |
| PCB-1248 | <0.075 | <0.16 | <0.16 | <0.08 | <0.081 | <0.078 | <0.076 | <0.17 | <0.084 | <0.083 | <0.084 | <0.076 | <0.074 | <0.075 | <0.079 | <0.076 | <0.076 | <0.083 | <0.076 | <0.088 | 4 | <0.21 |
| PCB-1254 | <0.075 | <0.16 | <0.16 | <0.08 | <0.081 | <0.078 | <0.076 | <0.17 | <0.084 | <0.083 | <0.084 | <0.076 | <0.074 | <0.075 | <0.079 | <0.076 | <0.076 | <0.083 | <0.076 | <0.13 | 9.3 | <0.24 |
| PCB-1260 | 0.13 | 3.2 | 2.9 | <0.08 | <0.081 | 0.17 | <0.076 | 2.1 | 1.3 | <0.083 | <0.084 | <0.076 | <0.074 | 0.46 | 0.56 | 0.26 | 0.18 | 0.11 | 0.18 | 3.5 | 9.2 | 6.2 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | | | | | | | | | | | | | | | | | | | | <0.17 | <160 | 9.5 |
| C19 to C36 Aliphatics | | | | | | | | | | | | | | | | | | | | 470 | 1200 | 55 |
| >22 aromatics | | | | | | | | | | | | | | | | | | | | <0.34 | 480 | 54 |
| ***...VPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | 2.86 | <10 | <3.18 |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | 3.47 | <10 | <3.18 |
| C9-C10 Aromatic Hydrocarbons | | | | | | | | | | | | | | | | | | | | <2.58 | <10 | <3.18 |

**Notes:**

FDGTI = Fluor Daniel GTI, Inc.

--- = not analyzed

J = analyte prese---, reported value may no

[ ] = analyte prese---, as values approach t

K = analyte prese--- reported value may be

L = analyte prese---, reported value may be

--- = not tested

DUP = duplicate

(a) = Analytical data reported by Smith Envi

**Sitewide Data All Depths**

| Sample Location | | | | | | | | | | | SSA-1A | SSA-1B | SSA-1D | SSA-1C | SSA-2A | SSA-2B | SSA-2C | SSA-3A | SSA-3B | SSA-3C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Depth (feet)** | Area 8 | Area 9 | Area 9 Dup | Area 10 | Area 11 | Area 12 | Area 13 | Area 14 | Area 15 | Area 16 | | | | | | | | | | |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | <0.52 | <0.28 | <0.23 | <0.14 | <0.056 | <0.28 | <0.026 | <0.026 | <0.062 | <0.029 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1221 | <0.46 | <0.25 | <0.21 | <0.12 | <0.051 | <0.25 | <0.023 | <0.023 | <0.056 | <0.026 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1232 | <0.35 | <0.19 | <0.16 | <0.093 | <0.039 | <0.19 | <0.018 | <0.018 | <0.043 | <0.02 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1242 | <0.35 | <0.19 | <0.16 | <0.093 | <0.039 | <0.19 | <0.018 | <0.018 | <0.043 | <0.02 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1248 | <0.35 | <0.19 | <0.16 | <0.093 | <0.039 | <0.19 | <0.018 | <0.018 | <0.043 | <0.02 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1254 | <0.4 | <0.21 | <0.18 | <0.1 | <0.044 | <0.21 | <0.02 | <0.020 | <0.048 | 0.17 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1260 | 12 | 5 | 3.8 | 4 | 1.1 | 4.7 | 0.34 | 0.36 | 1.2 | 0.62 | 2.2 | 3.4 | 3.6 | 3.5 | 0.85 | 0.79 | 0.67 | 2.4 | 1.2 | 1.1 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | 34 | 35 | 39 | 3000 | 24 | <14 | 40 | <6.5 | <7.8 | <7.2 | 4900 | 13000 | 18000 | 5400 | 40000 | 5000 | 6800 | 3700 | 1200 | 3800 |
| C19 to C36 Aliphatics | 130 | 350 | 280 | 2200 | 95 | 250 | 87 | 66 | 20 | 71 | 13000 | 31000 | 42000 | 9300 | 10000 | 1500 | 2400 | 2200 | 880 | 1200 |
| C22 aromatics | 57 | 280 | 170 | 1800 | 90 | 130 | 51 | 38 | <16 | 38 | 6800 | 27000 | 29000 | 7500 | 23000 | 1300 | 6600 | 4200 | 1100 | 2000 |
| ***VPH Method*** | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | <2.69 | <2.87 | 5.32 | <3.52 | <2.94 | <2.87 | <2.66 | <2.7 | <3.25 | <2.77 | <735 | <866 | <1420 | <744 | <860 | <598 | <808 | <844 | <642 | <706 |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | <2.69 | <2.87 | 5.76 | <3.52 | <2.94 | <2.87 | <2.66 | <2.7 | <3.25 | <2.77 | <735 | <866 | <1420 | <744 | <860 | <598 | <808 | <844 | <642 | <706 |
| C9-C10 Aromatic Hydrocarbons | <2.69 | 3.81 | 4.8 | <3.52 | <2.94 | <2.87 | <2.66 | <2.7 | <3.25 | <2.77 | <735 | <866 | <1420 | <744 | <860 | <598 | <808 | <844 | <642 | <706 |

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--- = not analyzed

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[ ] = analyte prese---, as values approach t

K = analyte prese--- reported value may be

L = analyte prese---, reported value may be

--- = not tested

DUP = duplicate

(a) = Analytical data reported by Smith Envi

**Sitewide Data 0-2 feet**

| Sample Location | MW-1 | MW-2 (a) | MW-4 (a) | MW-5 (a) | MW-6 (a) | MW-6A | MW-7 (a) | MW-8 (a) | MW-8A | MW-8A DUP | MW-9 (a) | MW-10 (a) | MW-10A | MW-11 (a) | MW-12 (a) | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | SB-16 | SB-16 | SB-16 | SB-17 | SB-18 | SB-18 | SB-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Depth (feet)** | 0-2 | 0-2 | 0-2 | 0-2 | 0-2 | 0-1 | 0-2 | 0-2 | 0-1 | 0-1 | 0-2 | 0-2 | 0-1 | 0-2 | 0-1 | 0-1 | 0-1 | 0-1 | 0-1 | 0-1 | **0-0.25** | **0.25-1** | **1-2** | **0-0.25** | **0-0.25** | **1-2** | **0-0.25** |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | | | | | | | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.15 | <1.9 | <0.15 | <0.38 |
| PCB-1221 | | | | | | | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.15 | <1.9 | <0.15 | <0.38 |
| PCB-1232 | | | | | | | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.15 | <1.9 | <0.15 | <0.38 |
| PCB-1242 | | | | | | | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.15 | <1.9 | <0.15 | <0.38 |
| PCB-1248 | | | | | | | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.15 | **8.5** | <0.15 | <0.38 |
| PCB-1254 | | | | | | | | | | | | | | | | | | | | | <0.071 | <0.73 | <0.073 | <0.15 | <1.9 | <0.15 | <0.38 |
| PCB-1260 | 2.03 | 1.97 | 0.641 | 0.301 | 0.586 | --- | 0.406 | --- | --- | --- | 0.484 | 0.15 | --- | 0.271 | --- | --- | --- | --- | --- | --- | 1.6 | **10** | 0.32 | 2.8 | **33** | 2 | **3.7** |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | 33.88 | 73.2 | 18.52 | 7040 | 3276 | 8400 | 608 | 244.4 | 2760 | 1640 | 7760 | 3352 | 348 | 1552 | 74 | 2400 | 108 | 14400 | 2440 | 360 | NS | NS | NS | NS | NS | NS | NS |
| C19 to C36 Aliphatics | | | | | | | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | NS | NS |
| C11-C22 aromatics | 50.82 | 109.8 | 27.78 | 10560 | 4914 | 12600 | 912 | 366.6 | 4140 | 2460 | 11640 | 5028 | 522 | 2328 | 111 | 3600 | 162 | 21600 | 3660 | 540 | NS | NS | NS | NS | NS | NS | NS |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | NS | NS |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | NS | NS |
| C9-C10 Aromatic Hydrocarbons | | | | | | | | | | | | | | | | | | | | | NS | NS | NS | NS | NS | NS | NS |

**Notes:**
FDGTI = Fluor Daniel GTI, Inc.
--- = not analyzed
J = analyte prese---, reported value may not be accurate or precise
[ ] = analyte prese---, as values approach the IDL, the qua---itiation may not be accurate
K = analyte prese--- reported value may be biased high, acutal value is expected to be lower
L = analyte prese---, reported value may be biased low actual value is expected to be higher
--- = not tested
DUP = duplicate
(a) = Analytical data reported by Smith Environmental (1995)

**Sitewide Data 0-2 feet**

| Sample Location | SB-19 | SB-19 | SB-20 | SB-20 | SB-21 | SB-21 | SB-22 | SB-22 | SB-23 | SB-23 | SB-33 | SB-33 | SB-33 | SB-34 | SB-34 | SB-34 | SB-35 | SB-35 | SB-35 | SB-36 | SB-36 | SB-36 | SB-37 | SB-37 | SB-37 | SB-38 | SB-38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Depth (feet)* | *0.25-1* | *1-2* | *0-0.25* | *1-2* | *0-0.25* | *1-2* | *0-0.25* | *1-2* | *0-0.25* | *1-2* | *0-0.25* | *0.25-1* | *1-2* | *0-0.25* | *0.25-1.0* | *1-2* | *0-0.25* | *0.25-1* | *1-2* | *0-0.25* | *0.25-1* | *1-2* | *0-0.25* | *0.25-1.0* | *1-2* | *0-0.25* | *0.25-1.0* |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | <0.072 | <0.073 | <1.9 | <0.36 | <1.5 | <0.073 | <0.38 | <0.078 | <0.071 | <0.37 | <0.17 | <0.083 | <0.074 | <0.1 | <0.075 | <0.082 | <0.081 | <0.077 | <0.097 | <0.16 | <0.16 | <0.08 | <0.17 | <0.084 | <0.083 | <0.075 | <0.079 |
| PCB-1221 | <0.072 | <0.073 | <1.9 | <0.36 | <1.5 | <0.073 | <0.38 | <0.078 | <0.071 | <0.37 | <0.17 | <0.083 | <0.074 | <0.1 | <0.075 | <0.082 | <0.081 | <0.077 | <0.097 | <0.16 | <0.16 | <0.08 | <0.17 | <0.084 | <0.083 | <0.075 | <0.079 |
| PCB-1232 | <0.072 | <0.073 | <1.9 | <0.36 | <1.5 | <0.073 | <0.38 | <0.078 | <0.071 | <0.37 | <0.17 | <0.083 | <0.074 | <0.1 | <0.075 | <0.082 | <0.081 | <0.077 | <0.097 | <0.16 | <0.16 | <0.08 | <0.17 | <0.084 | <0.083 | <0.075 | <0.079 |
| PCB-1242 | <0.072 | <0.073 | <1.9 | **5.4** | <1.5 | <0.073 | <0.38 | <0.078 | <0.071 | <0.37 | <0.17 | <0.083 | <0.074 | <0.1 | <0.075 | <0.082 | <0.081 | <0.077 | <0.097 | <0.16 | <0.16 | <0.08 | <0.17 | <0.084 | <0.083 | <0.075 | <0.079 |
| PCB-1248 | <0.072 | <0.073 | **14** | <0.36 | <1.5 | <0.073 | <0.38 | <0.078 | <0.071 | <0.37 | <0.17 | <0.083 | <0.074 | <0.1 | <0.075 | <0.082 | <0.081 | <0.077 | <0.097 | <0.16 | <0.16 | <0.08 | <0.17 | <0.084 | <0.083 | <0.075 | <0.079 |
| PCB-1254 | <0.072 | <0.073 | <1.9 | <0.36 | <1.5 | <0.073 | <0.38 | <0.078 | <0.071 | <0.37 | <0.17 | <0.083 | <0.074 | <0.1 | <0.075 | <0.082 | <0.081 | <0.077 | <0.097 | <0.16 | <0.16 | <0.08 | <0.17 | <0.084 | <0.083 | <0.075 | <0.079 |
| PCB-1260 | 1.6 | 0.53 | **27** | **3.1** | **15** | 0.5 | **4.7** | 1.8 | 0.53 | **4.6** | 2 | 0.22 | <0.074 | 1.8 | 0.63 | 1.1 | 0.26 | 0.38 | 0.61 | **3.2** | 2.9 | <0.08 | 2.1 | 1.3 | <0.083 | 0.46 | 0.56 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | NS | NS | NS | 18 | NS | 50 | NS | NS | NS | NS | | | | | | | | | | | | | | | | | |
| C19 to C36 Aliphatics | NS | NS | NS | 200 | NS | 270 | NS | NS | NS | NS | | | | | | | | | | | | | | | | | |
| C11-C22 aromatics | NS | NS | NS | 34 | NS | 22 | NS | NS | NS | NS | | | | | | | | | | | | | | | | | |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | NS | NS | NS | 37 | NS | 50 | NS | NS | NS | NS | | | | | | | | | | | | | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | NS | NS | NS | 36 | NS | 66 | NS | NS | NS | NS | | | | | | | | | | | | | | | | | |
| 10 Aromatic Hydrocarbons | NS | NS | NS | <14 | NS | 18 | NS | NS | NS | NS | | | | | | | | | | | | | | | | | |

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[ ] = analyte prese---, as values approach t
K = analyte prese--- reported value may be
L = analyte prese---, reported value may be
--- = not tested
DUP = duplicate
(a) = Analytical data reported by Smith Env

**Sitewide Data 0-2 feet**

| Sample Location | SB-38 | | | | | | | | | | | | | | SSA-1A | SSA-1B | SSA-1D | SSA-1C | SSA-2A | SSA-2B | SSA-2C | SSA-3A | SSA-3B | SSA-3C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (feet) | 1-2 | Area 5 | Area 6 | Area 7 | Area 8 | Area 9 | Area 9 Dup | Area 10 | Area 11 | Area 12 | Area 13 | Area 14 | Area 15 | Area 16 | | | | | | | | | | |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1016 | <0.076 | <0.076 | <0.19 | <0.31 | <0.52 | <0.28 | <0.23 | <0.14 | <0.056 | <0.28 | <0.026 | <0.026 | <0.062 | <0.029 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1221 | <0.076 | <0.13 | <0.32 | <0.27 | <0.46 | <0.25 | <0.21 | <0.12 | <0.051 | <0.25 | <0.023 | <0.023 | <0.056 | <0.026 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1232 | <0.076 | <0.16 | <0.39 | <0.21 | <0.35 | <0.19 | <0.16 | <0.093 | <0.039 | <0.19 | <0.018 | <0.018 | <0.043 | <0.02 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1242 | <0.076 | <0.074 | <0.18 | <0.21 | <0.35 | <0.19 | <0.16 | <0.093 | <0.039 | <0.19 | <0.018 | <0.018 | <0.043 | <0.02 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1248 | <0.076 | <0.088 | 4 | <0.21 | <0.35 | <0.19 | <0.16 | <0.093 | <0.039 | <0.19 | <0.018 | <0.018 | <0.043 | <0.02 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1254 | <0.076 | <0.13 | 9.3 | <0.24 | <0.4 | <0.21 | <0.18 | <0.1 | <0.044 | <0.21 | <0.02 | <0.020 | <0.048 | 0.17 | 0.8 | <0.71 | <0.72 | <0.64 | <0.34 | <0.1 | <0.17 | <0.35 | <0.22 | <0.15 |
| PCB-1260 | 0.26 | 3.5 | 9.2 | 6.2 | 12 | 5 | 3.8 | 4 | 1.1 | 4.7 | 0.34 | 0.36 | 1.2 | 0.62 | 2.2 | 3.4 | 3.6 | 3.5 | 0.85 | 0.79 | 0.67 | 2.4 | 1.2 | 1.1 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 aliphatics | | <0.17 | <160 | 9.5 | 34 | 35 | 39 | 3000 | 24 | <14 | 40 | <6.5 | <7.8 | <7.2 | 4900 | 13000 | 18000 | 5400 | 40000 | 5000 | 6800 | 3700 | 1200 | 3800 |
| C19 to C36 Aliphatics | | 470 | 1200 | 55 | 130 | 350 | 280 | 2200 | 95 | 250 | 87 | 66 | 20 | 71 | 13000 | 31000 | 42000 | 9300 | 10000 | 1500 | 2400 | 2200 | 880 | 1200 |
| C11-C22 aromatics | | <0.34 | 480 | 54 | 57 | 280 | 170 | 1800 | 90 | 130 | 51 | 38 | <16 | 38 | 6800 | 27000 | 29000 | 7500 | 23000 | 1300 | 6600 | 4200 | 1100 | 2000 |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | 2.86 | <10 | <3.18 | <2.69 | <2.87 | 5.32 | <3.52 | <2.94 | <2.87 | <2.66 | <2.7 | <3.25 | <2.77 | <735 | <866 | <1420 | <744 | <860 | <598 | <808 | <844 | <642 | <706 |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | 3.47 | <10 | <3.18 | <2.69 | <2.87 | 5.76 | <3.52 | <2.94 | <2.87 | <2.66 | <2.7 | <3.25 | <2.77 | <735 | <866 | <1420 | <744 | <860 | <598 | <808 | <844 | <642 | <706 |
| *0 Aromatic Hydrocarbons | | <2.58 | <10 | <3.18 | <2.69 | 3.81 | 4.8 | <3.52 | <2.94 | <2.87 | <2.66 | <2.7 | <3.25 | <2.77 | <735 | <866 | <1420 | <744 | <860 | <598 | <808 | <844 | <642 | <706 |

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J = analyte prese---, reported value may no
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K = analyte prese--- reported value may be
L = analyte prese---, reported value may be
--- = not tested
DUP = duplicate
(a) = Analytical data reported by Smith Env

**Former Roundhouse Area**

| | Sample Location | SB-1 | SB-1 | SB-1 | SB-1 | SB-1 | SB-1 | SB-2 | SB-2 | SB-2 | SB-4 | SB-4 | SB-4 | SB-3 | SB-3 | SB-3 | SB-3 | SB-3 | SB-3 | SB-5 | SB-5 | SB-5 | SB-7 | SB-7 | SB-7 | SB-6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Sample Depth** | **0-0.25** | **0.25-1** | **1-2** | **2-3** | **3-4** | **4-5** | **0-0.25** | **1-2** | **3-4** | **0-0.25** | **1-2** | **2-3** | **0-0.25** | **0.25-1** | **1-2** | **2-3** | **3-4** | **4-5** | **0-0.25** | **0.25-1** | **2-3** | **0-0.25** | **1-2** | **2-3** | **0-0.25** |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | MG/KG | <1.6 | <1.5 | <0.075 | <0.083 | <0.079 | <0.073 | <0.77 | <0.37 | <0.073 | <1.5 | <1.5 | <3.7 | <0.75 | <1.8 | <0.073 | <0.074 | <0.074 | <0.073 | <3.8 | <0.071 | <0.072 | <3.9 | <0.36 | <0.071 | <3.8 |
| PCB-1254 | MG/KG | <1.6 | <1.5 | <0.075 | <0.083 | <0.079 | <0.073 | <0.77 | <0.37 | <0.073 | <1.5 | <1.5 | <3.7 | <0.75 | <1.8 | <0.073 | <0.074 | <0.074 | <0.073 | <3.8 | <0.071 | <0.072 | <3.9 | <0.36 | <0.071 | <3.8 |
| PCB-1260 | MG/KG | **32** | **29** | 0.83 | <0.083 | <0.079 | <0.073 | **9.4** | **4** | <0.073 | **30** | **22** | **51** | **8.8** | **24** | 0.41 | <0.074 | 0.81 | <0.073 | **47** | 0.18 | <0.072 | **56** | **4** | <0.071 | **52** |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | MG/KG | NA | NA | NA | NA | 39 | NA | NA | 54 | NA | NA | NA | 260 | NA | NA | NA | NA | 16 | NA | NA | 28 | NA | NA | 49 | NA | NA |
| C19 to C36 Aliphatics | MG/KG | NA | NA | NA | NA | 110 | NA | NA | 260 | NA | NA | NA | 300 | NA | NA | NA | NA | 83 | NA | NA | 380 | NA | NA | 350 | NA | NA |
| C11 to C22 Aromatics (adjusted) | MG/KG | NA | NA | NA | NA | 25 | NA | NA | 99 | NA | NA | NA | 58 | NA | NA | NA | NA | 27 | NA | NA | 140 | NA | NA | 220 | | NA |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | MG/KG | NA | NA | NA | NA | 27 | NA | NA | 35 | NA | NA | NA | 30 | NA | NA | NA | NA | 24 | NA | NA | 30 | NA | NA | 32 | NA | NA |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | MG/KG | NA | NA | NA | NA | 17 | NA | NA | 30 | NA | NA | NA | 21 | NA | NA | NA | NA | 16 | NA | NA | 17 | NA | NA | 39 | NA | NA |
| C9-C10 Aromatic Hydrocarbons | MG/KG | NA | NA | NA | NA | 25 | NA | NA | <0.14 | NA | NA | NA | <13 | NA | NA | NA | NA | <0.13 | NA | NA | <0.15 | NA | NA | <16 | NA | NA |

**Former Roundhouse Area**

| | SB-6 | SB-6 | SB-6 | SB-6 | SB-6 | SB-8 | SB-8 | SB-8 | SB-8 | SB-8 | SB-8 | SB-9 | SB-9 | SB-9 | SB-12 | SB-12 | SB-12 | SB-10 | SB-10 | SB-10 | SB-10 | SB-10 | SB-10 | SB-11 | SB-11 | SB-11 | SB-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.25-1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0-1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1 | 3-4 | 0-0.25 | 1-2 | 3-4 | 0-0.25 | 0.25-1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25 -1 | 1-2 | 2-3 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | <1.5 | <7.2 | <7.2 | <1.4 | <3.7 | <3.7 | <3.8 | <7.3 | <3.7 | <3.6 | <37 | <7.5 | <0.073 | <0.074 | <3.8 | <1.9 | <0.74 | <3.8 | <0.14 | <0.08 | <0.07 | <0.072 | <0.072 | <37 | <76 | <7.3 | <76 |
| PCB-1254 | <1.5 | <7.2 | <7.2 | <1.4 | <3.7 | <3.7 | <3.8 | <7.3 | <3.7 | <3.6 | <37 | <7.5 | <0.073 | <0.074 | <3.8 | <1.9 | <0.74 | <3.8 | <0.14 | <0.08 | <0.07 | <0.072 | <0.072 | <37 | <76 | <7.3 | <76 |
| PCB-1260 | **27** | **100** | **81** | **28** | **81** | **31** | **49** | **79** | **44** | **50** | **460** | **150** | 0.94 | 0.23 | **78** | **17** | **15** | **53** | 1.8 | <0.08 | 0.12 | <0.072 | 0.48 | **370** | **1400** | **130** | **1100** |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | NA | 38 | NA | NA | NA | NA | NA | NA | NA | NA | 39 | NA | NA | 1900 | NA | NA | 38 | NA | NA | NA | NA | NA | 150 | NA | NA | NA | NA |
| C19 to C36 Aliphatics | NA | 380 | NA | NA | NA | NA | NA | NA | NA | NA | 300 | NA | NA | 1300 | NA | NA | 410 | NA | NA | NA | NA | NA | 710 | NA | NA | NA | NA |
| C11 to C22 Aromatics (adjusted) | NA | 150 | NA | NA | NA | NA | NA | NA | NA | NA | 70 | NA | NA | 130 | NA | NA | 62 | NA | NA | NA | NA | NA | 160 | NA | NA | NA | NA |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | NA | 50 | NA | NA | NA | NA | NA | NA | NA | NA | 35 | NA | NA | <40 | NA | NA | 14 | NA | NA | NA | NA | NA | 39 | NA | NA | NA | NA |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | NA | 580 | NA | NA | NA | NA | NA | NA | NA | NA | 36 | NA | NA | 450 | NA | NA | <0.13 | NA | NA | NA | NA | NA | 69 | NA | NA | NA | NA |
| C9-C10 Aromatic Hydrocarbons | NA | 230 | NA | NA | NA | NA | NA | NA | NA | NA | <15 | NA | NA | 180 | NA | NA | <0.13 | NA | NA | NA | NA | NA | <17 | NA | NA | NA | NA |

**Former Roundhouse Area**

| | SB-11 | SB-11 | SB-13 | SB-13 | SB-15 | SB-15 | SB-15 | SB-14 | SB-14 | SB-14 | SB-14 | SB-14 | SB-24 | SB-24 | SB-24 | SB-24 | SB-24 | SB-24 | SB-24 | SB-24 | SB-24 | SB-24 | SB-24 | SB-25 | SB-25 | SB-25 | SB-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3-4 | 4-5 | 1-2 | 3-4 | 0-0.25 | 3-4 | 4-5 | 0-0.25 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-6 | 8-9 | 9-10 | 10-11 | 11-12 | 6-7 | 7-8 | 8-9 | 0-0.25 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | <0.078 | <0.072 | <0.077 | <0.073 | <0.073 | <0.073 | <0.078 | <0.14 | <0.15 | <0.089 | <0.072 | <0.076 | <1.7 | <2 | <0.74 | <0.74 | <1.9 | <4.2 | <4 | <4.1 | <2 | 5.2 | <0.084 | <4.1 | <0.91 | <1.6 | <1.5 |
| PCB-1254 | <0.078 | <0.072 | <0.077 | <0.073 | <0.073 | <0.073 | <0.078 | <0.14 | <0.15 | <0.089 | <0.072 | <0.076 | <1.7 | 11 | <0.74 | <0.74 | <1.9 | <4.2 | <4 | <4.1 | 37 | <0.47 | <0.084 | 24 | 7 | <1.6 | <1.5 |
| PCB-1260 | 0.75 | 0.36 | <0.077 | <0.073 | 1.2 | <0.073 | <0.078 | 1.9 | 2.5 | 0.7 | <0.072 | <0.076 | 16 | 26 | 8.8 | 11 | 28 | 50 | 49 | 36 | 29 | 7.4 | 0.21 | 38 | 12 | 16 | 18 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | NA | 1900 | NA | 19 | NA | NA | 39 | NA | NA | 17 | NA | NA | | | | | | | | | | | | | | | |
| C19 to C36 Aliphatics | NA | 3300 | NA | 110 | NA | NA | 180 | NA | NA | 94 | NA | NA | | | | | | | | | | | | | | | |
| C11 to C22 Aromatics (adjusted) | NA | 350 | NA | <19 | NA | NA | 41 | NA | NA | 27 | NA | NA | | | | | | | | | | | | | | | |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | NA | <0.41 | NA | 15 | NA | NA | 29 | NA | NA | 19 | NA | NA | | | | | | | | | | | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | NA | 580 | NA | <15 | NA | NA | 20 | NA | NA | <13 | NA | NA | | | | | | | | | | | | | | | |
| C9-C10 Aromatic Hydrocarbons | NA | 200 | NA | <15 | NA | NA | 17 | NA | NA | 27 | NA | NA | | | | | | | | | | | | | | | |

**Former Roundhouse Area**

| | SB-26 | SB-26 | SB-26 | SB-26 | SB-26 | SB-26 | SB-27 | SB-27 | SB-27 | SB-27 | SB-27 | SB-27 | SB-27 | SB-28 | SB-28 | SB-28 | SB-28 | SB-28 | SB-28 | SB-28 | SB-29 | SB-29 | SB-29 | SB-29 | SB-29 | SB-30 | SB-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-2 | 2-3 | 3-4 | 5-6 | 6-7 | 7-8 | 0-0.25 | 1-2 | 2-3 | 3-4 | 4-5 | 5-6 | 6-7 | 0-0.25 | 0.25-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-6 | 0-0.25 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25-1 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | <0.74 | <1.5 | <0.75 | <0.38 | <0.4 | <1.6 | <1.6 | <1.5 | <3.6 | <3.9 | <1.6 | <1.6 | **4.7** | <3.7 | <7.3 | <1.5 | <3.7 | <3.8 | <1.6 | <2.1 | <7.7 | <0.41 | <0.075 | <0.075 | <0.077 | <78 | <2 |
| PCB-1254 | **5.4** | <1.5 | **3.8** | 1.7 | **3.4** | **12** | **12** | <1.5 | **33** | **25** | **14** | **9.4** | **6.4** | <3.7 | <7.3 | <1.5 | <3.7 | **31** | **17** | **20** | <7.7 | <0.41 | <0.075 | <0.075 | <0.077 | <78 | <2 |
| PCB-1260 | **9.3** | **22** | **9** | **3.3** | **6.1** | **18** | **18** | **18** | **36** | **39** | **14** | **14** | **9.7** | **37** | **81** | **15** | **39** | **39** | **21** | **23** | **170** | **7** | <0.075 | 0.15 | <0.077 | **780** | **45** |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C19 to C36 Aliphatics | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C11 to C22 Aromatics (adjusted) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9-C10 Aromatic Hydrocarbons | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Former Roundhouse Area**

| | SB-30 | SB-30 | SB-30 | SB-30 | SB-31 | SB-31 | SB-31 | SB-31 | SB-31 | SB-31 | SB-32 | SB-32 | SB-32 | SB-32 | SB-32 | Area 1 | SS-1 | SS-2 | SS-3 | SS-4 | SS-5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0.25 -1 | 1-2 | 2-3 | 3-4 | 4-5 | 0-0.25 | 0-1 | 1-2 | 2-3 | 3-3.5 | | 0-0.25 | 0-0.25 | 0-0.25 | 0-0.25 | 0-0.25 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | <40 | <0.15 | <0.15 | <0.079 | <7.9 | <4.4 | <0.11 | <0.09 | <0.084 | <0.079 | <20 | <8 | <4 | <0.16 | <0.17 | 0.55 | <1.6 | <0.09 | <0.36 | <0.4 | <0.39 |
| PCB-1254 | <40 | <0.15 | <0.15 | <0.079 | <7.9 | <4.4 | <0.11 | 0.5 | <0.084 | <0.079 | <20 | <8 | <4 | <0.16 | <0.17 | <1.6 | <1.6 | <0.09 | <0.36 | <0.4 | <0.39 |
| PCB-1260 | **710** | 2.8 | 2 | <0.079 | **120** | **43** | 1.4 | 1.2 | 0.73 | 0.59 | **200** | **110** | **71** | 1.8 | 2.1 | 39 | 21 | 1.5 | 7.2 | 3.4 | 4.4 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | | | | | | | | | | | | | | | | <65 | | | | | |
| C19 to C36 Aliphatics | | | | | | | | | | | | | | | | 750 | | | | | |
| C11 to C22 Aromatics (adjusted) | | | | | | | | | | | | | | | | 230 | | | | | |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | 3.21 | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | | | | 2.79 | | | | | |
| C9-C10 Aromatic Hydrocarbons | | | | | | | | | | | | | | | | <2.74 | | | | | |

**Former Roundhouse Area (0-2 FT)**

| | Sample Location | SB-1 | SB-1 | SB-1 | SB-2 | SB-2 | SB-4 | SB-4 | SB-3 | SB-3 | SB-3 | SB-5 | SB-5 | SB-7 | SB-7 | SB-6 | SB-6 | SB-6 | SB-8 | SB-8 | SB-8 | SB-9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sample Depth | 0-0.25 | 0.25-1 | 1-2 | 0-0.25 | 1-2 | 0-0.25 | 1-2 | 0-0.25 | 0.25-1 | 1-2 | 0-0.25 | 0.25-1 | 0-0.25 | 1-2 | 0-0.25 | 0.25-1 | 1-2 | 0-0.25 | 0-1 feet bgs | 1-2 feet bgs | 0-0.25 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | MG/KG | <1.6 | <1.5 | <0.075 | <0.77 | <0.37 | <1.5 | <1.5 | <0.75 | <1.8 | <0.073 | <3.8 | <0.071 | <3.9 | <0.36 | <3.8 | <1.5 | <7.2 | <3.7 | <3.8 | <7.3 | <7.5 |
| PCB-1254 | MG/KG | <1.6 | <1.5 | <0.075 | <0.77 | <0.37 | <1.5 | <1.5 | <0.75 | <1.8 | <0.073 | <3.8 | <0.071 | <3.9 | <0.36 | <3.8 | <1.5 | <7.2 | <3.7 | <3.8 | <7.3 | <7.5 |
| PCB-1260 | MG/KG | **32** | **29** | 0.83 | **9.4** | **4** | **30** | **22** | **8.8** | **24** | 0.41 | **47** | 0.18 | **56** | **4** | **52** | **27** | **100** | **31** | **49** | **79** | **150** |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | MG/KG | NA | NA | NA | NA | 54 | NA | NA | NA | NA | NA | NA | 28 | NA | 49 | NA | NA | 38 | NA | NA | NA | NA |
| C19 to C36 Aliphatics | MG/KG | NA | NA | NA | NA | 260 | NA | NA | NA | NA | NA | NA | 380 | NA | 350 | NA | NA | 380 | NA | NA | NA | NA |
| C11 to C22 Aromatics (adjusted) | MG/KG | NA | NA | NA | NA | 99 | NA | NA | NA | NA | NA | NA | 140 | NA | 220 | NA | NA | 150 | NA | NA | NA | NA |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | MG/KG | NA | NA | NA | NA | 35 | NA | NA | NA | NA | NA | NA | 30 | NA | 32 | NA | NA | 50 | NA | NA | NA | NA |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | MG/KG | NA | NA | NA | NA | 30 | NA | NA | NA | NA | NA | NA | 17 | NA | 39 | NA | NA | 580 | NA | NA | NA | NA |
| C9-C10 Aromatic Hydrocarbons | MG/KG | NA | NA | NA | NA | <0.14 | NA | NA | NA | NA | NA | NA | <0.15 | NA | <16 | NA | NA | 230 | NA | NA | NA | NA |

**Former Roundhouse Area (0-2 FT)**

| | SB-9 | SB-12 | SB-12 | SB-10 | SB-10 | SB-10 | SB-11 | SB-11 | SB-11 | SB-13 | SB-15 | SB-14 | SB-14 | SB-24 | SB-24 | SB-24 | SB-26 | SB-26 | SB-27 | SB-27 | SB-28 | SB-28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.25-1 | 0-0.25 | 1-2 | 0-0.25 | 0.25-1 | 1-2 | 0-0.25 | 0.25 -1 | 1-2 | 1-2 | 0-0.25 | 0-0.25 | 1-2 | 0-0.25 | 0-1 | 1-2 | 0-0.25 | 1-2 | 0-0.25 | 1-2 | 0-0.25 | 0.25-1 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | | | | | |
| PCB-1248 | <0.073 | <3.8 | <1.9 | <3.8 | <0.14 | <0.08 | <37 | <76 | <7.3 | <0.077 | <0.073 | <0.14 | <0.15 | <1.7 | <2 | <0.74 | <1.5 | <0.74 | <1.6 | <1.5 | <3.7 | <7.3 |
| PCB-1254 | <0.073 | <3.8 | <1.9 | <3.8 | <0.14 | <0.08 | <37 | <76 | <7.3 | <0.077 | <0.073 | <0.14 | <0.15 | <1.7 | **11** | <0.74 | <1.5 | **5.4** | **12** | <1.5 | <3.7 | <7.3 |
| PCB-1260 | 0.94 | **78** | **17** | **53** | 1.8 | <0.08 | **370** | **1400** | **130** | <0.077 | 1.2 | 1.9 | 2.5 | **16** | **26** | **8.8** | **18** | **9.3** | **18** | **18** | **37** | **81** |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | | | | | | | | | |
| C19 to C36 Aliphatics | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | | | | | | | | | |
| C11 to C22 Aromatics (adjusted) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | | | | | | | | | |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | | | | | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | | | | | | | | | |
| C9-C10 Aromatic Hydrocarbons | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | | | | | | | | | |

**Former Roundhouse Area (0-2 FT)**

| | SB-28 | SB-29 | SB-29 | SB-30 | SB-30 | SB-30 | SB-31 | SB-31 | SB-31 | SB-32 | SB-32 | SB-32 | Area 1 | SS-1 | SS-2 | SS-3 | SS-4 | SS-5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-2 | 0-0.25 | 1-2 | 0-0.25 | 0.25-1 | 1-2 | 0-0.25 | 0.25 -1 | 1-2 | 0-0.25 | 0-1 | 1-2 | | 0-0.25 | 0-0.25 | 0-0.25 | 0-0.25 | 0-0.25 |
| ***PCB Analyses (EPA Method 8082)*** | | | | | | | | | | | | | | | | | | |
| PCB-1248 | <1.5 | <7.7 | <0.41 | <78 | <2 | <40 | <7.9 | <4.4 | <0.11 | <20 | <8 | <4 | 0.55 | <1.6 | <0.09 | <0.36 | <0.4 | <0.39 |
| PCB-1254 | <1.5 | <7.7 | <0.41 | <78 | <2 | <40 | <7.9 | <4.4 | <0.11 | <20 | <8 | <4 | <1.6 | <1.6 | <0.09 | <0.36 | <0.4 | <0.39 |
| PCB-1260 | **15** | **170** | **7** | **780** | **45** | **710** | **120** | **43** | 1.4 | **200** | **110** | **71** | 39 | 21 | 1.5 | 7.2 | 3.4 | 4.4 |
| ***MA EPH Method*** | | | | | | | | | | | | | | | | | | |
| C9 to C18 Aliphatics | | | | | | | | | | | | | <65 | | | | | |
| C19 to C36 Aliphatics | | | | | | | | | | | | | 750 | | | | | |
| C11 to C22 Aromatics (adjusted) | | | | | | | | | | | | | 230 | | | | | |
| ***MA VPH Method*** | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | 3.21 | | | | | |
| C9-C12 Aliphatic Hydrocarbons (unadjusted) | | | | | | | | | | | | | 2.79 | | | | | |
| C9-C10 Aromatic Hydrocarbons | | | | | | | | | | | | | <2.74 | | | | | |

# Appendix R

## Pro-UCC Model Results for COPCs in Site-Wide and Former Round House Areas

Sitewide Data 0-2 ft

Data File

Variable: PCB-1016

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 58 |
| Number of Unique Samples | 42 |
| Minimum | 0.013 |
| Maximum | 0.95 |
| Mean | 0.147982759 |
| Median | 0.055 |
| Standard Deviation | 0.216581352 |
| Variance | 0.046907482 |
| Coefficient of Variation | **1.463558014** |
| Skewness | 2.7144035 |

| Gamma Statistics | |
|---|---|
| k hat | 0.923621539 |
| k star (bias corrected) | 0.887342264 |
| Theta hat | 0.160220125 |
| Theta star | 0.166770777 |
| nu hat | 107.1400985 |
| nu star | 102.9317026 |
| Approx.Chi Square Value (.05) | 80.51754841 |
| Adjusted Level of Significance | 0.045862069 |
| Adjusted Chi Square Value | 80.01330461 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.342805922 |
| Maximum of log data | -0.051293294 |
| Mean of log data | -2.541592624 |
| Standard Deviation of log data | 1.038959679 |
| Variance of log data | 1.079437214 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.269572 |
| Lilliefors 5% Critical Value | 0.116337 |
| **Data not normal at 5% significance level** | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.195533 |

| **Gamma Distribution Test** | |
|---|---|
| A-D Test Statistic | 3.869227 |
| A-D 5% Critical Value | 0.78328 |
| K-S Test Statistic | 0.206435 |
| K-S 5% Critical Value | 0.120586 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.189178 |
| Adjusted Gamma UCL | 0.19037 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.163039 |
| Lilliefors 5% Critical Value | 0.116337 |
| *Data not lognormal at 5% significance level* | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.185985 |
| 95% Chebyshev (MVUE) UCL | 0.227819 |
| 97.5% Chebyshev (MVUE) UCL | 0.268757 |
| 99% Chebyshev (MVUE) UCL | 0.349173 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.19476 |
| Adj-CLT UCL (Adjusted for skewness) | 0.20559 |
| Mod-t UCL (Adjusted for skewness) | 0.197222 |
| Jackknife UCL | 0.195533 |
| Standard Bootstrap UCL | 0.193547 |
| Bootstrap-t UCL | 0.212819 |
| Hall's Bootstrap UCL | 0.201824 |
| Percentile Bootstrap UCL | 0.195379 |
| BCA Bootstrap UCL | 0.206819 |
| 95% Chebyshev (Mean, Sd) UCL | 0.271943 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.325581 |
| 99% Chebyshev (Mean, Sd) UCL | 0.430943 |

Data File

Variable: PCB-1221

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 58 |
| Number of Unique Samples | 43 |
| Minimum | 0.0115 |
| Maximum | 0.95 |
| Mean | 0.148224 |
| Median | 0.0545 |
| Standard Deviation | 0.216097 |
| Variance | 0.046698 |
| Coefficient of Variation | 1.457906 |
| Skewness | 2.728727 |

| Gamma Statistics | |
|---|---|
| k hat | 0.925198 |
| k star (bias corrected) | 0.888837 |
| Theta hat | 0.160208 |
| Theta star | 0.166762 |
| nu hat | 107.3229 |
| nu star | 103.1051 |
| Approx.Chi Square Value (.05) | 80.67102 |
| Adjusted Level of Significance | 0.045862 |
| Adjusted Chi Square Value | 80.16628 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.465408 |
| Maximum of log data | -0.051293 |
| Mean of log data | -2.538756 |
| Standard Deviation of log data | 1.047621 |
| Variance of log data | 1.097509 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.268182 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.195668 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 3.510253 |
| A-D 5% Critical Value | 0.783198 |
| K-S Test Statistic | 0.203434 |
| K-S 5% Critical Value | 0.120578 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.189444 |
| Adjusted Gamma UCL | 0.190637 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.163037 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.188941 |
| 95% Chebyshev (MVUE) UCL | 0.231485 |
| 97.5% Chebyshev (MVUE) UCL | 0.273339 |
| 99% Chebyshev (MVUE) UCL | 0.355553 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.194897 |
| Adj-CLT UCL (Adjusted for skewness) | 0.20576 |
| Mod-t UCL (Adjusted for skewness) | 0.197362 |
| Jackknife UCL | 0.195668 |
| Standard Bootstrap UCL | 0.19513 |
| Bootstrap-t UCL | 0.21394 |
| Hall's Bootstrap UCL | 0.200435 |
| Percentile Bootstrap UCL | 0.197698 |
| BCA Bootstrap UCL | 0.211491 |
| 95% Chebyshev (Mean, Sd) UCL | 0.271907 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.325425 |
| 99% Chebyshev (Mean, Sd) UCL | 0.430551 |

Data File

Variable: PCB-1232

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 58 |
| Number of Unique Samples | 40 |
| Minimum | 0.009 |
| Maximum | 0.95 |
| Mean | 0.143845 |
| Median | 0.056 |
| Standard Deviation | 0.217068 |
| Variance | 0.047119 |
| Coefficient of Variation | 1.509043 |
| Skewness | 2.748343 |

| Gamma Statistics | |
|---|---|
| k hat | 0.881136 |
| k star (bias corrected) | 0.847055 |
| Theta hat | 0.163249 |
| Theta star | 0.169818 |
| nu hat | 102.2118 |
| nu star | 98.25833 |
| Approx.Chi Square Value (.05) | 76.3875 |
| Adjusted Level of Significance | 0.045862 |
| Adjusted Chi Square Value | 75.89692 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.710531 |
| Maximum of log data | -0.051293 |
| Mean of log data | -2.604251 |
| Standard Deviation of log data | 1.076725 |
| Variance of log data | 1.159337 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.296494 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.191502 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 3.968694 |
| A-D 5% Critical Value | 0.785492 |
| K-S Test Statistic | 0.223753 |
| K-S 5% Critical Value | 0.120804 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.18503 |
| Adjusted Gamma UCL | 0.186226 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.16932 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.18496 |
| 95% Chebyshev (MVUE) UCL | 0.2267 |
| 97.5% Chebyshev (MVUE) UCL | 0.268526 |
| 99% Chebyshev (MVUE) UCL | 0.350686 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.190727 |
| Adj-CLT UCL (Adjusted for skewness) | 0.201718 |
| Mod-t UCL (Adjusted for skewness) | 0.193216 |
| Jackknife UCL | 0.191502 |
| Standard Bootstrap UCL | 0.189483 |
| Bootstrap-t UCL | 0.214797 |
| Hall's Bootstrap UCL | 0.196066 |
| Percentile Bootstrap UCL | 0.193491 |
| BCA Bootstrap UCL | 0.202922 |
| 95% Chebyshev (Mean, Sd) UCL | 0.268084 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.321842 |
| 99% Chebyshev (Mean, Sd) UCL | 0.42744 |

Data File

Variable: PCB-1242

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 58 |
| Number of Unique Samples | 40 |
| Minimum | 0.009 |
| Maximum | 5.4 |
| Mean | 0.231155 |
| Median | 0.053 |
| Standard Deviation | 0.723999 |
| Variance | 0.524174 |
| Coefficient of Variation | 3.13209 |
| Skewness | 6.650196 |

| Gamma Statistics | |
|---|---|
| k hat | 0.562529 |
| k star (bias corrected) | 0.544927 |
| Theta hat | 0.410921 |
| Theta star | 0.424194 |
| nu hat | 65.25341 |
| nu star | 63.21157 |
| Approx.Chi Square Value (.05) | 45.91865 |
| Adjusted Level of Significance | 0.045862 |
| Adjusted Chi Square Value | 45.5431 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.710531 |
| Maximum of log data | 1.686399 |
| Mean of log data | -2.573661 |
| Standard Deviation of log data | 1.207927 |
| Variance of log data | 1.459087 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.379481 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.390108 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 6.330966 |
| A-D 5% Critical Value | 0.809805 |
| K-S Test Statistic | 0.276164 |
| K-S 5% Critical Value | 0.123045 |
| Data do not follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.318208 |
| Adjusted Gamma UCL | 0.320832 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.187548 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.236088 |
| 95% Chebyshev (MVUE) UCL | 0.288519 |
| 97.5% Chebyshev (MVUE) UCL | 0.346348 |
| 99% Chebyshev (MVUE) UCL | 0.459941 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.387524 |
| Adj-CLT UCL (Adjusted for skewness) | 0.476225 |
| Mod-t UCL (Adjusted for skewness) | 0.403943 |
| Jackknife UCL | 0.390108 |
| Standard Bootstrap UCL | 0.388375 |
| Bootstrap-t UCL | 0.77232 |
| Hall's Bootstrap UCL | 0.891637 |
| Percentile Bootstrap UCL | 0.408474 |
| BCA Bootstrap UCL | 0.518043 |
| 95% Chebyshev (Mean, Sd) UCL | 0.645537 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.82484 |
| 99% Chebyshev (Mean, Sd) UCL | 1.177047 |

Data File

Variable: PCB-1248

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 58 |
| Number of Unique Samples | 42 |
| Minimum | 0.009 |
| Maximum | 14 |
| Mean | 0.564483 |
| Median | 0.053 |
| Standard Deviation | 2.167588 |
| Variance | 4.698436 |
| Coefficient of Variation | 3.839953 |
| Skewness | 5.279927 |

| Gamma Statistics | |
|---|---|
| k hat | 0.353554 |
| k star (bias corrected) | 0.346761 |
| Theta hat | 1.596595 |
| Theta star | 1.627872 |
| nu hat | 41.01228 |
| nu star | 40.22429 |
| Approx.Chi Square Value (.05) | 26.68982 |
| Adjusted Level of Significance | 0.045862 |
| Adjusted Chi Square Value | 26.40842 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.710531 |
| Maximum of log data | 2.639057 |
| Mean of log data | -2.470654 |
| Standard Deviation of log data | 1.433354 |
| Variance of log data | 2.054504 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.450456 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 1.040372 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 10.07412 |
| A-D 5% Critical Value | 0.850382 |
| K-S Test Statistic | 0.331811 |
| K-S 5% Critical Value | 0.125914 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.850733 |
| Adjusted Gamma UCL | 0.859798 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.18811 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.398919 |
| 95% Chebyshev (MVUE) UCL | 0.47548 |
| 97.5% Chebyshev (MVUE) UCL | 0.582491 |
| 99% Chebyshev (MVUE) UCL | 0.792695 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 1.032638 |
| Adj-CLT UCL (Adjusted for skewness) | 1.24348 |
| Mod-t UCL (Adjusted for skewness) | 1.07326 |
| Jackknife UCL | 1.040372 |
| Standard Bootstrap UCL | 1.018629 |
| Bootstrap-t UCL | 2.274319 |
| Hall's Bootstrap UCL | 2.464809 |
| Percentile Bootstrap UCL | 1.074931 |
| BCA Bootstrap UCL | 1.285853 |
| 95% Chebyshev (Mean, Sd) UCL | 1.805105 |
| 97.5% Chebyshev (Mean, Sd) UCL | 2.341923 |
| 99% Chebyshev (Mean, Sd) UCL | 3.396398 |

Data File

Variable: PCB-1254

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 58 |
| Number of Unique Samples | 41 |
| Minimum | 0.01 |
| Maximum | 9.3 |
| Mean | 0.306026 |
| Median | 0.056 |
| Standard Deviation | 1.220894 |
| Variance | 1.490582 |
| Coefficient of Variation | 3.989512 |
| Skewness | 7.264541 |

| Gamma Statistics | |
|---|---|
| k hat | 0.49955 |
| k star (bias corrected) | 0.485205 |
| Theta hat | 0.612603 |
| Theta star | 0.630714 |
| nu hat | 57.94778 |
| nu star | 56.28381 |
| Approx.Chi Square Value (.05) | 40.03788 |
| Adjusted Level of Significance | 0.045862 |
| Adjusted Chi Square Value | 39.68859 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.60517 |
| Maximum of log data | 2.230014 |
| Mean of log data | -2.455771 |
| Standard Deviation of log data | 1.206318 |
| Variance of log data | 1.455204 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.404209 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.574071 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 7.004127 |
| A-D 5% Critical Value | 0.815745 |
| K-S Test Statistic | 0.263547 |
| K-S 5% Critical Value | 0.123575 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.4302 |
| Adjusted Gamma UCL | 0.433986 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.163264 |
| Lilliefors 5% Critical Value | 0.116337 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.264895 |
| 95% Chebyshev (MVUE) UCL | 0.323752 |
| 97.5% Chebyshev (MVUE) UCL | 0.388582 |
| 99% Chebyshev (MVUE) UCL | 0.515927 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.569714 |
| Adj-CLT UCL (Adjusted for skewness) | 0.733109 |
| Mod-t UCL (Adjusted for skewness) | 0.599557 |
| Jackknife UCL | 0.574071 |
| Standard Bootstrap UCL | 0.570943 |
| Bootstrap-t UCL | 1.663947 |
| Hall's Bootstrap UCL | 1.426388 |
| Percentile Bootstrap UCL | 0.619198 |
| BCA Bootstrap UCL | 0.817707 |
| 95% Chebyshev (Mean, Sd) UCL | 1.004806 |
| 97.5% Chebyshev (Mean, Sd) UCL | 1.307169 |
| 99% Chebyshev (Mean, Sd) UCL | 1.901102 |

Data File

Variable: PCB-1260

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 67 |
| Number of Unique Samples | 57 |
| Minimum | 0.037 |
| Maximum | 33 |
| Mean | 3.123119 |
| Median | 1.3 |
| Standard Deviation | 5.550428 |
| Variance | 30.80725 |
| Coefficient of Variation | 1.777206 |
| Skewness | 3.893401 |

| Gamma Statistics | |
|---|---|
| k hat | 0.67062 |
| k star (bias corrected) | 0.650542 |
| Theta hat | 4.657064 |
| Theta star | 4.800794 |
| nu hat | 89.86305 |
| nu star | 87.17266 |
| Approx.Chi Square Value (.05) | 66.64505 |
| Adjusted Level of Significance | 0.046418 |
| Adjusted Chi Square Value | 66.25136 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -3.296837 |
| Maximum of log data | 3.496508 |
| Mean of log data | 0.232205 |
| Standard Deviation of log data | 1.409607 |
| Variance of log data | 1.986993 |

RECOMMENDATION

Assuming gamma distribution (0.05)

Use Approximate Gamma UCL

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.2891 |
| Lilliefors 5% Critical Value | 0.108242 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 4.254361 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 1.507692 |
| A-D 5% Critical Value | 0.800077 |
| K-S Test Statistic | 0.104724 |
| K-S 5% Critical Value | 0.11386 |
| Data follow approximate gamma distibution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 4.085084 |
| Adjusted Gamma UCL | 4.109359 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.062265 |
| Lilliefors 5% Critical Value | 0.108242 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 5.440311 |
| 95% Chebyshev (MVUE) UCL | 6.604755 |
| 97.5% Chebyshev (MVUE) UCL | 8.029911 |
| 99% Chebyshev (MVUE) UCL | 10.82935 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 4.238483 |
| Adj-CLT UCL (Adjusted for skewness) | 4.583119 |
| Mod-t UCL (Adjusted for skewness) | 4.308118 |
| Jackknife UCL | 4.254361 |
| Standard Bootstrap UCL | 4.191121 |
| Bootstrap-t UCL | 5.001712 |
| Hall's Bootstrap UCL | 8.641272 |
| Percentile Bootstrap UCL | 4.26097 |
| BCA Bootstrap UCL | 4.764597 |
| 95% Chebyshev (Mean, Sd) UCL | 6.078857 |
| 97.5% Chebyshev (Mean, Sd) UCL | 7.357807 |
| 99% Chebyshev (Mean, Sd) UCL | 9.870056 |

Data File

Variable: C9-C10 Aromatic Hydrocarbons

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 25 |
| Number of Unique Samples | 25 |
| Minimum | 1.29 |
| Maximum | 720 |
| Mean | 166.9865 |
| Median | 5 |
| Standard Deviation | 216.5953 |
| Variance | 46913.55 |
| Coefficient of Variation | 1.297083 |
| Skewness | 0.889149 |

| Gamma Statistics | |
|---|---|
| k hat | 0.311668 |
| k star (bias corrected) | 0.300934 |
| Theta hat | 535.7835 |
| Theta star | 554.8934 |
| nu hat | 15.58339 |
| nu star | 15.04672 |
| Approx.Chi Square Value (.05) | 7.292863 |
| Adjusted Level of Significance | 0.0395 |
| Adjusted Chi Square Value | 6.926 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 0.254642 |
| Maximum of log data | 6.579251 |
| Mean of log data | 2.919148 |
| Standard Deviation of log data | 2.63805 |
| Variance of log data | 6.959309 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.736795 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 241.1003 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 2.769931 |
| A-D 5% Critical Value | 0.849135 |
| K-S Test Statistic | 0.272055 |
| K-S 5% Critical Value | 0.189207 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 344.5284 |
| Adjusted Gamma UCL | 362.7777 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.761231 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 9253.979 |
| 95% Chebyshev (MVUE) UCL | 1501.778 |
| 97.5% Chebyshev (MVUE) UCL | 1989.218 |
| 99% Chebyshev (MVUE) UCL | 2946.7 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 238.24 |
| Adj-CLT UCL (Adjusted for skewness) | 246.4712 |
| Mod-t UCL (Adjusted for skewness) | 242.3842 |
| Jackknife UCL | 241.1003 |
| Standard Bootstrap UCL | 238.3802 |
| Bootstrap-t UCL | 250.8467 |
| Hall's Bootstrap UCL | 243.0552 |
| Percentile Bootstrap UCL | 241.2522 |
| BCA Bootstrap UCL | 243.9526 |
| 95% Chebyshev (Mean, Sd) UCL | 355.8099 |
| 97.5% Chebyshev (Mean, Sd) UCL | 437.514 |
| 99% Chebyshev (Mean, Sd) UCL | 598.0058 |

Data File

Variable: C19 to C36 Aliphatics

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 25 |
| Number of Unique Samples | 23 |
| Minimum | 20 |
| Maximum | 42000 |
| Mean | 4768.96 |
| Median | 470 |
| Standard Deviation | 10275.18 |
| Variance | 1.06E+08 |
| Coefficient of Variation | 2.154595 |
| Skewness | 2.878899 |

| Gamma Statistics | |
|---|---|
| k hat | 0.349671 |
| k star (bias corrected) | 0.334377 |
| Theta hat | 13638.42 |
| Theta star | 14262.22 |
| nu hat | 17.48355 |
| nu star | 16.71885 |
| Approx.Chi Square Value (.05) | 8.470394 |
| Adjusted Level of Significance | 0.0395 |
| Adjusted Chi Square Value | 8.070969 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 2.995732 |
| Maximum of log data | 10.64542 |
| Mean of log data | 6.546532 |
| Standard Deviation of log data | 2.090624 |
| Variance of log data | 4.37071 |

RECOMMENDATION

Data are lognormal (0.05)

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.520465 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 8284.884 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 1.425963 |
| A-D 5% Critical Value | 0.840616 |
| K-S Test Statistic | 0.215308 |
| K-S 5% Critical Value | 0.188251 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 9412.968 |
| Adjusted Gamma UCL | 9878.808 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.959402 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 36541.87 |
| 95% Chebyshev (MVUE) UCL | 16610.31 |
| 97.5% Chebyshev (MVUE) UCL | 21666.55 |
| 99% Chebyshev (MVUE) UCL | 31598.55 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 8149.193 |
| Adj-CLT UCL (Adjusted for skewness) | 9413.511 |
| Mod-t UCL (Adjusted for skewness) | 8482.092 |
| Jackknife UCL | 8284.884 |
| Standard Bootstrap UCL | 8207.207 |
| Bootstrap-t UCL | 14092.14 |
| Hall's Bootstrap UCL | 21293.55 |
| Percentile Bootstrap UCL | 8630.28 |
| BCA Bootstrap UCL | 10120.12 |
| 95% Chebyshev (Mean, Sd) UCL | 13726.65 |
| 97.5% Chebyshev (Mean, Sd) UCL | 17602.65 |
| 99% Chebyshev (Mean, Sd) UCL | 25216.31 |

Data File

Variable: C9-C18 aliphatics

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 45 |
| Number of Unique Samples | 45 |
| Minimum | 0.085 |
| Maximum | 40000 |
| Mean | 3600.785 |
| Median | 608 |
| Standard Deviation | 6920.559 |
| Variance | 47894134 |
| Coefficient of Variation | 1.921958 |
| Skewness | 3.770016 |

| Gamma Statistics | |
|---|---|
| k hat | 0.298517 |
| k star (bias corrected) | 0.29343 |
| Theta hat | 12062.26 |
| Theta star | 12271.35 |
| nu hat | 26.86649 |
| nu star | 26.40872 |
| Approx.Chi Square Value (.05) | 15.69262 |
| Adjusted Level of Significance | 0.044667 |
| Adjusted Chi Square Value | 15.41805 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -2.465104 |
| Maximum of log data | 10.59663 |
| Mean of log data | 5.877064 |
| Standard Deviation of log data | 2.98234 |
| Variance of log data | 8.894353 |

RECOMMENDATION

Assuming gamma distribution (0.05)

Use Adjusted Gamma UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.567354 |
| Shapiro-Wilk 5% Critical Value | 0.945 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 5334.204 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.830286 |
| A-D 5% Critical Value | 0.862555 |
| K-S Test Statistic | 0.151149 |
| K-S 5% Critical Value | 0.143272 |
| Data follow approximate gamma distibution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 6059.674 |
| Adjusted Gamma UCL | 6167.587 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.933263 |
| Shapiro-Wilk 5% Critical Value | 0.945 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 295354.2 |
| 95% Chebyshev (MVUE) UCL | 78632.16 |
| 97.5% Chebyshev (MVUE) UCL | 104119.4 |
| 99% Chebyshev (MVUE) UCL | 154184.2 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 5297.708 |
| Adj-CLT UCL (Adjusted for skewness) | 5917.224 |
| Mod-t UCL (Adjusted for skewness) | 5430.836 |
| Jackknife UCL | 5334.204 |
| Standard Bootstrap UCL | 5252.46 |
| Bootstrap-t UCL | 6851.739 |
| Hall's Bootstrap UCL | 12377.34 |
| Percentile Bootstrap UCL | 5413.441 |
| BCA Bootstrap UCL | 6197.229 |
| 95% Chebyshev (Mean, Sd) UCL | 8097.669 |
| 97.5% Chebyshev (Mean, Sd) UCL | 10043.47 |
| 99% Chebyshev (Mean, Sd) UCL | 13865.63 |

Data File

Variable: C5-C8 Aliphatic Hydrocarbons (unadjusted)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 25 |
| Number of Unique Samples | 24 |
| Minimum | 1.33 |
| Maximum | 720 |
| Mean | 169.4551 |
| Median | 5.32 |
| Standard Deviation | 214.928 |
| Variance | 46194.04 |
| Coefficient of Variation | 1.268348 |
| Skewness | 0.888884 |

| Gamma Statistics | |
|---|---|
| k hat | 0.323029 |
| k star (bias corrected) | 0.310932 |
| Theta hat | 524.5823 |
| Theta star | 544.9911 |
| nu hat | 16.15143 |
| nu star | 15.54659 |
| Approx.Chi Square Value (.05) | 7.642055 |
| Adjusted Level of Significance | 0.0395 |
| Adjusted Chi Square Value | 7.265285 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 0.285179 |
| Maximum of log data | 6.579251 |
| Mean of log data | 3.023518 |
| Standard Deviation of log data | 2.641285 |
| Variance of log data | 6.976387 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.751371 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 242.9984 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 2.494897 |
| A-D 5% Critical Value | 0.846588 |
| K-S Test Statistic | 0.266848 |
| K-S 5% Critical Value | 0.188921 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 344.7304 |
| Adjusted Gamma UCL | 362.6078 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.766922 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 10425.81 |
| 95% Chebyshev (MVUE) UCL | 1679.671 |
| 97.5% Chebyshev (MVUE) UCL | 2225.003 |
| 99% Chebyshev (MVUE) UCL | 3296.201 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 240.1601 |
| Adj-CLT UCL (Adjusted for skewness) | 248.3255 |
| Mod-t UCL (Adjusted for skewness) | 244.272 |
| Jackknife UCL | 242.9984 |
| Standard Bootstrap UCL | 240.6884 |
| Bootstrap-t UCL | 253.9693 |
| Hall's Bootstrap UCL | 243.7515 |
| Percentile Bootstrap UCL | 239.6005 |
| BCA Bootstrap UCL | 241.7694 |
| 95% Chebyshev (Mean, Sd) UCL | 356.825 |
| 97.5% Chebyshev (Mean, Sd) UCL | 437.9 |
| 99% Chebyshev (Mean, Sd) UCL | 597.1564 |

Data File

Variable: C9-C12 Aliphatic Hydrocarbons (unadjusted)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 25 |
| Number of Unique Samples | 24 |
| Minimum | 1.33 |
| Maximum | 720 |
| Mean | 170.0971 |
| Median | 5.76 |
| Standard Deviation | 214.5731 |
| Variance | 46041.62 |
| Coefficient of Variation | 1.261474 |
| Skewness | 0.886435 |

| Gamma Statistics | |
|---|---|
| k hat | 0.325303 |
| k star (bias corrected) | 0.312933 |
| Theta hat | 522.8889 |
| Theta star | 543.5577 |
| nu hat | 16.26513 |
| nu star | 15.64664 |
| Approx.Chi Square Value (.05) | 7.712247 |
| Adjusted Level of Significance | 0.0395 |
| Adjusted Chi Square Value | 7.333513 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 0.285179 |
| Maximum of log data | 6.579251 |
| Mean of log data | 3.044439 |
| Standard Deviation of log data | 2.638082 |
| Variance of log data | 6.959475 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.75485 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 243.5189 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 2.451744 |
| A-D 5% Critical Value | 0.846078 |
| K-S Test Statistic | 0.262621 |
| K-S 5% Critical Value | 0.188864 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 345.0938 |
| Adjusted Gamma UCL | 362.9159 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.769172 |
| Shapiro-Wilk 5% Critical Value | 0.918 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 10490.69 |
| 95% Chebyshev (MVUE) UCL | 1702.357 |
| 97.5% Chebyshev (MVUE) UCL | 2254.902 |
| 99% Chebyshev (MVUE) UCL | 3340.268 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 240.6854 |
| Adj-CLT UCL (Adjusted for skewness) | 248.8148 |
| Mod-t UCL (Adjusted for skewness) | 244.787 |
| Jackknife UCL | 243.5189 |
| Standard Bootstrap UCL | 239.9609 |
| Bootstrap-t UCL | 258.0265 |
| Hall's Bootstrap UCL | 245.0154 |
| Percentile Bootstrap UCL | 240.8812 |
| BCA Bootstrap UCL | 245.4721 |
| 95% Chebyshev (Mean, Sd) UCL | 357.1576 |
| 97.5% Chebyshev (Mean, Sd) UCL | 438.0988 |
| 99% Chebyshev (Mean, Sd) UCL | 597.0922 |

Data File

Variable: C11-C22 aromatics

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 45 |
| Number of Unique Samples | 44 |
| Minimum | 0.17 |
| Maximum | 29000 |
| Mean | 4379.648 |
| Median | 912 |
| Standard Deviation | 7367.54 |
| Variance | 54280652 |
| Coefficient of Variation | 1.682222 |
| Skewness | 2.228323 |

| Gamma Statistics | |
|---|---|
| k hat | 0.345428 |
| k star (bias corrected) | 0.337215 |
| Theta hat | 12678.89 |
| Theta star | 12987.72 |
| nu hat | 31.08855 |
| nu star | 30.34931 |
| Approx.Chi Square Value (.05) | 18.76561 |
| Adjusted Level of Significance | 0.044667 |
| Adjusted Chi Square Value | 18.46294 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -1.771957 |
| Maximum of log data | 10.27505 |
| Mean of log data | 6.433873 |
| Standard Deviation of log data | 2.607154 |
| Variance of log data | 6.797253 |

RECOMMENDATION

Data follow gamma distribution (0.05)

Use Adjusted Gamma UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.640114 |
| Shapiro-Wilk 5% Critical Value | 0.945 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 6225.024 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.729791 |
| A-D 5% Critical Value | 0.850896 |
| K-S Test Statistic | 0.12574 |
| K-S 5% Critical Value | 0.14234 |
| Data follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 7083.134 |
| Adjusted Gamma UCL | 7199.251 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.943361 |
| Shapiro-Wilk 5% Critical Value | 0.945 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 108939.8 |
| 95% Chebyshev (MVUE) UCL | 50474.26 |
| 97.5% Chebyshev (MVUE) UCL | 66221.74 |
| 99% Chebyshev (MVUE) UCL | 97154.62 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 6186.171 |
| Adj-CLT UCL (Adjusted for skewness) | 6575.995 |
| Mod-t UCL (Adjusted for skewness) | 6285.829 |
| Jackknife UCL | 6225.024 |
| Standard Bootstrap UCL | 6166.231 |
| Bootstrap-t UCL | 7046.174 |
| Hall's Bootstrap UCL | 6473.053 |
| Percentile Bootstrap UCL | 6307.248 |
| BCA Bootstrap UCL | 6639.977 |
| 95% Chebyshev (Mean, Sd) UCL | 9166.975 |
| 97.5% Chebyshev (Mean, Sd) UCL | 11238.46 |
| 99% Chebyshev (Mean, Sd) UCL | 15307.48 |

Sitewide All Depths

Data File

Variable: PCB-1016

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 94 |
| Number of Unique Samples | 45 |
| Minimum | 0.013 |
| Maximum | 0.95 |
| Mean | 0.107468 |
| Median | 0.0415 |
| Standard Deviation | 0.177402 |
| Variance | 0.031471 |
| Coefficient of Variation | 1.650738 |
| Skewness | 3.612399 |

| Gamma Statistics | |
|---|---|
| k hat | 1.028881 |
| k star (bias corrected) | 1.003137 |
| Theta hat | 0.104451 |
| Theta star | 0.107132 |
| nu hat | 193.4297 |
| nu star | 188.5898 |
| Approx.Chi Square Value (.05) | 157.8155 |
| Adjusted Level of Significance | 0.047447 |
| Adjusted Chi Square Value | 157.3801 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.342806 |
| Maximum of log data | -0.051293 |
| Mean of log data | -2.789718 |
| Standard Deviation of log data | 0.881581 |
| Variance of log data | 0.777185 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.337626 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.137868 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 12.00302 |
| A-D 5% Critical Value | 0.782185 |
| K-S Test Statistic | 0.303714 |
| K-S 5% Critical Value | 0.094994 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.128425 |
| Adjusted Gamma UCL | 0.12878 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.262599 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.10989 |
| 95% Chebyshev (MVUE) UCL | 0.131469 |
| 97.5% Chebyshev (MVUE) UCL | 0.149369 |
| 99% Chebyshev (MVUE) UCL | 0.184528 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.137565 |
| Adj-CLT UCL (Adjusted for skewness) | 0.14485 |
| Mod-t UCL (Adjusted for skewness) | 0.139004 |
| Jackknife UCL | 0.137868 |
| Standard Bootstrap UCL | 0.136939 |
| Bootstrap-t UCL | 0.153381 |
| Hall's Bootstrap UCL | 0.1417 |
| Percentile Bootstrap UCL | 0.139112 |
| BCA Bootstrap UCL | 0.146165 |
| 95% Chebyshev (Mean, Sd) UCL | 0.187225 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.221736 |
| 99% Chebyshev (Mean, Sd) UCL | 0.289527 |

Data File

Variable: PCB-1221

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 94 |
| Number of Unique Samples | 46 |
| Minimum | 0.0115 |
| Maximum | 0.95 |
| Mean | 0.107617 |
| Median | 0.042 |
| Standard Deviation | 0.177074 |
| Variance | 0.031355 |
| Coefficient of Variation | 1.645405 |
| Skewness | 3.626643 |

| Gamma Statistics | |
|---|---|
| k hat | 1.029484 |
| k star (bias corrected) | 1.003721 |
| Theta hat | 0.104535 |
| Theta star | 0.107218 |
| nu hat | 193.543 |
| nu star | 188.6995 |
| Approx.Chi Square Value (.05) | 157.9159 |
| Adjusted Level of Significance | 0.047447 |
| Adjusted Chi Square Value | 157.4803 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.465408 |
| Maximum of log data | -0.051293 |
| Mean of log data | -2.787968 |
| Standard Deviation of log data | 0.888336 |
| Variance of log data | 0.789141 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.327413 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.13796 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 11.37994 |
| A-D 5% Critical Value | 0.782171 |
| K-S Test Statistic | 0.297419 |
| K-S 5% Critical Value | 0.094993 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.128596 |
| Adjusted Gamma UCL | 0.128951 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.252035 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.110965 |
| 95% Chebyshev (MVUE) UCL | 0.132873 |
| 97.5% Chebyshev (MVUE) UCL | 0.151081 |
| 99% Chebyshev (MVUE) UCL | 0.186848 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.137658 |
| Adj-CLT UCL (Adjusted for skewness) | 0.144958 |
| Mod-t UCL (Adjusted for skewness) | 0.139099 |
| Jackknife UCL | 0.13796 |
| Standard Bootstrap UCL | 0.137221 |
| Bootstrap-t UCL | 0.148153 |
| Hall's Bootstrap UCL | 0.144424 |
| Percentile Bootstrap UCL | 0.140824 |
| BCA Bootstrap UCL | 0.147963 |
| 95% Chebyshev (Mean, Sd) UCL | 0.187227 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.221674 |
| 99% Chebyshev (Mean, Sd) UCL | 0.289339 |

Data File

Variable: PCB-1232

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 94 |
| Number of Unique Samples | 43 |
| Minimum | 0.009 |
| Maximum | 0.95 |
| Mean | 0.105426 |
| Median | 0.042 |
| Standard Deviation | 0.17708 |
| Variance | 0.031357 |
| Coefficient of Variation | 1.679669 |
| Skewness | 3.660845 |

| Gamma Statistics | |
|---|---|
| k hat | 1.009675 |
| k star (bias corrected) | 0.984544 |
| Theta hat | 0.104415 |
| Theta star | 0.107081 |
| nu hat | 189.8189 |
| nu star | 185.0942 |
| Approx.Chi Square Value (.05) | 154.6178 |
| Adjusted Level of Significance | 0.047447 |
| Adjusted Chi Square Value | 154.187 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.710531 |
| Maximum of log data | -0.051293 |
| Mean of log data | -2.820791 |
| Standard Deviation of log data | 0.89975 |
| Variance of log data | 0.80955 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.354425 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.13577 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 11.64143 |
| A-D 5% Critical Value | 0.78265 |
| K-S Test Statistic | 0.294402 |
| K-S 5% Critical Value | 0.095034 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.126206 |
| Adjusted Gamma UCL | 0.126558 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.247294 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.108855 |
| 95% Chebyshev (MVUE) UCL | 0.130537 |
| 97.5% Chebyshev (MVUE) UCL | 0.148621 |
| 99% Chebyshev (MVUE) UCL | 0.184143 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.135468 |
| Adj-CLT UCL (Adjusted for skewness) | 0.142837 |
| Mod-t UCL (Adjusted for skewness) | 0.136919 |
| Jackknife UCL | 0.13577 |
| Standard Bootstrap UCL | 0.136328 |
| Bootstrap-t UCL | 0.149944 |
| Hall's Bootstrap UCL | 0.138994 |
| Percentile Bootstrap UCL | 0.138154 |
| BCA Bootstrap UCL | 0.149809 |
| 95% Chebyshev (Mean, Sd) UCL | 0.185038 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.219487 |
| 99% Chebyshev (Mean, Sd) UCL | 0.287154 |

Data File

Variable: PCB-1242

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 94 |
| Number of Unique Samples | 44 |
| Minimum | 0.009 |
| Maximum | 5.4 |
| Mean | 0.161489 |
| Median | 0.0415 |
| Standard Deviation | 0.57443 |
| Variance | 0.32997 |
| Coefficient of Variation | 3.557077 |
| Skewness | 8.410311 |

| Gamma Statistics | |
|---|---|
| k hat | 0.633291 |
| k star (bias corrected) | 0.620172 |
| Theta hat | 0.255 |
| Theta star | 0.260395 |
| nu hat | 119.0587 |
| nu star | 116.5923 |
| Approx.Chi Square Value (.05) | 92.6574 |
| Adjusted Level of Significance | 0.047447 |
| Adjusted Chi Square Value | 92.32686 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.710531 |
| Maximum of log data | 1.686399 |
| Mean of log data | -2.791301 |
| Standard Deviation of log data | 1.014231 |
| Variance of log data | 1.028664 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.395327 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.259924 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 15.11084 |
| A-D 5% Critical Value | 0.805485 |
| K-S Test Statistic | 0.317912 |
| K-S 5% Critical Value | 0.096716 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.203205 |
| Adjusted Gamma UCL | 0.203932 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.260722 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.129678 |
| 95% Chebyshev (MVUE) UCL | 0.157561 |
| 97.5% Chebyshev (MVUE) UCL | 0.181705 |
| 99% Chebyshev (MVUE) UCL | 0.229132 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.258944 |
| Adj-CLT UCL (Adjusted for skewness) | 0.31386 |
| Mod-t UCL (Adjusted for skewness) | 0.26849 |
| Jackknife UCL | 0.259924 |
| Standard Bootstrap UCL | 0.256049 |
| Bootstrap-t UCL | 0.489029 |
| Hall's Bootstrap UCL | 0.573465 |
| Percentile Bootstrap UCL | 0.269862 |
| BCA Bootstrap UCL | 0.351867 |
| 95% Chebyshev (Mean, Sd) UCL | 0.419745 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.531493 |
| 99% Chebyshev (Mean, Sd) UCL | 0.750999 |

Data File

Variable: PCB-1248

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 94 |
| Number of Unique Samples | 44 |
| Minimum | 0.009 |
| Maximum | 14 |
| Mean | 0.364713 |
| Median | 0.042 |
| Standard Deviation | 1.716023 |
| Variance | 2.944736 |
| Coefficient of Variation | 4.705136 |
| Skewness | 6.781326 |

| Gamma Statistics | |
|---|---|
| k hat | 0.382372 |
| k star (bias corrected) | 0.377261 |
| Theta hat | 0.953817 |
| Theta star | 0.966739 |
| nu hat | 71.88591 |
| nu star | 70.92501 |
| Approx.Chi Square Value (.05) | 52.53226 |
| Adjusted Level of Significance | 0.047447 |
| Adjusted Chi Square Value | 52.28656 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.710531 |
| Maximum of log data | 2.639057 |
| Mean of log data | -2.742154 |
| Standard Deviation of log data | 1.182485 |
| Variance of log data | 1.39827 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.446742 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.658772 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 21.05476 |
| A-D 5% Critical Value | 0.847471 |
| K-S Test Statistic | 0.37266 |
| K-S 5% Critical Value | 0.099132 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.492407 |
| Adjusted Gamma UCL | 0.494721 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.265751 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.173785 |
| 95% Chebyshev (MVUE) UCL | 0.213986 |
| 97.5% Chebyshev (MVUE) UCL | 0.251174 |
| 99% Chebyshev (MVUE) UCL | 0.324223 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.655842 |
| Adj-CLT UCL (Adjusted for skewness) | 0.788121 |
| Mod-t UCL (Adjusted for skewness) | 0.679404 |
| Jackknife UCL | 0.658772 |
| Standard Bootstrap UCL | 0.650619 |
| Bootstrap-t UCL | 1.447887 |
| Hall's Bootstrap UCL | 1.550954 |
| Percentile Bootstrap UCL | 0.663271 |
| BCA Bootstrap UCL | 0.853378 |
| 95% Chebyshev (Mean, Sd) UCL | 1.136213 |
| 97.5% Chebyshev (Mean, Sd) UCL | 1.470042 |
| 99% Chebyshev (Mean, Sd) UCL | 2.125784 |

Data File

Variable: PCB-1254

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 94 |
| Number of Unique Samples | 44 |
| Minimum | 0.01 |
| Maximum | 9.3 |
| Mean | 0.204984 |
| Median | 0.042 |
| Standard Deviation | 0.964498 |
| Variance | 0.930256 |
| Coefficient of Variation | 4.705234 |
| Skewness | 9.223183 |

| Gamma Statistics | |
|---|---|
| k hat | 0.544266 |
| k star (bias corrected) | 0.533988 |
| Theta hat | 0.376625 |
| Theta star | 0.383874 |
| nu hat | 102.322 |
| nu star | 100.3898 |
| Approx.Chi Square Value (.05) | 78.26957 |
| Adjusted Level of Significance | 0.047447 |
| Adjusted Chi Square Value | 77.96683 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -4.60517 |
| Maximum of log data | 2.230014 |
| Mean of log data | -2.736765 |
| Standard Deviation of log data | 1.017749 |
| Variance of log data | 1.035814 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.419895 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 0.370261 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 16.3435 |
| A-D 5% Critical Value | 0.814132 |
| K-S Test Statistic | 0.31322 |
| K-S 5% Critical Value | 0.097317 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.262916 |
| Adjusted Gamma UCL | 0.263937 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.260001 |
| Lilliefors 5% Critical Value | 0.091384 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.137597 |
| 95% Chebyshev (MVUE) UCL | 0.16724 |
| 97.5% Chebyshev (MVUE) UCL | 0.192942 |
| 99% Chebyshev (MVUE) UCL | 0.243429 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.368615 |
| Adj-CLT UCL (Adjusted for skewness) | 0.469734 |
| Mod-t UCL (Adjusted for skewness) | 0.386034 |
| Jackknife UCL | 0.370261 |
| Standard Bootstrap UCL | 0.363908 |
| Bootstrap-t UCL | 1.019724 |
| Hall's Bootstrap UCL | 0.895818 |
| Percentile Bootstrap UCL | 0.398021 |
| BCA Bootstrap UCL | 0.511931 |
| 95% Chebyshev (Mean, Sd) UCL | 0.638609 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.826239 |
| 99% Chebyshev (Mean, Sd) UCL | 1.194801 |

Data File

Variable: PCB-1260

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 104 |
| Number of Unique Samples | 79 |
| Minimum | 0.0355 |
| Maximum | 33 |
| Mean | 2.093804 |
| Median | 0.555 |
| Standard Deviation | 4.661968 |
| Variance | 21.73394 |
| Coefficient of Variation | 2.226554 |
| Skewness | 4.759358 |

| Gamma Statistics | |
|---|---|
| k hat | 0.456285 |
| k star (bias corrected) | 0.449533 |
| Theta hat | 4.588805 |
| Theta star | 4.657727 |
| nu hat | 94.90731 |
| nu star | 93.50294 |
| Approx.Chi Square Value (.05) | 72.19846 |
| Adjusted Level of Significance | 0.047692 |
| Adjusted Chi Square Value | 71.93662 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -3.338223 |
| Maximum of log data | 3.496508 |
| Mean of log data | -0.673179 |
| Standard Deviation of log data | 1.806221 |
| Variance of log data | 3.262434 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.329422 |
| Lilliefors 5% Critical Value | 0.086879 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 2.852562 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 2.640199 |
| A-D 5% Critical Value | 0.829266 |
| K-S Test Statistic | 0.122538 |
| K-S 5% Critical Value | 0.094053 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 2.711648 |
| Adjusted Gamma UCL | 2.721518 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.12409 |
| Lilliefors 5% Critical Value | 0.086879 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 4.490892 |
| 95% Chebyshev (MVUE) UCL | 5.422873 |
| 97.5% Chebyshev (MVUE) UCL | 6.685269 |
| 99% Chebyshev (MVUE) UCL | 9.165002 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 2.845738 |
| Adj-CLT UCL (Adjusted for skewness) | 3.073701 |
| Mod-t UCL (Adjusted for skewness) | 2.88812 |
| Jackknife UCL | 2.852562 |
| Standard Bootstrap UCL | 2.832856 |
| Bootstrap-t UCL | 3.311657 |
| Hall's Bootstrap UCL | 3.889943 |
| Percentile Bootstrap UCL | 2.90705 |
| BCA Bootstrap UCL | 3.263212 |
| 95% Chebyshev (Mean, Sd) UCL | 4.086446 |
| 97.5% Chebyshev (Mean, Sd) UCL | 4.948664 |
| 99% Chebyshev (Mean, Sd) UCL | 6.642325 |

Data File

Variable: C9-C18 aliphatics

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 66 |
| Number of Unique Samples | 64 |
| Minimum | 0.085 |
| Maximum | 40000 |
| Mean | 3734.117 |
| Median | 504 |
| Standard Deviation | 6736.881 |
| Variance | 45385571 |
| Coefficient of Variation | 1.804143 |
| Skewness | 3.200133 |

| Gamma Statistics | |
|---|---|
| k hat | 0.290117 |
| k star (bias corrected) | 0.287031 |
| Theta hat | 12871.08 |
| Theta star | 13009.46 |
| nu hat | 38.29543 |
| nu star | 37.88806 |
| Approx.Chi Square Value (.05) | 24.79097 |
| Adjusted Level of Significance | 0.046364 |
| Adjusted Chi Square Value | 24.55419 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -2.465104 |
| Maximum of log data | 10.59663 |
| Mean of log data | 5.835392 |
| Standard Deviation of log data | 2.996294 |
| Variance of log data | 8.97778 |

RECOMMENDATION

Data are Non-parametric (0.05)

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.289698 |
| Lilliefors 5% Critical Value | 0.109059 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 5117.837 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 1.351346 |
| A-D 5% Critical Value | 0.869175 |
| K-S Test Statistic | 0.154717 |
| K-S 5% Critical Value | 0.119418 |
| Data do not follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 5706.854 |
| Adjusted Gamma UCL | 5761.885 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.155141 |
| Lilliefors 5% Critical Value | 0.109059 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 173433.1 |
| 95% Chebyshev (MVUE) UCL | 82682.86 |
| 97.5% Chebyshev (MVUE) UCL | 108879.4 |
| 99% Chebyshev (MVUE) UCL | 160337.5 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 5098.116 |
| Adj-CLT UCL (Adjusted for skewness) | 5447.147 |
| Mod-t UCL (Adjusted for skewness) | 5172.279 |
| Jackknife UCL | 5117.837 |
| Standard Bootstrap UCL | 5064.192 |
| Bootstrap-t UCL | 5624.198 |
| Hall's Bootstrap UCL | 6067.753 |
| Percentile Bootstrap UCL | 5177.842 |
| BCA Bootstrap UCL | 5444.29 |
| 95% Chebyshev (Mean, Sd) UCL | 7348.746 |
| 97.5% Chebyshev (Mean, Sd) UCL | 8912.799 |
| 99% Chebyshev (Mean, Sd) UCL | 11985.08 |

Data File

Variable: C19 to C36 Aliphatics

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 31 |
| Number of Unique Samples | 29 |
| Minimum | 0.55 |
| Maximum | 42000 |
| Mean | 4090.518 |
| Median | 350 |
| Standard Deviation | 9345.78 |
| Variance | 87343612 |
| Coefficient of Variation | 2.284743 |
| Skewness | 3.223472 |

| Gamma Statistics | |
|---|---|
| k hat | 0.306428 |
| k star (bias corrected) | 0.298279 |
| Theta hat | 13349.04 |
| Theta star | 13713.74 |
| nu hat | 18.99852 |
| nu star | 18.49329 |
| Approx.Chi Square Value (.05) | 9.746897 |
| Adjusted Level of Significance | 0.0413 |
| Adjusted Chi Square Value | 9.393756 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -0.597837 |
| Maximum of log data | 10.64542 |
| Mean of log data | 6.073864 |
| Standard Deviation of log data | 2.537925 |
| Variance of log data | 6.441065 |

RECOMMENDATION

Data are lognormal (0.05)

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.494464 |
| Shapiro-Wilk 5% Critical Value | 0.929 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 6939.458 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 1.101554 |
| A-D 5% Critical Value | 0.852898 |
| K-S Test Statistic | 0.1736 |
| K-S 5% Critical Value | 0.171019 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 7761.149 |
| Adjusted Gamma UCL | 8052.916 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.979678 |
| Shapiro-Wilk 5% Critical Value | 0.929 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 93715.36 |
| 95% Chebyshev (MVUE) UCL | 28781.59 |
| 97.5% Chebyshev (MVUE) UCL | 37922.28 |
| 99% Chebyshev (MVUE) UCL | 55877.4 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 6851.49 |
| Adj-CLT UCL (Adjusted for skewness) | 7889.874 |
| Mod-t UCL (Adjusted for skewness) | 7101.425 |
| Jackknife UCL | 6939.458 |
| Standard Bootstrap UCL | 6714.72 |
| Bootstrap-t UCL | 12078.4 |
| Hall's Bootstrap UCL | 18017.45 |
| Percentile Bootstrap UCL | 7157.435 |
| BCA Bootstrap UCL | 8243.81 |
| 95% Chebyshev (Mean, Sd) UCL | 11407.16 |
| 97.5% Chebyshev (Mean, Sd) UCL | 14573.07 |
| 99% Chebyshev (Mean, Sd) UCL | 20791.9 |

Data File

Variable: C11-C22 aromatics

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 67 |
| Number of Unique Samples | 65 |
| Minimum | 0.17 |
| Maximum | 33600 |
| Mean | 4473.297 |
| Median | 852 |
| Standard Deviation | 7840.709 |
| Variance | 61476716 |
| Coefficient of Variation | 1.752781 |
| Skewness | 2.341095 |

| Gamma Statistics | |
|---|---|
| k hat | 0.316742 |
| k star (bias corrected) | 0.31251 |
| Theta hat | 14122.85 |
| Theta star | 14314.11 |
| nu hat | 42.4434 |
| nu star | 41.87628 |
| Approx.Chi Square Value (.05) | 28.04024 |
| Adjusted Level of Significance | 0.046418 |
| Adjusted Chi Square Value | 27.79118 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -1.771957 |
| Maximum of log data | 10.42228 |
| Mean of log data | 6.248036 |
| Standard Deviation of log data | 2.772868 |
| Variance of log data | 7.688795 |

RECOMMENDATION

Assuming gamma distribution (0.05)

Use Adjusted Gamma UCL

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.284169 |
| Lilliefors 5% Critical Value | 0.108242 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 6071.325 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.910916 |
| A-D 5% Critical Value | 0.860912 |
| K-S Test Statistic | 0.113328 |
| K-S 5% Critical Value | 0.118039 |
| Data follow approximate gamma distibution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 6680.58 |
| Adjusted Gamma UCL | 6740.45 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.104397 |
| Lilliefors 5% Critical Value | 0.108242 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 109445.7 |
| 95% Chebyshev (MVUE) UCL | 66027.89 |
| 97.5% Chebyshev (MVUE) UCL | 86397.69 |
| 99% Chebyshev (MVUE) UCL | 126410.2 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 6048.894 |
| Adj-CLT UCL (Adjusted for skewness) | 6341.633 |
| Mod-t UCL (Adjusted for skewness) | 6116.986 |
| Jackknife UCL | 6071.325 |
| Standard Bootstrap UCL | 6075.371 |
| Bootstrap-t UCL | 6410.385 |
| Hall's Bootstrap UCL | 6380.919 |
| Percentile Bootstrap UCL | 6071.683 |
| BCA Bootstrap UCL | 6416.883 |
| 95% Chebyshev (Mean, Sd) UCL | 8648.665 |
| 97.5% Chebyshev (Mean, Sd) UCL | 10455.35 |
| 99% Chebyshev (Mean, Sd) UCL | 14004.23 |

Sitewide Data 0-2 ft

Data File

Variable: C5-C8

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 4 |
| Number of Unique Samples | 4 |
| Minimum | 2.86 |
| Maximum | 50 |
| Mean | 23.795 |
| Median | 21.16 |
| Standard Deviation | 23.38571 |
| Variance | 546.8913 |
| Coefficient of Variation | 0.982799 |
| Skewness | 0.251059 |

| Gamma Statistics | |
|---|---|
| k hat | 0.95439 |
| k star (bias corrected) | 0.405264 |
| Theta hat | 24.93217 |
| Theta star | 58.7148 |
| nu hat | 7.635117 |
| nu star | 3.242113 |
| Approx.Chi Square Value (.05) | 0.447413 |
| Adjusted Level of Significance | N/A |
| Adjusted Chi Square Value | N/A |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 1.050822 |
| Maximum of log data | 3.912023 |
| Mean of log data | 2.561309 |
| Standard Deviation of log data | 1.414153 |
| Variance of log data | 1.999829 |

RECOMMENDATION

Data are normal (0.05)

Use Student's-t UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.866622 |
| Shapiro-Wilk 5% Critical Value | 0.748 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 51.31253 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.432117 |
| A-D 5% Critical Value | 0.667283 |
| K-S Test Statistic | 0.289423 |
| K-S 5% Critical Value | 0.402913 |
| Data follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 172.4268 |
| Adjusted Gamma UCL | N/A |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.875208 |
| Shapiro-Wilk 5% Critical Value | 0.748 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 1038509 |
| 95% Chebyshev (MVUE) UCL | 92.12008 |
| 97.5% Chebyshev (MVUE) UCL | 121.1192 |
| 99% Chebyshev (MVUE) UCL | 178.0823 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 43.02803 |
| Adj-CLT UCL (Adjusted for skewness) | 44.59639 |
| Mod-t UCL (Adjusted for skewness) | 51.55716 |
| Jackknife UCL | 51.31253 |
| Standard Bootstrap UCL | N/R |
| Bootstrap-t UCL | N/R |
| Hall's Bootstrap UCL | N/R |
| Percentile Bootstrap UCL | N/R |
| BCA Bootstrap UCL | N/R |
| 95% Chebyshev (Mean, Sd) UCL | 74.76297 |
| 97.5% Chebyshev (Mean, Sd) UCL | 96.81685 |
| 99% Chebyshev (Mean, Sd) UCL | 140.1374 |

*Recommended UCL exceeds the maximum observation*

Data File

Variable: C9-C10

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 3 |
| Number of Unique Samples | 3 |
| Minimum | 3.81 |
| Maximum | 18 |
| Mean | 8.87 |
| Median | 4.8 |

*Too Few Observations To Calculate UCLs*

Data File

Variable: C9-C12

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 4 |
| Number of Unique Samples | 4 |
| Minimum | 3.47 |
| Maximum | 66 |
| Mean | 27.8075 |
| Median | 20.88 |
| Standard Deviation | 29.46292 |
| Variance | 868.0634 |
| Coefficient of Variation | 1.059531 |
| Skewness | 0.811381 |

| Gamma Statistics | |
|---|---|
| k hat | 0.920625 |
| k star (bias corrected) | 0.396823 |
| Theta hat | 30.20503 |
| Theta star | 70.07535 |
| nu hat | 7.364998 |
| nu star | 3.174583 |
| Approx.Chi Square Value (.05) | 0.425768 |
| Adjusted Level of Significance | N/A |
| Adjusted Chi Square Value | N/A |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 1.244155 |
| Maximum of log data | 4.189655 |
| Mean of log data | 2.692066 |
| Standard Deviation of log data | 1.416525 |
| Variance of log data | 2.006544 |

RECOMMENDATION

Data are normal (0.05)

Use Student's-t UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.886272 |
| Shapiro-Wilk 5% Critical Value | 0.748 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 62.47597 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.362738 |
| A-D 5% Critical Value | 0.667782 |
| K-S Test Statistic | 0.294828 |
| K-S 5% Critical Value | 0.403256 |
| Data follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 207.3364 |
| Adjusted Gamma UCL | N/A |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.903006 |
| Shapiro-Wilk 5% Critical Value | 0.748 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 1229001 |
| 95% Chebyshev (MVUE) UCL | 105.2911 |
| 97.5% Chebyshev (MVUE) UCL | 138.4475 |
| 99% Chebyshev (MVUE) UCL | 203.5768 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 52.03859 |
| Adj-CLT UCL (Adjusted for skewness) | 58.42448 |
| Mod-t UCL (Adjusted for skewness) | 63.47204 |
| Jackknife UCL | 62.47597 |
| Standard Bootstrap UCL | N/R |
| Bootstrap-t UCL | N/R |
| Hall's Bootstrap UCL | N/R |
| Percentile Bootstrap UCL | N/R |
| BCA Bootstrap UCL | N/R |
| 95% Chebyshev (Mean, Sd) UCL | 92.02044 |
| 97.5% Chebyshev (Mean, Sd) UCL | 119.8054 |
| 99% Chebyshev (Mean, Sd) UCL | 174.3837 |

Former Roundhouse All Depths

Data File

Variable: C5-C8 Aliphatic Hydrocarbons (unadjusted) (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 17 |
| Number of Unique Samples | 15 |
| Minimum | 0 |
| Maximum | 50 |
| Mean | 23.67147 |
| Median | 27 |
| Standard Deviation | 13.93644 |
| Variance | 194.2245 |
| Coefficient of Variation | 0.588744 |
| Skewness | -0.2729 |

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.955884 |
| Shapiro-Wilk 5% Critical Value | 0.892 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 29.5727 |

Gamma Statistics Not Available

Lognormal Statistics Not Available

RECOMMENDATION
Data are normal (0.05)

Use Student's-t UCL

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 29.23121 |
| Adj-CLT UCL (Adjusted for skewness) | 28.99217 |
| Mod-t UCL (Adjusted for skewness) | 29.53542 |
| Jackknife UCL | 29.5727 |
| Standard Bootstrap UCL | 29.06688 |
| Bootstrap-t UCL | 29.53944 |
| Hall's Bootstrap UCL | 29.23647 |
| Percentile Bootstrap UCL | 28.94118 |
| BCA Bootstrap UCL | 28.84824 |
| 95% Chebyshev (Mean, Sd) UCL | 38.40492 |
| 97.5% Chebyshev (Mean, Sd) UCL | 44.78009 |
| 99% Chebyshev (Mean, Sd) UCL | 57.30288 |

Former Roundhouse All Depths

Data File

Variable: C9-C10 Aromatic Hydrocarbons (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 16 |
| Number of Unique Samples | 14 |
| Minimum | 0.065 |
| Maximum | 230 |
| Mean | 44.93844 |
| Median | 7.75 |
| Standard Deviation | 79.55109 |
| Variance | 6328.376 |
| Coefficient of Variation | 1.770224 |
| Skewness | 1.784639 |

| Gamma Statistics | |
|---|---|
| k hat | 0.308144 |
| k star (bias corrected) | 0.292034 |
| Theta hat | 145.8359 |
| Theta star | 153.8811 |
| nu hat | 9.860603 |
| nu star | 9.345073 |
| Approx.Chi Square Value (.05) | 3.535925 |
| Adjusted Level of Significance | 0.03348 |
| Adjusted Chi Square Value | 3.13988 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -2.73337 |
| Maximum of log data | 5.438079 |
| Mean of log data | 1.577251 |
| Standard Deviation of log data | 2.870735 |
| Variance of log data | 8.241117 |

RECOMMENDATION

Data follow gamma distribution (0.05)

Use Adjusted Gamma UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.59224 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 79.8027 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.706058 |
| A-D 5% Critical Value | 0.83615 |
| K-S Test Statistic | 0.176473 |
| K-S 5% Critical Value | 0.232706 |
| Data follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 118.7675 |
| Adjusted Gamma UCL | 133.7481 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.872558 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 29553.56 |
| 95% Chebyshev (MVUE) UCL | 567.6414 |
| 97.5% Chebyshev (MVUE) UCL | 758.0723 |
| 99% Chebyshev (MVUE) UCL | 1132.137 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 77.65091 |
| Adj-CLT UCL (Adjusted for skewness) | 87.13197 |
| Mod-t UCL (Adjusted for skewness) | 81.28155 |
| Jackknife UCL | 79.8027 |
| Standard Bootstrap UCL | 77.06448 |
| Bootstrap-t UCL | 94.13407 |
| Hall's Bootstrap UCL | 68.03692 |
| Percentile Bootstrap UCL | 79.94938 |
| BCA Bootstrap UCL | 84.95031 |
| 95% Chebyshev (Mean, Sd) UCL | 131.6272 |
| 97.5% Chebyshev (Mean, Sd) UCL | 169.1375 |
| 99% Chebyshev (Mean, Sd) UCL | 242.8193 |

Former Roundhouse All Depths

Data File

Variable: C9-C12 Aliphatic Hydrocarbons (unadjusted) (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 16 |
| Number of Unique Samples | 14 |
| Minimum | 0.065 |
| Maximum | 580 |
| Mean | 118.2409 |
| Median | 20.5 |
| Standard Deviation | 210.0579 |
| Variance | 44124.31 |
| Coefficient of Variation | 1.776524 |
| Skewness | 1.813498 |

| Gamma Statistics | |
|---|---|
| k hat | 0.404427 |
| k star (bias corrected) | 0.370264 |
| Theta hat | 292.3663 |
| Theta star | 319.3423 |
| nu hat | 12.94168 |
| nu star | 11.84845 |
| Approx.Chi Square Value (.05) | 5.12638 |
| Adjusted Level of Significance | 0.03348 |
| Adjusted Chi Square Value | 4.631999 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -2.73337 |
| Maximum of log data | 6.363028 |
| Mean of log data | 3.148521 |
| Standard Deviation of log data | 2.213893 |
| Variance of log data | 4.90132 |

RECOMMENDATION

Data are lognormal (0.05)

Use 99% Chebyshev (MVUE) UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.567514 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 210.3014 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 1.152082 |
| A-D 5% Critical Value | 0.816171 |
| K-S Test Statistic | 0.269287 |
| K-S 5% Critical Value | 0.229943 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 273.2867 |
| Adjusted Gamma UCL | 302.455 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.890769 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 4461.015 |
| 95% Chebyshev (MVUE) UCL | 694.4424 |
| 97.5% Chebyshev (MVUE) UCL | 915.9492 |
| 99% Chebyshev (MVUE) UCL | 1351.056 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 204.6195 |
| Adj-CLT UCL (Adjusted for skewness) | 230.0595 |
| Mod-t UCL (Adjusted for skewness) | 214.2695 |
| Jackknife UCL | 210.3014 |
| Standard Bootstrap UCL | 203.4567 |
| Bootstrap-t UCL | 255.1164 |
| Hall's Bootstrap UCL | 179.2976 |
| Percentile Bootstrap UCL | 213.75 |
| BCA Bootstrap UCL | 227.5616 |
| 95% Chebyshev (Mean, Sd) UCL | 347.1462 |
| 97.5% Chebyshev (Mean, Sd) UCL | 446.1937 |
| 99% Chebyshev (Mean, Sd) UCL | 640.7533 |

Recommended UCL exceeds the maximum observation

Former Roundhouse All Depths

Data File

Variable: C9 to C18 Aliphatics (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 16 |
| Number of Unique Samples | 12 |
| Minimum | 16 |
| Maximum | 1900 |
| Mean | 288.6563 |
| Median | 39 |
| Standard Deviation | 632.0578 |
| Variance | 399497 |
| Coefficient of Variation | 2.189656 |
| Skewness | 2.463838 |

| Gamma Statistics | |
|---|---|
| k hat | 0.441671 |
| k star (bias corrected) | 0.400525 |
| Theta hat | 653.5543 |
| Theta star | 720.6952 |
| nu hat | 14.13349 |
| nu star | 12.81679 |
| Approx.Chi Square Value (.05) | 5.76867 |
| Adjusted Level of Significance | 0.03348 |
| Adjusted Chi Square Value | 5.238823 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 2.772589 |
| Maximum of log data | 7.549609 |
| Mean of log data | 4.198805 |
| Standard Deviation of log data | 1.49076 |
| Variance of log data | 2.222365 |

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.460258 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 565.6635 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 2.682213 |
| A-D 5% Critical Value | 0.808443 |
| K-S Test Statistic | 0.383958 |
| K-S 5% Critical Value | 0.228874 |
| Data do not follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 641.3345 |
| Adjusted Gamma UCL | 706.1981 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.76579 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 791.9785 |
| 95% Chebyshev (MVUE) UCL | 512.8623 |
| 97.5% Chebyshev (MVUE) UCL | 657.5425 |
| 99% Chebyshev (MVUE) UCL | 941.7389 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 548.5669 |
| Adj-CLT UCL (Adjusted for skewness) | 652.5659 |
| Mod-t UCL (Adjusted for skewness) | 581.8852 |
| Jackknife UCL | 565.6635 |
| Standard Bootstrap UCL | 537.6932 |
| Bootstrap-t UCL | 2647.805 |
| Hall's Bootstrap UCL | 2922.763 |
| Percentile Bootstrap UCL | 540.9063 |
| BCA Bootstrap UCL | 733.6875 |
| 95% Chebyshev (Mean, Sd) UCL | 977.4252 |
| 97.5% Chebyshev (Mean, Sd) UCL | 1275.456 |
| 99% Chebyshev (Mean, Sd) UCL | 1860.88 |

RECOMMENDATION

Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

Former Roundhouse All Depths

Data File

Variable: C11 to C22 Aromatics (adjusted) (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 16 |
| Number of Unique Samples | 15 |
| Minimum | 9.5 |
| Maximum | 350 |
| Mean | 112.4063 |
| Median | 84.5 |
| Standard Deviation | 93.80853 |
| Variance | 8800.041 |
| Coefficient of Variation | 0.834549 |
| Skewness | 1.175465 |

| Gamma Statistics | |
|---|---|
| k hat | 1.442115 |
| k star (bias corrected) | 1.213385 |
| Theta hat | 77.94541 |
| Theta star | 92.63855 |
| nu hat | 46.14768 |
| nu star | 38.82833 |
| Approx.Chi Square Value (.05) | 25.55361 |
| Adjusted Level of Significance | 0.03348 |
| Adjusted Chi Square Value | 24.33108 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 2.251292 |
| Maximum of log data | 5.857933 |
| Mean of log data | 4.336952 |
| Standard Deviation of log data | 0.987923 |
| Variance of log data | 0.975993 |

RECOMMENDATION

Data are normal (0.05)

Use Student's-t UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.88951 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 153.519 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.214473 |
| A-D 5% Critical Value | 0.755687 |
| K-S Test Statistic | 0.113459 |
| K-S 5% Critical Value | 0.219162 |
| Data follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 170.7996 |
| Adjusted Gamma UCL | 179.3815 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.96284 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 247.7607 |
| 95% Chebyshev (MVUE) UCL | 260.5437 |
| 97.5% Chebyshev (MVUE) UCL | 321.5966 |
| 99% Chebyshev (MVUE) UCL | 441.5234 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 150.9816 |
| Adj-CLT UCL (Adjusted for skewness) | 158.3456 |
| Mod-t UCL (Adjusted for skewness) | 154.6676 |
| Jackknife UCL | 153.519 |
| Standard Bootstrap UCL | 149.816 |
| Bootstrap-t UCL | 165.7354 |
| Hall's Bootstrap UCL | 166.829 |
| Percentile Bootstrap UCL | 150.3438 |
| BCA Bootstrap UCL | 154.9375 |
| 95% Chebyshev (Mean, Sd) UCL | 214.6317 |
| 97.5% Chebyshev (Mean, Sd) UCL | 258.8648 |
| 99% Chebyshev (Mean, Sd) UCL | 345.752 |

Former Roundhouse All Depths

Data File

Variable: C19 to C36 Aliphatics (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 16 |
| Number of Unique Samples | 13 |
| Minimum | 83 |
| Maximum | 3300 |
| Mean | 563.5625 |
| Median | 325 |
| Standard Deviation | 794.325 |
| Variance | 630952.1 |
| Coefficient of Variation | 1.409471 |
| Skewness | 3.093924 |

| Gamma Statistics | |
|---|---|
| k hat | 1.064613 |
| k star (bias corrected) | 0.906664 |
| Theta hat | 529.3592 |
| Theta star | 621.5778 |
| nu hat | 34.06761 |
| nu star | 29.01326 |
| Approx.Chi Square Value (.05) | 17.71694 |
| Adjusted Level of Significance | 0.03348 |
| Adjusted Chi Square Value | 16.71639 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 4.418841 |
| Maximum of log data | 8.101678 |
| Mean of log data | 5.795992 |
| Standard Deviation of log data | 0.995701 |
| Variance of log data | 0.99142 |

RECOMMENDATION
Data are lognormal (0.05)

Use H-UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.584522 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 911.6854 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.803233 |
| A-D 5% Critical Value | 0.762187 |
| K-S Test Statistic | 0.24116 |
| K-S 5% Critical Value | 0.220868 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 922.89 |
| Adjusted Gamma UCL | 978.1291 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.943634 |
| Shapiro-Wilk 5% Critical Value | 0.887 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 1083.254 |
| 95% Chebyshev (MVUE) UCL | 1133.952 |
| 97.5% Chebyshev (MVUE) UCL | 1400.743 |
| 99% Chebyshev (MVUE) UCL | 1924.802 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 890.1996 |
| Adj-CLT UCL (Adjusted for skewness) | 1054.322 |
| Mod-t UCL (Adjusted for skewness) | 937.2852 |
| Jackknife UCL | 911.6854 |
| Standard Bootstrap UCL | 877.1361 |
| Bootstrap-t UCL | 1586.041 |
| Hall's Bootstrap UCL | 2194.206 |
| Percentile Bootstrap UCL | 923 |
| BCA Bootstrap UCL | 1099 |
| 95% Chebyshev (Mean, Sd) UCL | 1429.158 |
| 97.5% Chebyshev (Mean, Sd) UCL | 1803.702 |
| 99% Chebyshev (Mean, Sd) UCL | 2539.421 |

Former Roundhouse All Depths

Data File

Variable: PCB-1248 (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 124 |
| Number of Unique Samples | 56 |
| Minimum | 0.035 |
| Maximum | 5.2 |
| Mean | 0.971798 |
| Median | 0.5025 |
| Standard Deviation | 1.204724 |
| Variance | 1.451359 |
| Coefficient of Variation | 1.239685 |
| Skewness | 1.526948 |

| Gamma Statistics | |
|---|---|
| k hat | 0.570814 |
| k star (bias corrected) | 0.56238 |
| Theta hat | 1.702478 |
| Theta star | 1.728009 |
| nu hat | 141.5619 |
| nu star | 139.4703 |
| Approx.Chi Square Value (.05) | 113.1767 |
| Adjusted Level of Significance | 0.048065 |
| Adjusted Chi Square Value | 112.9001 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -3.352407 |
| Maximum of log data | 1.648659 |
| Mean of log data | -1.11911 |
| Standard Deviation of log data | 1.713708 |
| Variance of log data | 2.936796 |

RECOMMENDATION

Data are Non-parametric (0.05)

Use 97.5% Chebyshev (Mean, Sd) UCL

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.218401 |
| Lilliefors 5% Critical Value | 0.079565 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 1.151101 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 4.404417 |
| A-D 5% Critical Value | 0.812305 |
| K-S Test Statistic | 0.163608 |
| K-S 5% Critical Value | 0.087625 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 1.19757 |
| Adjusted Gamma UCL | 1.200505 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.174658 |
| Lilliefors 5% Critical Value | 0.079565 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 2.224186 |
| 95% Chebyshev (MVUE) UCL | 2.753416 |
| 97.5% Chebyshev (MVUE) UCL | 3.348357 |
| 99% Chebyshev (MVUE) UCL | 4.517005 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 1.149751 |
| Adj-CLT UCL (Adjusted for skewness) | 1.165602 |
| Mod-t UCL (Adjusted for skewness) | 1.153574 |
| Jackknife UCL | 1.151101 |
| Standard Bootstrap UCL | 1.143783 |
| Bootstrap-t UCL | 1.183382 |
| Hall's Bootstrap UCL | 1.161999 |
| Percentile Bootstrap UCL | 1.153806 |
| BCA Bootstrap UCL | 1.158403 |
| 95% Chebyshev (Mean, Sd) UCL | 1.443376 |
| 97.5% Chebyshev (Mean, Sd) UCL | 1.647428 |
| 99% Chebyshev (Mean, Sd) UCL | 2.048249 |

Former Roundhouse All Depths

Data File

Variable: PCB-1254 (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 128 |
| Number of Unique Samples | 71 |
| Minimum | 0.035 |
| Maximum | 37 |
| Mean | 3.400414 |
| Median | 0.75 |
| Standard Deviation | 6.919183 |
| Variance | 47.87509 |
| Coefficient of Variation | 2.034806 |
| Skewness | 2.976183 |

| Gamma Statistics | |
|---|---|
| k hat | 0.35983 |
| k star (bias corrected) | 0.356605 |
| Theta hat | 9.450057 |
| Theta star | 9.535525 |
| nu hat | 92.11648 |
| nu star | 91.29083 |
| Approx.Chi Square Value (.05) | 70.25474 |
| Adjusted Level of Significance | 0.048125 |
| Adjusted Chi Square Value | 70.0457 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -3.352407 |
| Maximum of log data | 3.610918 |
| Mean of log data | -0.636461 |
| Standard Deviation of log data | 2.158782 |
| Variance of log data | 4.660341 |

RECOMMENDATION

Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.32668 |
| Lilliefors 5% Critical Value | 0.078312 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 4.413757 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 5.129848 |
| A-D 5% Critical Value | 0.853415 |
| K-S Test Statistic | 0.149695 |
| K-S 5% Critical Value | 0.08857 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 4.418587 |
| Adjusted Gamma UCL | 4.431773 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.154456 |
| Lilliefors 5% Critical Value | 0.078312 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 10.49003 |
| 95% Chebyshev (MVUE) UCL | 12.2574 |
| 97.5% Chebyshev (MVUE) UCL | 15.33967 |
| 99% Chebyshev (MVUE) UCL | 21.39418 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 4.406366 |
| Adj-CLT UCL (Adjusted for skewness) | 4.578269 |
| Mod-t UCL (Adjusted for skewness) | 4.440571 |
| Jackknife UCL | 4.413757 |
| Standard Bootstrap UCL | 4.426999 |
| Bootstrap-t UCL | 4.679207 |
| Hall's Bootstrap UCL | 4.537008 |
| Percentile Bootstrap UCL | 4.418184 |
| BCA Bootstrap UCL | 4.64977 |
| 95% Chebyshev (Mean, Sd) UCL | 6.066208 |
| 97.5% Chebyshev (Mean, Sd) UCL | 7.2197 |
| 99% Chebyshev (Mean, Sd) UCL | 9.48551 |

Former Roundhouse All Depths

Data File

Variable: PCB-1260 (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 131 |
| Number of Unique Samples | 98 |
| Minimum | 0 |
| Maximum | 1400 |
| Mean | 60.76263 |
| Median | 14 |
| Standard Deviation | 183.6809 |
| Variance | 33738.67 |
| Coefficient of Variation | 3.022925 |
| Skewness | 5.36256 |

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.370396 |
| Lilliefors 5% Critical Value | 0.07741 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 87.34915 |

Gamma Statistics Not Available

Lognormal Statistics Not Available

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 87.15969 |
| Adj-CLT UCL (Adjusted for skewness) | 95.19394 |
| Mod-t UCL (Adjusted for skewness) | 88.60233 |
| Jackknife UCL | 87.34915 |
| Standard Bootstrap UCL | 87.45639 |
| Bootstrap-t UCL | 104.8204 |
| Hall's Bootstrap UCL | 97.89798 |
| Percentile Bootstrap UCL | 89.44163 |
| BCA Bootstrap UCL | 99.88966 |
| 95% Chebyshev (Mean, Sd) UCL | 130.7154 |
| 97.5% Chebyshev (Mean, Sd) UCL | 160.9841 |
| 99% Chebyshev (Mean, Sd) UCL | 220.4409 |

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Former Roundhouse 0-2 ft

Data File

Variable: C5-C8 Aliphatic Hydrocarbons (unadjusted) (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 5 |
| Number of Unique Samples | 5 |
| Minimum | 3.21 |
| Maximum | 50 |
| Mean | 30.042 |
| Median | 32 |
| Standard Deviation | 16.93144 |
| Variance | 286.6738 |
| Coefficient of Variation | 0.563592 |
| Skewness | -0.96477 |

| Gamma Statistics | |
|---|---|
| k hat | 1.801732 |
| k star (bias corrected) | 0.854026 |
| Theta hat | 16.67396 |
| Theta star | 35.17691 |
| nu hat | 18.01732 |
| nu star | 8.540261 |
| Approx.Chi Square Value (.05) | 3.051007 |
| Adjusted Level of Significance | 0.0086 |
| Adjusted Chi Square Value | 1.807774 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 1.166271 |
| Maximum of log data | 3.912023 |
| Mean of log data | 3.100115 |
| Standard Deviation of log data | 1.098922 |
| Variance of log data | 1.207628 |

RECOMMENDATION

Data are normal (0.05)

Use Student's-t UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.91 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 46.18428 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.720218 |
| A-D 5% Critical Value | 0.685219 |
| K-S Test Statistic | 0.398274 |
| K-S 5% Critical Value | 0.360946 |
| Data do not follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 84.09242 |
| Adjusted Gamma UCL | 141.924 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.717756 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 761.0091 |
| 95% Chebyshev (MVUE) UCL | 105.5409 |
| 97.5% Chebyshev (MVUE) UCL | 136.1517 |
| 99% Chebyshev (MVUE) UCL | 196.2808 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 42.49679 |
| Adj-CLT UCL (Adjusted for skewness) | 39.00594 |
| Mod-t UCL (Adjusted for skewness) | 45.63978 |
| Jackknife UCL | 46.18428 |
| Standard Bootstrap UCL | 41.43181 |
| Bootstrap-t UCL | 40.55235 |
| Hall's Bootstrap UCL | 39.64246 |
| Percentile Bootstrap UCL | 40 |
| BCA Bootstrap UCL | 39.4 |
| 95% Chebyshev (Mean, Sd) UCL | 63.04746 |
| 97.5% Chebyshev (Mean, Sd) UCL | 77.32895 |
| 99% Chebyshev (Mean, Sd) UCL | 105.3822 |

Former Roundhouse 0-2 ft

Data File

Variable: C9-C10 Aromatic Hydrocarbons (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 5 |
| Number of Unique Samples | 5 |
| Minimum | 0.07 |
| Maximum | 230 |
| Mean | 47.977 |
| Median | 1.74 |
| Standard Deviation | 101.8063 |
| Variance | 10364.52 |
| Coefficient of Variation | 2.121981 |
| Skewness | 2.23038 |

| Gamma Statistics | |
|---|---|
| k hat | 0.219366 |
| k star (bias corrected) | 0.22108 |
| Theta hat | 218.7075 |
| Theta star | 217.0122 |
| nu hat | 2.193661 |
| nu star | 2.210798 |
| Approx.Chi Square Value (.05) | 0.182954 |
| Adjusted Level of Significance | 0.0086 |
| Adjusted Chi Square Value | 0.078027 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -2.65926 |
| Maximum of log data | 5.438079 |
| Mean of log data | 0.564376 |
| Standard Deviation of log data | 3.405588 |
| Variance of log data | 11.59803 |

RECOMMENDATION

Data follow gamma distribution (0.05)

Use Adjusted Gamma UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.577438 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 145.0381 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.476977 |
| A-D 5% Critical Value | 0.768325 |
| K-S Test Statistic | 0.273513 |
| K-S 5% Critical Value | 0.38682 |
| Data follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 579.7489 |
| Adjusted Gamma UCL | 1359.361 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.91304 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 2.98E+14 |
| 95% Chebyshev (MVUE) UCL | 195.0516 |
| 97.5% Chebyshev (MVUE) UCL | 262.7588 |
| 99% Chebyshev (MVUE) UCL | 395.7564 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 122.8658 |
| Adj-CLT UCL (Adjusted for skewness) | 171.3906 |
| Mod-t UCL (Adjusted for skewness) | 152.607 |
| Jackknife UCL | 145.0381 |
| Standard Bootstrap UCL | 115.3937 |
| Bootstrap-t UCL | 5310.834 |
| Hall's Bootstrap UCL | 2192.742 |
| Percentile Bootstrap UCL | 138.03 |
| BCA Bootstrap UCL | 139.948 |
| 95% Chebyshev (Mean, Sd) UCL | 246.434 |
| 97.5% Chebyshev (Mean, Sd) UCL | 332.3065 |
| 99% Chebyshev (Mean, Sd) UCL | 500.9864 |

Recommended UCL exceeds the maximum observation

Former Roundhouse 0-2 ft

Data File

Variable: C9-C12 Aliphatic Hydrocarbons (unadjusted) (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 5 |
| Number of Unique Samples | 5 |
| Minimum | 2.79 |
| Maximum | 580 |
| Mean | 133.758 |
| Median | 30 |
| Standard Deviation | 249.8308 |
| Variance | 62415.44 |
| Coefficient of Variation | 1.867782 |
| Skewness | 2.219303 |

| Gamma Statistics | |
|---|---|
| k hat | 0.44903 |
| k star (bias corrected) | 0.312945 |
| Theta hat | 297.8823 |
| Theta star | 427.4167 |
| nu hat | 4.490297 |
| nu star | 3.129452 |
| Approx.Chi Square Value (.05) | 0.411589 |
| Adjusted Level of Significance | 0.0086 |
| Adjusted Chi Square Value | 0.154472 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 1.026042 |
| Maximum of log data | 6.363028 |
| Mean of log data | 3.457408 |
| Standard Deviation of log data | 1.922853 |
| Variance of log data | 3.697362 |

RECOMMENDATION

Data follow gamma distribution (0.05)

Use Adjusted Gamma UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.605862 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 371.9443 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.540838 |
| A-D 5% Critical Value | 0.718147 |
| K-S Test Statistic | 0.364543 |
| K-S 5% Critical Value | 0.373733 |
| Data follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 1017.008 |
| Adjusted Gamma UCL | 2709.815 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.94949 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 1194154 |
| 95% Chebyshev (MVUE) UCL | 448.8171 |
| 97.5% Chebyshev (MVUE) UCL | 596.0978 |
| 99% Chebyshev (MVUE) UCL | 885.4021 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 317.5338 |
| Adj-CLT UCL (Adjusted for skewness) | 436.0214 |
| Mod-t UCL (Adjusted for skewness) | 390.426 |
| Jackknife UCL | 371.9443 |
| Standard Bootstrap UCL | 297.278 |
| Bootstrap-t UCL | 2977.452 |
| Hall's Bootstrap UCL | 2550.296 |
| Percentile Bootstrap UCL | 349.116 |
| BCA Bootstrap UCL | 361.8 |
| 95% Chebyshev (Mean, Sd) UCL | 620.7679 |
| 97.5% Chebyshev (Mean, Sd) UCL | 831.4975 |
| 99% Chebyshev (Mean, Sd) UCL | 1245.435 |

Recommended UCL exceeds the maximum observation

Former Roundhouse 0-2 ft

Data File

Variable: C9 to C18 Aliphatics (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 5 |
| Number of Unique Samples | 5 |
| Minimum | 28 |
| Maximum | 54 |
| Mean | 40.3 |
| Median | 38 |
| Standard Deviation | 10.96358 |
| Variance | 120.2 |
| Coefficient of Variation | 0.272049 |
| Skewness | 0.278955 |

| Gamma Statistics | |
|---|---|
| k hat | 16.84029 |
| k star (bias corrected) | 6.869448 |
| Theta hat | 2.393071 |
| Theta star | 5.866556 |
| nu hat | 168.4029 |
| nu star | 68.69448 |
| Approx.Chi Square Value (.05) | 50.6133 |
| Adjusted Level of Significance | 0.0086 |
| Adjusted Chi Square Value | 43.90354 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 3.332205 |
| Maximum of log data | 3.988984 |
| Mean of log data | 3.666367 |
| Standard Deviation of log data | 0.274625 |
| Variance of log data | 0.075419 |

RECOMMENDATION

Data are normal (0.05)

Use Student's-t UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.940167 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 50.75257 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.263842 |
| A-D 5% Critical Value | 0.67875 |
| K-S Test Statistic | 0.218359 |
| K-S 5% Critical Value | 0.357296 |
| Data follow gamma distribution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 54.69684 |
| Adjusted Gamma UCL | 63.05614 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.950801 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 56.0509 |
| 95% Chebyshev (MVUE) UCL | 61.82061 |
| 97.5% Chebyshev (MVUE) UCL | 71.13202 |
| 99% Chebyshev (MVUE) UCL | 89.42248 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 48.36482 |
| Adj-CLT UCL (Adjusted for skewness) | 49.01839 |
| Mod-t UCL (Adjusted for skewness) | 50.85451 |
| Jackknife UCL | 50.75257 |
| Standard Bootstrap UCL | 47.42961 |
| Bootstrap-t UCL | 57.06202 |
| Hall's Bootstrap UCL | 58.44178 |
| Percentile Bootstrap UCL | 47.7 |
| BCA Bootstrap UCL | 47.7 |
| 95% Chebyshev (Mean, Sd) UCL | 61.67194 |
| 97.5% Chebyshev (Mean, Sd) UCL | 70.9196 |
| 99% Chebyshev (Mean, Sd) UCL | 89.08483 |

Former Roundhouse 0-2 ft

Data File

Variable: C11 to C22 Aromatics (adjusted) (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 5 |
| Number of Unique Samples | 5 |
| Minimum | 99 |
| Maximum | 230 |
| Mean | 167.8 |
| Median | 150 |
| Standard Deviation | 55.71535 |
| Variance | 3104.2 |
| Coefficient of Variation | 0.332034 |
| Skewness | 0.072499 |

| Gamma Statistics | |
|---|---|
| k hat | 10.81319 |
| k star (bias corrected) | 4.458611 |
| Theta hat | 15.51808 |
| Theta star | 37.63504 |
| nu hat | 108.1319 |
| nu star | 44.58611 |
| Approx.Chi Square Value (.05) | 30.2681 |
| Adjusted Level of Significance | 0.0086 |
| Adjusted Chi Square Value | 25.22554 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 4.59512 |
| Maximum of log data | 5.438079 |
| Mean of log data | 5.075821 |
| Standard Deviation of log data | 0.34841 |
| Variance of log data | 0.12139 |

RECOMMENDATION

Data are normal (0.05)

Use Student's-t UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.911173 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 220.9185 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.33273 |
| A-D 5% Critical Value | 0.678865 |
| K-S Test Statistic | 0.248953 |
| K-S 5% Critical Value | 0.357555 |
| Data follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 247.176 |
| Adjusted Gamma UCL | 296.5863 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.922557 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 263.7433 |
| 95% Chebyshev (MVUE) UCL | 281.6271 |
| 97.5% Chebyshev (MVUE) UCL | 330.7917 |
| 99% Chebyshev (MVUE) UCL | 427.3662 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 208.7843 |
| Adj-CLT UCL (Adjusted for skewness) | 209.6475 |
| Mod-t UCL (Adjusted for skewness) | 221.0531 |
| Jackknife UCL | 220.9185 |
| Standard Bootstrap UCL | 204.7347 |
| Bootstrap-t UCL | 252.5578 |
| Hall's Bootstrap UCL | 282.8801 |
| Percentile Bootstrap UCL | 208 |
| BCA Bootstrap UCL | 199.8 |
| 95% Chebyshev (Mean, Sd) UCL | 276.4092 |
| 97.5% Chebyshev (Mean, Sd) UCL | 323.4045 |
| 99% Chebyshev (Mean, Sd) UCL | 415.7176 |

Former Roundhouse 0-2 ft

Data File

Variable: C19 to C36 Aliphatics (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 5 |
| Number of Unique Samples | 4 |
| Minimum | 260 |
| Maximum | 750 |
| Mean | 424 |
| Median | 380 |
| Standard Deviation | 188.7591 |
| Variance | 35630 |
| Coefficient of Variation | 0.445187 |
| Skewness | 1.837503 |

| Gamma Statistics | |
|---|---|
| k hat | 7.746998 |
| k star (bias corrected) | 3.232132 |
| Theta hat | 54.73088 |
| Theta star | 131.1827 |
| nu hat | 77.46998 |
| nu star | 32.32132 |
| Approx.Chi Square Value (.05) | 20.32491 |
| Adjusted Level of Significance | 0.0086 |
| Adjusted Chi Square Value | 16.30443 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | 5.560682 |
| Maximum of log data | 6.620073 |
| Mean of log data | 5.983806 |
| Standard Deviation of log data | 0.388433 |
| Variance of log data | 0.150881 |

RECOMMENDATION

Data are normal (0.05)

Use Student's-t UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.777559 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 603.9611 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.568206 |
| A-D 5% Critical Value | 0.679705 |
| K-S Test Statistic | 0.370763 |
| K-S 5% Critical Value | 0.357914 |
| Data follow approximate gamma distibution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 674.2584 |
| Adjusted Gamma UCL | 840.5228 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.868326 |
| Shapiro-Wilk 5% Critical Value | 0.762 |
| Data are lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 711.9974 |
| 95% Chebyshev (MVUE) UCL | 738.7773 |
| 97.5% Chebyshev (MVUE) UCL | 876.1103 |
| 99% Chebyshev (MVUE) UCL | 1145.874 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 562.8514 |
| Adj-CLT UCL (Adjusted for skewness) | 636.9732 |
| Mod-t UCL (Adjusted for skewness) | 615.5226 |
| Jackknife UCL | 603.9611 |
| Standard Bootstrap UCL | N/R |
| Bootstrap-t UCL | N/R |
| Hall's Bootstrap UCL | N/R |
| Percentile Bootstrap UCL | N/R |
| BCA Bootstrap UCL | N/R |
| 95% Chebyshev (Mean, Sd) UCL | 791.9592 |
| 97.5% Chebyshev (Mean, Sd) UCL | 951.1755 |
| 99% Chebyshev (Mean, Sd) UCL | 1263.925 |

Former Roundhouse 0-2 ft

Data File

Variable: PCB-1248 (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 24 |
| Number of Unique Samples | 18 |
| Minimum | 0.0355 |
| Maximum | 0.55 |
| Mean | 0.165458 |
| Median | 0.1275 |
| Standard Deviation | 0.14706 |
| Variance | 0.021627 |
| Coefficient of Variation | 0.888802 |
| Skewness | 1.097984 |

| Gamma Statistics | |
|---|---|
| k hat | 1.362173 |
| k star (bias corrected) | 1.219679 |
| Theta hat | 0.121466 |
| Theta star | 0.135657 |
| nu hat | 65.3843 |
| nu star | 58.54459 |
| Approx.Chi Square Value (.05) | 41.95019 |
| Adjusted Level of Significance | 0.0392 |
| Adjusted Chi Square Value | 40.96206 |

| *Log-transformed Statistics* | |
|---|---|
| Minimum of log data | -3.338223 |
| Maximum of log data | -0.597837 |
| Mean of log data | -2.209012 |
| Standard Deviation of log data | 0.951892 |
| Variance of log data | 0.906099 |

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

| Normal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.821661 |
| Shapiro-Wilk 5% Critical Value | 0.916 |
| Data not normal at 5% significance level | |

| *95% UCL (Assuming Normal Distribution)* | |
|---|---|
| Student's-t UCL | 0.216906 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 1.22963 |
| A-D 5% Critical Value | 0.764382 |
| K-S Test Statistic | 0.196192 |
| K-S 5% Critical Value | 0.181684 |
| Data do not follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 0.230909 |
| Adjusted Gamma UCL | 0.23648 |

| Lognormal Distribution Test | |
|---|---|
| Shapiro-Wilk Test Statisitic | 0.86969 |
| Shapiro-Wilk 5% Critical Value | 0.916 |
| *Data not lognormal at 5% significance level* | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 0.281488 |
| 95% Chebyshev (MVUE) UCL | 0.328438 |
| 97.5% Chebyshev (MVUE) UCL | 0.397735 |
| 99% Chebyshev (MVUE) UCL | 0.533855 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 0.214834 |
| Adj-CLT UCL (Adjusted for skewness) | 0.222023 |
| Mod-t UCL (Adjusted for skewness) | 0.218027 |
| Jackknife UCL | 0.216906 |
| Standard Bootstrap UCL | 0.212987 |
| Bootstrap-t UCL | 0.228189 |
| Hall's Bootstrap UCL | 0.221246 |
| Percentile Bootstrap UCL | 0.213729 |
| BCA Bootstrap UCL | 0.219979 |
| 95% Chebyshev (Mean, Sd) UCL | 0.296306 |
| 97.5% Chebyshev (Mean, Sd) UCL | 0.352923 |
| 99% Chebyshev (Mean, Sd) UCL | 0.464138 |

Former Roundhouse 0-2 ft

Data File

Variable: PCB-1254 (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 61 |
| Number of Unique Samples | 39 |
| Minimum | 0.0355 |
| Maximum | 12 |
| Mean | 1.779525 |
| Median | 0.8 |
| Standard Deviation | 2.518451 |
| Variance | 6.342598 |
| Coefficient of Variation | 1.415238 |
| Skewness | 2.603695 |

| Gamma Statistics | |
|---|---|
| k hat | 0.606246 |
| k star (bias corrected) | 0.58736 |
| Theta hat | 2.935318 |
| Theta star | 3.029702 |
| nu hat | 73.96201 |
| nu star | 71.65787 |
| Approx.Chi Square Value (.05) | 53.16382 |
| Adjusted Level of Significance | 0.046066 |
| Adjusted Chi Square Value | 52.77869 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -3.338223 |
| Maximum of log data | 2.484907 |
| Mean of log data | -0.441284 |
| Standard Deviation of log data | 1.665499 |
| Variance of log data | 2.773888 |

RECOMMENDATION

Assuming gamma distribution (0.05)

Use Approximate Gamma UCL

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.244312 |
| Lilliefors 5% Critical Value | 0.113441 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 2.318233 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 0.878018 |
| A-D 5% Critical Value | 0.805881 |
| K-S Test Statistic | 0.094487 |
| K-S 5% Critical Value | 0.119593 |
| Data follow approximate gamma distibution at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 2.398566 |
| Adjusted Gamma UCL | 2.416069 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.159692 |
| Lilliefors 5% Critical Value | 0.113441 |
| Data not lognormal at 5% significance level | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 4.937645 |
| 95% Chebyshev (MVUE) UCL | 5.630329 |
| 97.5% Chebyshev (MVUE) UCL | 7.008152 |
| 99% Chebyshev (MVUE) UCL | 9.71462 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 2.309915 |
| Adj-CLT UCL (Adjusted for skewness) | 2.424777 |
| Mod-t UCL (Adjusted for skewness) | 2.336149 |
| Jackknife UCL | 2.318233 |
| Standard Bootstrap UCL | 2.311545 |
| Bootstrap-t UCL | 2.482551 |
| Hall's Bootstrap UCL | 2.468364 |
| Percentile Bootstrap UCL | 2.324041 |
| BCA Bootstrap UCL | 2.46032 |
| 95% Chebyshev (Mean, Sd) UCL | 3.185072 |
| 97.5% Chebyshev (Mean, Sd) UCL | 3.793253 |
| 99% Chebyshev (Mean, Sd) UCL | 4.987908 |

Former Roundhouse 0-2 ft

Data File

Variable: PCB-1260 (mg/kg)

| Raw Statistics | |
|---|---|
| Number of Valid Samples | 65 |
| Number of Unique Samples | 60 |
| Minimum | 0.0385 |
| Maximum | 1400 |
| Mean | 84.10521 |
| Median | 23 |
| Standard Deviation | 214.6589 |
| Variance | 46078.44 |
| Coefficient of Variation | 2.552266 |
| Skewness | 4.677647 |

| *Gamma Statistics* | |
|---|---|
| k hat | 0.402714 |
| k star (bias corrected) | 0.394384 |
| Theta hat | 208.8459 |
| Theta star | 213.2573 |
| nu hat | 52.35284 |
| nu star | 51.26989 |
| Approx.Chi Square Value (.05) | 35.82286 |
| Adjusted Level of Significance | 0.046308 |
| Adjusted Chi Square Value | 35.53007 |

| Log-transformed Statistics | |
|---|---|
| Minimum of log data | -3.257097 |
| Maximum of log data | 7.244228 |
| Mean of log data | 2.799841 |
| Standard Deviation of log data | 2.094791 |
| Variance of log data | 4.388148 |

| Normal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.347666 |
| Lilliefors 5% Critical Value | 0.109895 |
| Data not normal at 5% significance level | |

| 95% UCL (Assuming Normal Distribution) | |
|---|---|
| Student's-t UCL | 128.5429 |

| Gamma Distribution Test | |
|---|---|
| A-D Test Statistic | 1.828882 |
| A-D 5% Critical Value | 0.839767 |
| K-S Test Statistic | 0.153092 |
| K-S 5% Critical Value | 0.118471 |
| Data do not follow gamma distribution | |
| at 5% significance level | |

| 95% UCLs (Assuming Gamma Distribution) | |
|---|---|
| Approximate Gamma UCL | 120.3719 |
| Adjusted Gamma UCL | 121.3638 |

| Lognormal Distribution Test | |
|---|---|
| Lilliefors Test Statisitic | 0.115563 |
| Lilliefors 5% Critical Value | 0.109895 |
| *Data not lognormal at 5% significance level* | |

| 95% UCLs (Assuming Lognormal Distribution) | |
|---|---|
| 95% H-UCL | 374.4958 |
| 95% Chebyshev (MVUE) UCL | 366.007 |
| 97.5% Chebyshev (MVUE) UCL | 466.5712 |
| 99% Chebyshev (MVUE) UCL | 664.1101 |

| 95% Non-parametric UCLs | |
|---|---|
| CLT UCL | 127.8997 |
| Adj-CLT UCL (Adjusted for skewness) | 144.4058 |
| Mod-t UCL (Adjusted for skewness) | 131.1176 |
| Jackknife UCL | 128.5429 |
| Standard Bootstrap UCL | 128.0363 |
| Bootstrap-t UCL | 172.8053 |
| Hall's Bootstrap UCL | 151.2296 |
| Percentile Bootstrap UCL | 133.0267 |
| BCA Bootstrap UCL | 152.582 |
| 95% Chebyshev (Mean, Sd) UCL | 200.1616 |
| 97.5% Chebyshev (Mean, Sd) UCL | 250.3793 |
| 99% Chebyshev (Mean, Sd) UCL | 349.0222 |

RECOMMENDATION

Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

# Appendix S

## Variables Specific to the Inhalation Pathway and Equations/Models used to Calculate Concentrations of COCs in Air

# CHEMICAL DATA FOR SELECTED COCs

**Physical Property Data**

| Constituent | CAS Number | type | Molecular Weight (g/mole) MW | ref | Diffusion Coefficients in air (cm2/s) Dair | ref | in water (cm2/s) Dwat | ref | log (Koc) or log(Kd) (@ 20 - 25 C) log(L/kg) | partition | ref | Henry's Law Constant (@ 20 - 25 C) (atm-m3) mol | (unitless) | ref | Vapor Pressure (@ 20 - 25 C) (mm Hg) | ref | Solubility (@ 20 - 25 C) (mg/L) | ref | acid pKa | base pKb | ref |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1260* | 11096-82-5 | PCB | 358 | AT | 1.04E-01 | 4 | 1.00E-05 | 4 | 6.68 | Koc | OR | 4.60E-03 | 1.90E-01 | AT | 4.05E-05 | AT | 8.00E-02 | AT | - | - | - |
| TPH-Aliph C09-C18* | 0-00-0 | T | 200 | T | 1.00E-01 | T | 1.00E-05 | T | 6.70 | Koc | T | 1.26E+01 | 5.21E+02 | T | 3.65E-02 | - | 7.60E-04 | T | - | - | - |
| TPH-Aliph C19-C36* | 0-00-0 | T | 400 | - | 1.00E-01 | - | 1.00E-05 | - | 8.80 | Koc | - | 1.76E+02 | 7.26E+03 | - | 8.36E-04 | - | 2.50E-06 | - | - | - | - |
| TPH-Arom C11-C22* | 0-00-0 | T | 190 | T | 1.00E-01 | T | 1.00E-05 | T | 4.20 | Koc | T | 3.22E-04 | 1.33E-02 | T | 8.36E-04 | - | 6.50E-01 | T | - | - | - |
| TPH-Aliph C05-C08* | 0-00-0 | T | 100 | T | 1.00E-01 | T | 1.00E-05 | T | 3.60 | Koc | T | 1.17E+00 | 4.81E+01 | T | 4.79E+01 | - | 5.40E+00 | T | - | - | - |
| TPH-Aliph C9-C12* | 0-00-0 | T | 160 | T | 1.00E-01 | T | 1.00E-05 | T | 5.40 | Koc | T | 2.96E+00 | 1.22E+02 | T | 4.79E-01 | - | 3.40E-02 | T | - | - | - |
| TPH-Arom C09-C10* | 0-00-0 | T | 120 | T | 1.00E-01 | T | 1.00E-05 | T | 3.20 | Koc | T | 1.16E-02 | 4.80E-01 | T | 4.79E+00 | - | 6.50E+01 | T | - | - | - |

* = Chemical with user-specified data

Site Name: Amtrak-APU site wide soil all depths rme

Completed By: Ann Schnitz

Job ID:

Site Location: Wilmington, DE

Date Completed: 21-Mar-07

## CHEMICAL DATA FOR SELECTED COCs

**Toxicity Data**

| Constituent | Reference Dose (mg/kg/day) Oral RfD_oral | ref | (mg/kg/day) Dermal RfD_dermal | ref | Reference Conc. (mg/m3) Inhalation RfC_inhal | ref | Slope Factors 1/(mg/kg/day) Oral SF_oral | ref | 1/(mg/kg/day) Dermal SF_dermal | ref | Unit Risk Factor 1/(µg/m3) Inhalation URF_inhal | ref | EPA Weight of Evidence | Is Constituent Carcinogenic ? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1260* | - | - | - | - | - | - | 2.00E+00 | E3 | - | - | 5.70E-04 | E3 | B2 | TRUE |
| TPH-Aliph C09-C18* | 1.00E-01 | T | - | - | 1.00E+00 | T | - | - | - | - | - | - | D | FALSE |
| TPH-Aliph C19-C36* | 2.00E+00 | T | - | - | - | - | - | - | - | - | - | - | D | FALSE |
| TPH-Arom C11-C22* | 3.00E-02 | T | - | - | 2.00E-01 | T | - | - | - | - | - | - | D | FALSE |
| TPH-Aliph C05-C08* | 5.00E+00 | T | - | - | 1.84E+01 | T | - | - | - | - | - | - | D | FALSE |
| TPH-Aliph C9-C12* | 1.00E-01 | T | - | - | 1.00E+00 | T | - | - | - | - | - | - | D | FALSE |
| TPH-Arom C09-C10* | 4.00E-02 | T | - | - | 2.00E-01 | T | - | - | - | - | - | - | - | FALSE |
| | | | | | | | | | | | | | D | FALSE |

* = Chemical with user-specified

Site Name: Amtrak-APU site wic

Site Location: Wilmington, DE

# RBCA SITE ASSESSMENT

## Input Parameter Summary

Site Name: Amtrak-APU site wide soil all depths rme
Site Location: Wilmington, DE

Completed By: Ann Schnitz
Date Completed: 21-Mar-07

Job ID:



| Exposure Parameters | | Residential | | | Commercial/Industrial | |
|---|---|---|---|---|---|---|
| | | Adult | (1-6yrs) | (1-16 yrs) | Chronic | Construc. |
| $AT_c$ | Averaging time for carcinogens (yr) | 70 | | | | |
| $AT_n$ | Averaging time for non-carcinogens (yr) | 30 | | | 25 | 1 |
| BW | Body weight (kg) | 70 | 15 | 35 | 70 | |
| ED | Exposure duration (yr) | 30 | 6 | 16 | 25 | 1 |
| t | Averaging time for vapor flux (yr) | 30 | | | 25 | 1 |
| EF | Exposure frequency (days/yr) | 350 | | | 250 | 125 |
| $EF_D$ | Exposure frequency for dermal exposure | 350 | | | 250 | |
| $IR_w$ | Ingestion rate of water (L/day) | 2 | | | 1 | |
| $IR_s$ | Ingestion rate of soil (mg/day) | 100 | 200 | | 50 | 100 |
| SA | Skin surface area (dermal) (cm^2) | 5800 | | 2023 | 5800 | 5800 |
| M | Soil to skin adherence factor | 1 | | | | |
| $ET_{swim}$ | Swimming exposure time (hr/event) | 3 | | | | |
| $EV_{swim}$ | Swimming event frequency (events/yr) | 12 | 12 | 12 | | |
| $IR_{swim}$ | Water ingestion while swimming (L/hr) | 0.05 | 0.5 | | | |
| $SA_{swim}$ | Skin surface area for swimming (cm^2) | 23000 | | 8100 | | |
| $IR_{fish}$ | Ingestion rate of fish (kg/yr) | 0.025 | | | | |
| $FI_{fish}$ | Contaminated fish fraction (unitless) | 1 | | | | |

| Complete Exposure Pathways and Receptors | On-site | Off-site 1 | Off-site 2 |
|---|---|---|---|
| **Groundwater:** | | | |
| Groundwater Ingestion | None | None | None |
| Soil Leaching to Groundwater Ingestion | None | None | None |
| **Applicable Surface Water Exposure Routes:** | | | |
| Swimming | | | NA |
| Fish Consumption | | | NA |
| Aquatic Life Protection | | | NA |
| **Soil:** | | | |
| Direct Ingestion and Dermal Contact | Com./Constr. | | |
| **Outdoor Air:** | | | |
| Particulates from Surface Soils | Com./Constr. | None | None |
| Volatilization from Soils | Com./Constr. | None | None |
| Volatilization from Groundwater | None | None | None |
| **Indoor Air:** | | | |
| Volatilization from Subsurface Soils | None | NA | NA |
| Volatilization from Groundwater | None | NA | NA |

| Receptor Distance from Source Media | On-site | Off-site 1 | Off-site 2 | (Units) |
|---|---|---|---|---|
| Groundwater receptor | NA | NA | NA | (ft) |
| Soil leaching to groundwater receptor | NA | NA | NA | (ft) |
| Outdoor air inhalation receptor | 0 | NA | NA | (ft) |

| Target Health Risk Values | | Individual | Cumulative |
|---|---|---|---|
| $TR_{ab}$ | Target Risk (class A&B carcinogens) | 1.0E-5 | 1.0E-5 |
| $TR_c$ | Target Risk (class C carcinogens) | 1.0E-5 | |
| THQ | Target Hazard Quotient (non-carcinogenic risk) | 1.0E+0 | 1.0E+0 |

| Modeling Options | |
|---|---|
| RBCA tier | Tier 2 |
| Outdoor air volatilization model | Surface model only |
| Indoor air volatilization model | NA |
| Soil leaching model | NA |
| Use soil attenuation model (SAM) for leachate? | NA |
| Air dilution factor | NA |
| Groundwater dilution-attenuation factor | NA |

NOTE: NA = Not applicable

| Surface Parameters | | General | Construction | (Units) |
|---|---|---|---|---|
| A | Source zone area | 2.2E+4 | 2.2E+4 | (ft^2) |
| W | Length of source-zone area parallel to wind | 1.5E+2 | 1.5E+2 | (ft) |
| $W_{gw}$ | Length of source-zone area parallel to GW flow | NA | | (ft) |
| $U_{air}$ | Ambient air velocity in mixing zone | 7.4E+0 | | (ft/s) |
| $\delta_{air}$ | Air mixing zone height | 6.6E+0 | | (ft) |
| $P_a$ | Areal particulate emission rate | 6.9E-14 | | (g/cm^2/s) |
| $L_{ss}$ | Thickness of affected surface soils | NA | | (ft) |

| Surface Soil Column Parameters | | Value | | | (Units) |
|---|---|---|---|---|---|
| $h_{cap}$ | Capillary zone thickness | NA | | | (ft) |
| $h_v$ | Vadose zone thickness | NA | | | (ft) |
| $\rho_s$ | Soil bulk density | 1.7E+0 | | | (g/cm^3) |
| $f_{oc}$ | Fraction organic carbon | 1.0E-2 | | | (-) |
| $\theta_T$ | Soil total porosity | 3.8E-1 | | | (-) |
| $K_{vs}$ | Vertical hydraulic conductivity | 8.6E+2 | | | (cm/d) |
| $k_v$ | Vapor permeability | 1.1E-11 | | | (ft^2) |
| $L_{gw}$ | Depth to groundwater | NA | | | (ft) |
| $L_s$ | Depth to top of affected soils | 0.0E+0 | | | (ft) |
| $L_{base}$ | Depth to base of affected soils | 9.8E+0 | | | (ft) |
| $L_{subs}$ | Thickness of affected soils | 9.8E+0 | | | (ft) |
| pH | Soil/groundwater pH | 6.8E+0 | | | (-) |
| | | capillary | vadose | foundation | |
| $\theta_w$ | Volumetric water content | 0.342 | 0.12 | 0.12 | (-) |
| $\theta_a$ | Volumetric air content | 0.038 | 0.26 | 0.26 | (-) |

| Building Parameters | | Residential | Commercial | (Units) |
|---|---|---|---|---|
| $L_b$ | Building volume/area ratio | NA | NA | (ft) |
| $A_b$ | Foundation area | NA | NA | (ft^2) |
| $X_{crk}$ | Foundation perimeter | NA | NA | (ft) |
| ER | Building air exchange rate | NA | NA | (1/s) |
| $L_{crk}$ | Foundation thickness | NA | NA | (ft) |
| $Z_{crk}$ | Depth to bottom of foundation slab | NA | NA | (ft) |
| $\eta$ | Foundation crack fraction | NA | NA | (-) |
| dP | Indoor/outdoor differential pressure | NA | NA | (g/cm/s^2) |
| $Q_s$ | Convective air flow through slab | NA | NA | (ft^3/s) |

| Groundwater Parameters | | Value | (Units) |
|---|---|---|---|
| $\delta_{gw}$ | Groundwater mixing zone depth | NA | (ft) |
| $I_f$ | Net groundwater infiltration rate | NA | (in/yr) |
| $U_{gw}$ | Groundwater Darcy velocity | NA | (cm/d) |
| $V_{gw}$ | Groundwater seepage velocity | NA | (cm/d) |
| $K_s$ | Saturated hydraulic conductivity | NA | (cm/d) |
| i | Groundwater gradient | NA | (-) |
| $S_w$ | Width of groundwater source zone | NA | (ft) |
| $S_d$ | Depth of groundwater source zone | NA | (ft) |
| $\theta_{eff}$ | Effective porosity in water-bearing unit | NA | (-) |
| $f_{oc-sat}$ | Fraction organic carbon in water-bearing unit | NA | (-) |
| $pH_{sat}$ | Groundwater pH | NA | (-) |
| | Biodegradation considered? | NA | |

| Transport Parameters | | Off-site 1 | Off-site 2 | Off-site 1 | Off-site 2 | (Units) |
|---|---|---|---|---|---|---|
| **Lateral Groundwater Transport** | | Groundwater Ingestion | | Soil Leaching to GW | | |
| $\alpha_x$ | Longitudinal dispersivity | NA | NA | NA | NA | (ft) |
| $\alpha_y$ | Transverse dispersivity | NA | NA | NA | NA | (ft) |
| $\alpha_z$ | Vertical dispersivity | NA | NA | NA | NA | (ft) |
| **Lateral Outdoor Air Transport** | | Soil to Outdoor Air inhal. | | GW to Outdoor Air inhal. | | |
| $\sigma_y$ | Transverse dispersion coefficient | NA | NA | NA | NA | (ft) |
| $\sigma_z$ | Vertical dispersion coefficient | NA | NA | NA | NA | (ft) |
| ADF | Air dispersion factor | NA | NA | NA | NA | (-) |

| Surface Water Parameters | | Off-site 2 | (Units) |
|---|---|---|---|
| $Q_{sw}$ | Surface water flowrate | NA | (ft^3/s) |
| $W_{pl}$ | Width of GW plume at SW discharge | NA | (ft) |
| $\delta_{pl}$ | Thickness of GW plume at SW discharge | NA | (ft) |
| $DF_{sw}$ | Groundwater-to-surface water dilution factor | NA | (-) |

## TABLE A.1 STANDARD EXPOSURE FACTORS FOR TIER 1 AND TIER 2 EVALUATIONS

| EXPOSURE PATHWAY | | Contact Rate (CR) | Exposure Frequency (EF) | Exposure Duration (ED) | Body Weight (BW) | Surface Contact Area (SA) | Soil Adherence Factor (AF) | Dermal Adsorption Factor (DA) | EXPOSURE RATE (E) Equation | Value for Carcinogens | Value for Non-carcinogens |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RESIDENTIAL LAND USE*** | | | | | | | | | | | |
| *Ingestion of potable water* | MLE: | 1.4 L/day | 350 days/yr | 8 years | 70 kg | — | — | — | $\frac{CR \cdot EF \cdot ED}{BW \cdot AT}$ | 0.0022 L/kg-day | 0.019 L/kg-day |
| | RME: | 2 L/day | 350 days/yr | 30 years | 70 kg | — | — | — | | 0.0012 L/kg-day | 0.027 L/kg-day |
| *Ingestion of soil and dust* | MLE: | 25 mg/day | 350 days/yr | 8 years | 70 kg | — | — | — | $\frac{CR \cdot EF \cdot ED}{BW \cdot AT}$ | 0.039 mg/kg-day | 0.34 mg/kg-day |
| | RME: | 100 mg/day | 350 days/yr | 30 years | 70 kg | — | — | — | | 0.59 mg/kg-day | 1.4 mg/kg-day |
| *Inhalation of volatiles* | MLE: | — | 350 days/yr | 8 years | — | — | — | — | $\frac{EF \cdot ED}{BW \cdot AT}$ | 40 days/yr | 350 days/yr |
| | RME: | — | 350 days/yr | 30 years | — | — | — | — | | 150 days/yr | 350 days/yr |
| *Dermal contact with soils* | MLE: | — | 40 days/yr | 9 years | 70 kg | 5000 $cm^2$ | 0.2 $mg/cm^2$-day | Organics: 0.04* Metals: 0.001* | $\frac{EF \cdot ED \cdot SA \cdot AF \cdot DA}{BW \cdot AT}$ | 0.008 mg/kg-day** | 0.063 mg/kg-day** |
| | RME: | — | 350 days/yr | 30 years | 70 kg | 5800 $cm^2$ | 1.0 $mg/cm^2$-day | Organics: 0.04* Metals: 0.001* | | 1.4 mg/kg-day** | 3.2 mg/kg-day** |
| ***COMMERCIAL / INDUSTRIAL LAND USE*** | | | | | | | | | | | |
| *Ingestion of potable water* | MLE: | 1 L/day | 250 days/yr | 4 years | 70 kg | — | — | — | $\frac{CR \cdot EF \cdot ED}{BW \cdot AT}$ | 0.00056 L/kg-day | 0.0098 L/kg-day |
| | RME: | 1 L/day | 250 days/yr | 25 years | 70 kg | — | — | — | | 0.0035 L/kg-day | 0.0098 L/kg-day |
| *Ingestion of soil and dust* | MLE: | 50 mg/day | 250 days/yr | 4 years | 70 kg | — | — | — | $\frac{CR \cdot EF \cdot ED}{BW \cdot AT}$ | 0.028 mg/kg-day | 0.49 mg/kg-day |
| | RME: | 50 mg/day | 250 days/yr | 25 years | 70 kg | — | — | — | | 0.17 mg/kg-day | 0.49 mg/kg-day |
| *Inhalation of volatiles* | MLE: | — | 250 days/yr | 4 years | — | — | — | — | $\frac{EF \cdot ED}{AT}$ | 14 days/yr | 250 days/yr |
| | RME: | — | 250 days/yr | 25 years | — | — | — | — | | 89 days/yr | 250 days/yr |
| *Dermal contact with soils* | MLE: | — | 40 days/yr | 4 years | 70 kg | 5000 $cm^2$ | 0.2 $mg/cm^2$-day | Organics: 0.04* Metals: 0.001* | $\frac{EF \cdot ED \cdot SA \cdot AF \cdot DA}{BW \cdot AT}$ | 0.0036 mg/kg-day** | 0.063 mg/kg-day** |
| | RME: | — | 250 days/yr | 25 years | 70 kg | 5800 $cm^2$ | 1.0 $mg/cm^2$-day | Organics: 0.04* Metals: 0.001* | | 1.4 mg/kg-day** | 2.3 mg/kg-day** |

*NOTES:*

1) Exposure factors shown above are matched to published U.S. EPA guidelines, when available (U.S. EPA, 1997, 1992a, 1991a). If no EPA value available, other peer-reviewed reference applied (American Industrial Health Council, 1994).

2) MLE = Most Likely Exposure; corresponding to mean exposure rate for exposed population (American Industrial Health Council, 1994; U.S. EPA, 1992a).

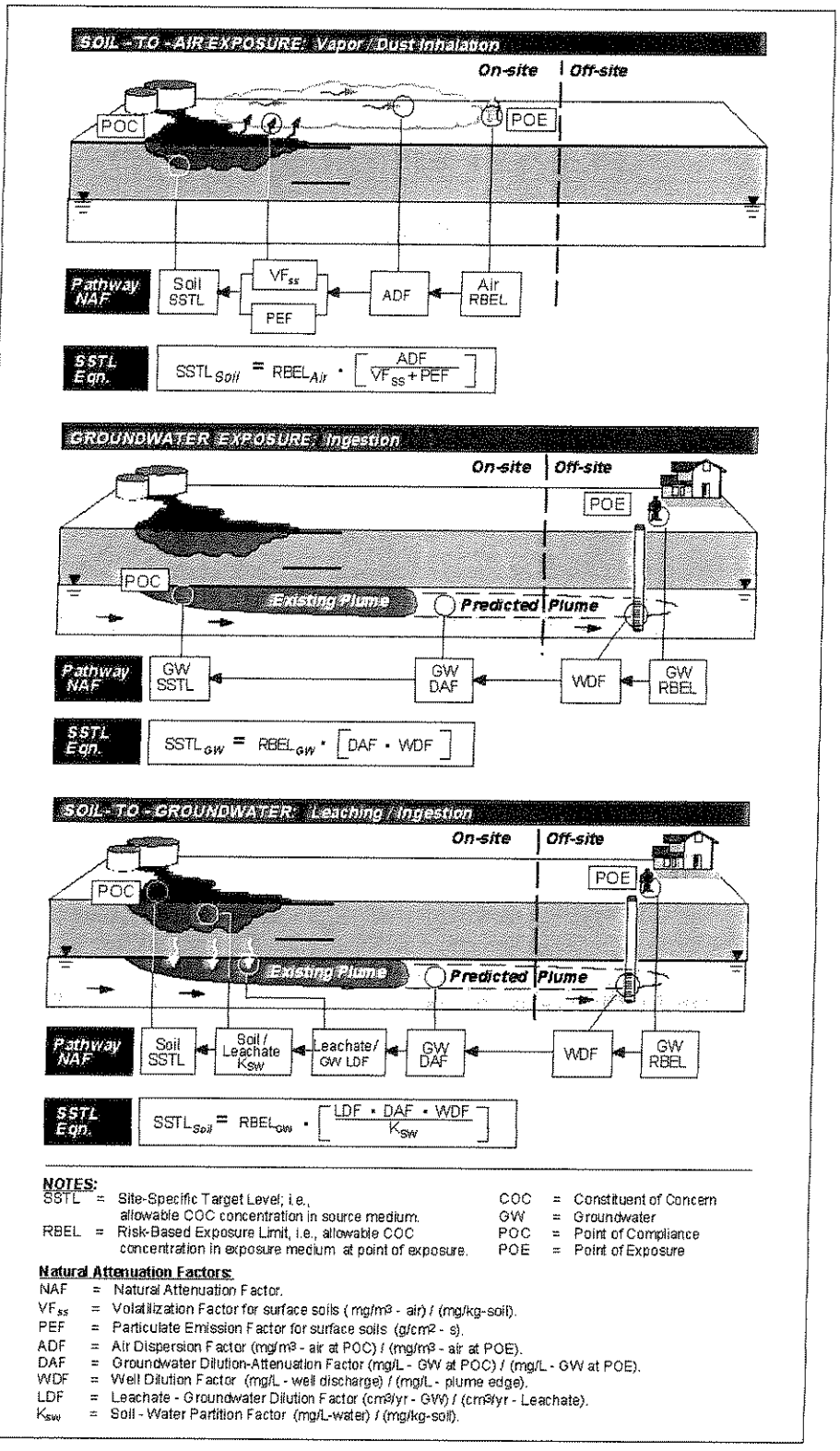
3) RME = Reasonable Maximum Exposure; corresponding to upper 95% exposure rate for exposed population (American Industrial Health Council, 1994; U.S. EPA, 1997, 1992a, 1991a).

4) AT = Averaging Time. For carcinogens, AT = 70 yrs x 365 days/yr. For non-carcinogens, AT = ED x 365 days/yr.

5) * = Default value. Use chemical-specific data if available. Values shown represent mid- to upper-range values per U.S. EPA, 1992b; Howard et al., 1991.

6) ** = Calculations of dermal contact with soils or sediments are based on organic default values. Contact rates for soil ingestion and dermal contact shown above are based upon adult receptor.

II) fate-and-transport modeling analyses predicting this concentration ratio. For purpose of simplicity and accuracy, direct field measurements represent the preferred method of NAF estimation, whenever feasible. However, due to temporal variability and sampling difficulties, some of these factors can prove difficult to quantify via direct field measurements (e.g., soil volatilization or leaching factors). In this case, modeling analyses, based on appropriate site-specific data and conservative assumptions, provide a convenient method of estimation. $NAF_{LT}$ for groundwater may be referred to as a groundwater dilution attenuation factor (DAF). DAFs are amenable to direct measurement via wells spaced along the centerline of the plume. In all cases, time-series groundwater monitoring data should be evaluated to establish the stability condition of the affected groundwater plume. Stable or diminishing plumes pose no risk to downgradient receptors located outside the plume area (i.e., DAF = infinite). Consequently, groundwater modeling analyses are necessary only for plumes for which available data either are insufficient to establish the stability condition or indicate an expanding plume.




**NOTES:**

SSTL = Site-Specific Target Level; i.e., allowable COC concentration in source medium.
RBEL = Risk-Based Exposure Limit, i.e., allowable COC concentration in exposure medium at point of exposure.
COC = Constituent of Concern
GW = Groundwater
POC = Point of Compliance
POE = Point of Exposure

**Natural Attenuation Factors:**

NAF = Natural Attenuation Factor.
$VF_{ss}$ = Volatilization Factor for surface soils ( mg/m$^3$ - air) / (mg/kg-soil).
PEF = Particulate Emission Factor for surface soils (g/cm$^2$ - s).
ADF = Air Dispersion Factor (mg/m$^3$ - air at POC) / (mg/m$^3$ - air at POE).
DAF = Groundwater Dilution-Attenuation Factor (mg/L - GW at POC) / (mg/L - GW at POE).
WDF = Well Dilution Factor (mg/L - well discharge) / (mg/L - plume edge).
LDF = Leachate - Groundwater Dilution Factor (cm$^3$/yr - GW) / (cm$^3$/yr - Leachate).
$K_{sw}$ = Soil - Water Partition Factor (mg/L-water) / (mg/kg-soil).

**FIGURE A.2.** BACK-CALCULATION OF SSTL VALUES FOR SOIL AND GROUNDWATER

# Appendix T

# Ecological Assessment Data Tables

**Appendix Table T-1**
**Field Water Quality Data Collected During Macroinvertebrate Sampling Activities in the AMTRAK Ditches, October 2004 through September 2006**

| Fall 2004 - Set HD, D-Net | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 10/5/04 | 10/5/04 | 10/5/04 | 10/5/04 | 10/5/04 |
| Time | 1000 | 1130 | 0900 | 0920 | 1140 |
| Water temperature (°C) | 16.2 | 17.2 | 16.6 | 17.3 | 18.9 |
| Dissolved oxygen (mg/l) | 6.5 | 8.8 | 9.1 | 11.0 | 12.1 |
| pH | 7.2 | 7.4 | 7.0 | 7.1 | 7.6 |
| Specific conductance (µmhos) | 149 | 152 | 136 | 138 | 141 |

| Fall 2004 - Pull HD | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 11/23/04 | 11/23/04 | 11/23/04 | 11/23/04 | 11/23/04 |
| Time | 0925 | 0940 | 1040 | 1100 | 1050 |
| Water temperature (°C) | 10.9 | 11.0 | 11.3 | 11.2 | 11.0 |
| Dissolved oxygen (mg/l) | 7.1 | 5.2 | 16.8 | 16.7 | 5.2 |
| pH | 7.8 | 7.8 | 8.6 | 8.8 | 7.8 |
| Specific conductance (µmhos) | 162 | 168 | 155 | 154 | 168 |

| Spring 2005 - Set HD | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 4/19/05 | 4/19/05 | 4/19/05 | 4/19/05 | 4/19/05 |
| Time | 1117 | 1100 | 0915 | 0900 | 1105 |
| Water temperature (°C) | 15.9 | 17.1 | 16.9 | 16.9 | 17.4 |
| Dissolved oxygen (mg/l) | 10.0 | 10.1 | >20.0 | >20.0 | 10.6 |
| pH | 7.6 | 7.5 | 8.3 | 8.3 | 7.5 |
| Specific conductance (µmhos) | 114 | 134 | 140 | 140 | 139 |

| Spring 2005 - Pull HD, D-Net | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 6/2/05 | 6/2/05 | 6/2/05 | 6/2/05 | 6/2/05 |
| Time | 1025 | 1040 | 0920 | 0902 | 1055 |
| Water temperature (°C) | 20.1 | 19.9 | 21.6 | 21.6 | 19.9 |
| Dissolved oxygen (mg/l) | 5.0 | 4.0 | 8.1 | 8.1 | 4.6 |
| pH | 7.5 | 7.4 | 7.6 | 7.6 | 7.5 |
| Specific conductance (µmhos) | 152 | 152 | 149 | 149 | 150 |

| Summer 2005 - Set HD, D-Net | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 8/2/05 | 8/2/05 | 8/2/05 | 8/2/05 | 8/2/05 |
| Time | 0950 | 1010 | 1210 | 1140 | 1025 |
| Water temperature (°C) | 26.6 | 26.9 | 28.6 | 28.6 | 23.3 |
| Dissolved oxygen (mg/l) | 5.9 | 6.0 | 0.9 | 0.9 | 7.3 |
| pH | 7.4 | 7.4 | 7.5 | 7.5 | 7.6 |
| Specific conductance (µmhos) | 145 | 145 | 144 | 144 | 144 |

| Summer 2005 - Pull HD | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 9/19/05 | 9/19/05 | 9/19/05 | 9/19/05 | 9/19/05 |
| Time | 0940 | 0950 | 1115 | 1105 | 1000 |
| Water temperature (°C) | 23.1 | 24.6 | 25.7 | 26.5 | 24.8 |
| Dissolved oxygen (mg/l) | 1.2 | 2.7 | 0.4 | 0.2 | 5.5 |
| pH | 7.5 | 7.5 | 7.7 | 7.7 | 7.9 |
| Specific conductance (µmhos) | 166 | 163 | 150 | 144 | 162 |



Source: ERC, Inc.

**Appendix Table T-1**
**Continued**

| Fall 2005 - Set HD, D-Net | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 10/4/05 | 10/4/05 | 10/4/05 | 10/4/05 | 10/4/05 |
| Time | 0847 | 0900 | 1105 | 1050 | 0915 |
| Water temperature (°C) | 20.1 | 20.6 | 21.1 | 21.2 | 20.7 |
| Dissolved oxygen (mg/l) | 2.1 | 5.4 | 6.8 | 7.1 | 4.6 |
| pH | 7.5 | 8.4 | 7.8 | 7.8 | 8.3 |
| Specific conductance (µmhos) | 177 | 176 | 156 | 159 | 175 |

| Fall 2005 - Pull HD | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 11/17/05 | 11/17/05 | 11/17/05 | 11/17/05 | 11/17/05 |
| Time | 0850 | 0900 | 1105 | 1000 | 0910 |
| Water temperature (°C) | 11.0 | 11.1 | 11.7 | 11.6 | 10.7 |
| Dissolved oxygen (mg/l) | 5.8 | 5.7 | 7.4 | 7.2 | 6.7 |
| pH | 7.6 | 7.7 | 7.8 | 7.7 | 7.8 |
| Specific conductance (µmhos) | 166 | 166 | 164 | 158 | 166 |

| Spring 2006 - Set HD | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 4/18/06 | 4/18/06 | 4/18/06 | 4/18/06 | 4/18/06 |
| Time | 1022 | 1035 | 1250 | 1241 | 1045 |
| Water temperature (°C) | 16.0 | 15.5 | 19.8 | 19.6 | 17.2 |
| Dissolved oxygen (mg/l) | 3.4 | 1.8 | 3.8 | 3.3 | 5.0 |
| pH | 7.5 | 7.6 | 7.6 | 7.6 | 7.7 |
| Specific conductance (µmhos) | 165 | 166 | 159 | 159 | 162 |

| Spring 2006 - Pull HD, D-Net | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 6/6/06 | 6/6/06 | 6/6/06 | 6/6/06 | 6/6/06 |
| Time | 1425 | 1410 | 0910 | 0855 | 1540 |
| Water temperature (°C) | 21.9 | 22.1 | 19.9 | 19.7 | 22.3 |
| Dissolved oxygen (mg/l) | 4.4 | 4.4 | 2.9 | 2.4 | 4.5 |
| pH | 7.5 | 7.5 | 7.2 | 6.7 | 7.6 |
| Specific conductance (µmhos) | 111 | 110 | 132 | 131 | 110 |

| Summer 2006 - Set HD, D-Net | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 8/5/06 | 8/5/06 | 8/5/06 | 8/5/06 | 8/5/06 |
| Time | 1400 | 1405 | 1245 | 1230 | 1415 |
| Water temperature (°C) | 31.3 | 31.4 | 30.6 | 30.8 | 32.2 |
| Dissolved oxygen (mg/l) | 10.1 | 12.3 | 9.5 | 10.1 | 14.7 |
| pH | 8.2 | 8.5 | 7.9 | 7.8 | 8.7 |
| Specific conductance (µmhos) | 135 | 143 | 164 | 159 | 136 |

| Summer 2006 - Pull HD | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 |
|---|---|---|---|---|---|
| Date | 9/25/06 | 9/25/06 | 9/25/06 | 9/25/06 | 9/25/06 |
| Time | 1050 | 1100 | 1205 | 1210 | 1105 |
| Water temperature (°C) | 20.1 | 20.0 | 21.0 | 21.7 | 21.2 |
| Dissolved oxygen (mg/l) | 6.3 | 4.9 | 7.3 | 8.6 | 7.9 |
| pH | 7.5 | 7.6 | 7.7 | 7.8 | 7.8 |
| Specific conductance (µmhos) | 149 | 153 | 147 | 148 | 146 |



Source: ERC, Inc.

**Appendix Table T-2**
**Field Water Quality Data Collected During**
**Macroinvertebrate Sampling Activities in the Conectiv**
**Impoundment, October 2004 through September 2006**

| Fall 2004 - Set HD, D-Net | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 10/6/04 | 10/6/04 | 10/6/04 |
| Time | 1240 | 1255 | 1310 |
| Water temperature (°C) | 15.2 | 14.0 | 13.3 |
| Dissolved oxygen (mg/l) | 3.7 | 2.2 | 2.1 |
| pH | 7.1 | 7.1 | 6.9 |
| Specific conductance (µmhos) | 143 | 147 | 143 |

| Fall 2004 - Pull HD | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 11/23/04 | 11/23/04 | 11/23/04 |
| Time | 1345 | 1335 | 1320 |
| Water temperature (°C) | 10.7 | 10.4 | 10.0 |
| Dissolved oxygen (mg/l) | 5.0 | 4.5 | 3.1 |
| pH | 7.2 | 7.3 | 7.2 |
| Specific conductance (µmhos) | 151 | 151 | 150 |

| Spring 2005 - Set HD | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 4/19/05 | 4/19/05 | 4/19/05 |
| Time | 1015 | 1020 | 1025 |
| Water temperature (°C) | 15.8 | 15.8 | 15.8 |
| Dissolved oxygen (mg/l) | 7.8 | 7.8 | 7.8 |
| pH | 7.2 | 7.2 | 7.2 |
| Specific conductance (µmhos) | 145 | 145 | 145 |

| Spring 2005 - Pull HD, D-Net | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 6/2/05 | 6/2/05 | 6/2/05 |
| Time | 1310 | 1325 | 1340 |
| Water temperature (°C) | 20.0 | 21.0 | 20.8 |
| Dissolved oxygen (mg/l) | 1.8 | 3.2 | 1.6 |
| pH | 7.3 | 7.3 | 7.3 |
| Specific conductance (µmhos) | 158 | 154 | 157 |

| Summer 2005 - Set HD, D-Net | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 8/3/05 | 8/3/05 | 8/3/05 |
| Time | 1025 | 1010 | 0945 |
| Water temperature (°C) | 24.5 | 24.9 | 24.3 |
| Dissolved oxygen (mg/l) | 0.2 | 0.2 | 0.2 |
| pH | 7.3 | 7.3 | 7.2 |
| Specific conductance (µmhos) | 150 | 155 | 151 |

| Summer 2005 - Pull HD | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 9/19/05 | 9/19/05 | 9/19/05 |
| Time | 1405 | 1412 | 1418 |
| Water temperature (°C) | 30.9 | 29.9 | 30.8 |
| Dissolved oxygen (mg/l) | 6.2 | 14.3 | 5.7 |
| pH | 7.5 | 7.8 | 7.3 |
| Specific conductance (µmhos) | 155 | 150 | 153 |



Source: ERC, Inc.

## Appendix Table T-2
## Continued

| Fall 2005 - Set HD, D-Net | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 10/12/05 | 10/12/05 | 10/12/05 |
| Time | 1150 | 1135 | 1115 |
| Water temperature (°C) | 17.0 | 17.3 | 17.3 |
| Dissolved oxygen (mg/l) | 5.1 | 3.6 | 3.3 |
| pH | 7.1 | 7.1 | 6.9 |
| Specific conductance (µmhos) | 140 | 152 | 151 |

| Fall 2005 - Pull HD | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 11/17/05 | 11/17/05 | 11/17/05 |
| Time | 1042 | 1050 | 1057 |
| Water temperature (°C) | 9.2 | 10.1 | 8.8 |
| Dissolved oxygen (mg/l) | 6.7 | 7.2 | 6.0 |
| pH | 7.7 | 7.7 | 7.6 |
| Specific conductance (µmhos) | 184 | 181 | 182 |

| Spring 2006 - Set HD | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 4/18/06 | 4/18/06 | 4/18/06 |
| Time | 1130 | 1135 | 1140 |
| Water temperature (°C) | 16.3 | 16.6 | 16.1 |
| Dissolved oxygen (mg/l) | 13.4 | 16.8 | 19.8 |
| pH | 8.1 | 8.7 | 8.9 |
| Specific conductance (µmhos) | 165 | 165 | 166 |

| Spring 2006 - Pull HD, D-Net | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 6/6/06 | 6/6/06 | 6/6/06 |
| Time | 1225 | 1235 | 1245 |
| Water temperature (°C) | 20.3 | 20.7 | 20.0 |
| Dissolved oxygen (mg/l) | 2.7 | 2.5 | 1.9 |
| pH | 7.2 | 7.2 | 7.3 |
| Specific conductance (µmhos) | 142 | 144 | 144 |

| Summer 2006 - Set HD, D-Net | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 8/5/06 | 8/5/06 | 8/5/06 |
| Time | 1120 | 1130 | 1140 |
| Water temperature (°C) | 25.5 | 24.7 | 24.8 |
| Dissolved oxygen (mg/l) | 4.5 | 0.3 | 2.0 |
| pH | 7.6 | 7.4 | 7.3 |
| Specific conductance (µmhos) | 162 | 172 | 174 |

| Summer 2006 - Pull HD | Macro 6 | Macro 7 | Macro 8 |
|---|---|---|---|
| Date | 9/25/06 | 9/25/06 | 9/25/06 |
| Time | 1250 | 1300 | 1305 |
| Water temperature (°C) | 18.6 | 19.6 | 20.6 |
| Dissolved oxygen (mg/l) | 3.6 | 6.1 | 8.6 |
| pH | 7.4 | 7.3 | 7.7 |
| Specific conductance (µmhos) | 157 | 160 | 151 |



Source: ERC, Inc.

**Appendix Table T-3**
**Field Water Quality Data Collected During**
**Macroinvertebrate Sampling Activities in the City Ditch,**
**October 2004 through September 2006**

| Fall 2004 - Set HD, D-Net | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 10/5/04 | 10/5/04 | 10/5/04 |
| Time | 1100 | 1115 | 1410 |
| Water temperature (°C) | 16.8 | 17.6 | 17.3 |
| Dissolved oxygen (mg/l) | 3.0 | 3.1 | 3.0 |
| pH | 7.2 | 7.1 | 7.3 |
| Specific conductance (µmhos) | 143 | 142 | 144 |

| Fall 2004 - Pull HD | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 11/23/04 | 11/23/04 | 11/23/04 |
| Time | 0900 | 0900 | 1010 |
| Water temperature (°C) | 10.9 | 10.9 | 11.2 |
| Dissolved oxygen (mg/l) | 8.6 | 7.8 | 0.8 |
| pH | 7.9 | 7.8 | 7.5 |
| Specific conductance (µmhos) | 135 | 138 | 161 |

| Spring 2005 - Set HD | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 4/19/05 | 4/19/05 | 4/19/05 |
| Time | 1121 | 1130 | 1340 |
| Water temperature (°C) | 15.6 | 16.3 | 15.4 |
| Dissolved oxygen (mg/l) | 10.3 | 11.2 | 8.6 |
| pH | 7.6 | 7.6 | 7.2 |
| Specific conductance (µmhos) | 110 | 109 | 155 |

| Spring 2005 - Pull HD, D-Net | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 6/2/05 | 6/2/05 | 6/3/05 |
| Time | 1120 | 1135 | 1000 |
| Water temperature (°C) | 19.9 | 19.5 | 14.3 |
| Dissolved oxygen (mg/l) | 5.7 | 6.3 | 5.3 |
| pH | 7.4 | 7.5 | 7.1 |
| Specific conductance (µmhos) | 136 | 130 | 156 |

| Summer 2005 - Set HD, D-Net | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 8/2/05 | 8/2/05 | 8/2/05 |
| Time | 0915 | 0930 | 1100 |
| Water temperature (°C) | 26.3 | 26.1 | 24.6 |
| Dissolved oxygen (mg/l) | 6.9 | 5.2 | 1.8 |
| pH | 7.4 | 7.4 | 7.2 |
| Specific conductance (µmhos) | 130 | 132 | 141 |

| Summer 2005 - Pull HD | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 9/19/05 | 9/19/05 | 9/19/05 |
| Time | 0930 | 0920 | 1015 |
| Water temperature (°C) | 22.6 | 21.8 | 20.7 |
| Dissolved oxygen (mg/l) | 2.6 | 3.8 | 1.2 |
| pH | 7.0 | 7.0 | 7.0 |
| Specific conductance (µmhos) | 152 | 141 | 143 |



Source: ERC, Inc.

**Appendix Table T-3**
**Continued**

| Fall 2005 - Set HD, D-Net | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 10/4/05 | 10/4/05 | 10/4/05 |
| Time | 0945 | 0930 | 1020 |
| Water temperature (°C) | 20.5 | 21.0 | 18.5 |
| Dissolved oxygen (mg/l) | 3.0 | 3.5 | 1.5 |
| pH | 7.4 | 7.5 | 7.1 |
| Specific conductance (µmhos) | 167 | 150 | 152 |

| Fall 2005 - Pull HD | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 11/17/05 | 11/17/05 | 11/17/05 |
| Time | 0835 | 0842 | 0930 |
| Water temperature (°C) | 11.5 | 11.0 | 9.8 |
| Dissolved oxygen (mg/l) | 7.2 | 6.9 | 3.4 |
| pH | 7.1 | 7.5 | 7.4 |
| Specific conductance (µmhos) | 155 | 160 | 159 |

| Spring 2006 - Set HD | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 4/18/06 | 4/18/06 | 4/18/06 |
| Time | 1012 | 1005 | 0940 |
| Water temperature (°C) | 14.0 | 13.8 | 10.3 |
| Dissolved oxygen (mg/l) | 3.1 | 3.1 | 5.6 |
| pH | 7.5 | 7.4 | 6.7 |
| Specific conductance (µmhos) | 159 | 160 | 142 |

| Spring 2006 - Pull HD, D-Net | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 6/6/06 | 6/6/06 | 6/6/06 |
| Time | 1500 | 1445 | 1530 |
| Water temperature (°C) | 21.3 | 21.2 | 20.8 |
| Dissolved oxygen (mg/l) | 2.5 | 2.4 | 1.7 |
| pH | 7.4 | 7.4 | 7.1 |
| Specific conductance (µmhos) | 126 | 126 | 125 |

| Summer 2006 - Set HD, D-Net | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 8/5/06 | 8/5/06 | 8/5/06 |
| Time | 1335 | 1345 | 1445 |
| Water temperature (°C) | 28.6 | 28.9 | 25.1 |
| Dissolved oxygen (mg/l) | 5.9 | 6.2 | 2.2 |
| pH | 7.6 | 7.7 | 7.1 |
| Specific conductance (µmhos) | 135 | 135 | 104 |

| Summer 2006 - Pull HD | Macro 9 | Macro 10 | Macro 11 |
|---|---|---|---|
| Date | 9/25/06 | 9/25/06 | 9/25/06 |
| Time | 1030 | 1041 | 1125 |
| Water temperature (°C) | 19.5 | 19.5 | 18.3 |
| Dissolved oxygen (mg/l) | 5.6 | 5.6 | 2.5 |
| pH | 7.1 | 7.1 | 7.3 |
| Specific conductance (µmhos) | 144 | 144 | 149 |



Source: ERC, Inc.

**Appendix Table T-4**
**Field Water Quality Data Collected During**
**Macroinvertebrate Sampling Activities in Shellpot Creek,**
**October 2004 through September 2006**

| Fall 2004 - Set HD, D-Net | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 10/6/04 | 10/6/04 | 10/6/04 | 10/6/04 |
| Time | 1000 | 1035 | 1100 | 1130 |
| Water temperature (°C) | 13.2 | 13.7 | 14.5 | 14.8 |
| Dissolved oxygen (mg/l) | 6.8 | 5.4 | 5.0 | 5.0 |
| pH | 6.8 | 6.8 | 6.8 | 7.1 |
| Specific conductance (µmhos) | 141 | 144 | 144 | 144 |

| Fall 2004 - Pull HD | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 11/23/04 | 11/23/04 | 11/23/04 | 11/23/04 |
| Time | 1145 | 1155 | 1205 | 1215 |
| Water temperature (°C) | 10.8 | 10.7 | 10.7 | 11.0 |
| Dissolved oxygen (mg/l) | 6.5 | 5.9 | 4.6 | 7.2 |
| pH | 7.7 | 7.4 | 7.3 | 7.4 |
| Specific conductance (µmhos) | 142 | 142 | 148 | 144 |

| Spring 2005 - Set HD | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 4/19/05 | 4/19/05 | 4/19/05 | 4/19/05 |
| Time | 1258 | 1245 | 1235 | 1225 |
| Water temperature (°C) | 17.2 | 16.8 | 18.0 | 17.0 |
| Dissolved oxygen (mg/l) | 9.2 | 8.5 | 9.7 | 7.6 |
| pH | 7.3 | 7.3 | 7.3 | 7.2 |
| Specific conductance (µmhos) | 138 | 136 | 139 | 147 |

| Spring 2005 - Pull HD, D-Net | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 6/3/05 | 6/3/05 | 6/3/05 | 6/3/05 |
| Time | 1230 | 1240 | 1210 | 1155 |
| Water temperature (°C) | 16.7 | 16.9 | 17.6 | 18.6 |
| Dissolved oxygen (mg/l) | 6.1 | 4.9 | 5.0 | 6.6 |
| pH | 7.3 | 7.2 | 7.3 | 7.4 |
| Specific conductance (µmhos) | 145 | 146 | 150 | 158 |

| Summer 2005 - Set HD, D-Net | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 8/3/05 | 8/3/05 | 8/3/05 | 8/3/05 |
| Time | 1400 | 1330 | 1305 | 1245 |
| Water temperature (°C) | 29.9 | 30.8 | 30.8 | 31.6 |
| Dissolved oxygen (mg/l) | 6.7 | 8.5 | 9.6 | 9.0 |
| pH | 7.2 | 7.2 | 7.2 | 7.3 |
| Specific conductance (µmhos) | 134 | 133 | 135 | 144 |

| Summer 2005 - Pull HD | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 9/19/05 | 9/19/05 | 9/19/05 | 9/19/05 |
| Time | 1535 | 1542 | 1600 | 1515 |
| Water temperature (°C) | 28.4 | 28.4 | 28.4 | 31.3 |
| Dissolved oxygen (mg/l) | 13.4 | 16.5 | 19.9 | 7.8 |
| pH | 8.3 | 8.9 | 8.8 | 7.5 |
| Specific conductance (µmhos) | 124 | 128 | 146 | 159 |



Source: ERC, Inc.

**Appendix Table T-4**
**Continued**

| Fall 2005 - Set HD, D-Net | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 10/5/05 | 10/5/05 | 10/5/05 | 10/5/05 |
| Time | 1655 | 1640 | 1705 | 1605 |
| Water temperature (°C) | 22.2 | 22.7 | 23.7 | 24.8 |
| Dissolved oxygen (mg/l) | 7.2 | 4.3 | 8.1 | >20.0 |
| pH | 7.5 | 7.5 | 7.5 | 8.5 |
| Specific conductance (µmhos) | 140 | 140 | 138 | 170 |

| Fall 2005 - Pull HD | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 11/17/05 | 11/17/05 | 11/17/05 | 11/17/05 |
| Time | 1145 | 1153 | 1205 | 1215 |
| Water temperature (°C) | 10.5 | 10.5 | 10.5 | 11.2 |
| Dissolved oxygen (mg/l) | 7.4 | 6.6 | 6.9 | 8.2 |
| pH | 8.0 | 7.7 | 7.7 | 7.7 |
| Specific conductance (µmhos) | 107 | 106 | 110 | 124 |

| Spring 2006 - Set HD | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 4/19/06 | 4/19/06 | 4/19/06 | 4/19/06 |
| Time | 0815 | 0825 | 0835 | 0845 |
| Water temperature (°C) | 14.1 | 14.5 | 14.0 | 14.1 |
| Dissolved oxygen (mg/l) | 4.8 | 3.7 | 6.5 | 6.9 |
| pH | 6.8 | 7.1 | 7.3 | 7.3 |
| Specific conductance (µmhos) | 153 | 151 | 180 | 180 |

| Spring 2006 - Pull HD, D-Net | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 6/6/06 | 6/6/06 | 6/6/06 | 6/6/06 |
| Time | 1101 | 1055 | 1040 | 1025 |
| Water temperature (°C) | 18.9 | 18.6 | 19.5 | 18.5 |
| Dissolved oxygen (mg/l) | 4.1 | 3.4 | 2.2 | 2.1 |
| pH | 7.4 | 7.5 | 7.4 | 7.2 |
| Specific conductance (µmhos) | 129 | 133 | 131 | 135 |

| Summer 2006 - Set HD, D-Net | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 8/5/06 | 8/5/06 | 8/5/06 | 8/5/06 |
| Time | 0940 | 0930 | 0915 | 0900 |
| Water temperature (°C) | 26.1 | 27.1 | 28.8 | 29.0 |
| Dissolved oxygen (mg/l) | 2.4 | 3.8 | 5.0 | 5.2 |
| pH | 7.1 | 7.2 | 7.2 | 6.7 |
| Specific conductance (µmhos) | 145 | 138 | 125 | 119 |

| Summer 2006 - Pull HD | Macro 12 | Macro 13 | Macro 14 | Macro 15 |
|---|---|---|---|---|
| Date | 9/25/06 | 9/25/06 | 9/25/06 | 9/25/06 |
| Time | 1420 | 1410 | 1400 | 1355 |
| Water temperature (°C) | 21.8 | 22.4 | 21.9 | 22.9 |
| Dissolved oxygen (mg/l) | 8.3 | 10.2 | 9.5 | 7.9 |
| pH | 7.5 | 7.4 | 7.3 | 7.3 |
| Specific conductance (µmhos) | 125 | 130 | 132 | 124 |



Source: ERC, Inc.

**Appendix Table T-5**
**Macroinvertebrates Collected by D-Frame Net in the**
**Ditches Adjacent to the AMTRAK Former Fueling Facility, October 2004**

| | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 | Total |
|---|---|---|---|---|---|---|
| Annelida | | | | | | |
| Oligochaeta | 2 | 390 | 24 | 15 | 42 | 473 |
| Nematoda | | | | 1 | | 1 |
| Crustacea | | | | | | |
| Amphipoda | | | | | | |
| Gammaridae | | | | | | |
| *Gammarus* | 2 | | | | | 2 |
| Decapoda | | | | | | |
| Palaemonidae | | | | | | |
| *Palaemonetes* | 10 | 32 | 107 | 4 | 37 | 190 |
| Insecta | | | | | | |
| Collembola | | | | | 1 | 1 |
| Ephemeroptera | | | | | | |
| Baetidae | | | | | | |
| *Callibaetis* | | 1 | | | | 1 |
| Odonata | | | | | | |
| Anisoptera | | | | | | |
| Aeshnidae | | | | | | |
| *Anax* | 4 | 2 | | | | 6 |
| Libellulidae | | | | | | |
| *Erythemis* | 32 | 25 | 6 | 2 | 64 | 129 |
| *Libelulla* | | 15 | 9 | | 25 | 49 |
| Zygoptera | | | | | | |
| Coenagrionidae | | | | | | |
| *Enallagma* | 589 | 135 | 45 | 48 | 332 | 1149 |
| Hemiptera | | | | | | |
| Mesoveliidae | | | | | | |
| *Mesovelia* | 1 | | | | 3 | 4 |
| Pleidae | | | | | | |
| *Neoplea* | | | | | 1 | 1 |
| Notonectidae | | | | | | |
| *Notonecta* | | 2 | | | | 2 |
| Megaloptera | | | | | | |
| Corydalidae | | | | | | |
| *Chauliodes* | 1 | | | | | 1 |
| Trichoptera | | | | | | |
| Hydropsychidae | | | | | | |
| *Hydropsyche* | | | | | 1 | 1 |
| Coleoptera | | | | | | |
| Haliplidae | | | | | | |
| *Haliplus* | | 1 | | | | 1 |
| *Peltodytes* | | 8 | | | 14 | 22 |
| Hydrophilidae | | | | | | |
| *Tropisternus* | 1 | | | | | 1 |
| Diptera | | | | | | |
| Ceratopogonidae | 1 | 4 | | | 1 | 6 |
| Chironomidae | 2 | 36 | 3 | 25 | 8 | 74 |
| Culicidae | 2 | | | | | 2 |
| Psychodidae | 1 | 1 | | | | 2 |
| Simuliidae | | | | | | |
| *Simulium* | | | | | 1 | 1 |
| Tipulidae | | | | | 1 | 1 |
| Sciomyzidae | 1 | | | | | 1 |
| Mollusca | | | | | | |
| Gastropoda | | | | | | |
| Physidae | | | | | | |
| *Physella* | 11 | 72 | 9 | 19 | 20 | 131 |
| Planorbidae | 15 | 15 | | 3 | 2 | 35 |
| Bivalvia | 3 | 3 | 18 | 19 | 18 | 61 |
| Total specimens | 678 | 742 | 221 | 136 | 571 | 2348 |
| Total taxa | 17 | 16 | 8 | 9 | 17 | 28 |



Source: ERC, Inc.

**Appendix Table T-6**
**Macroinvertebrates Collected by D-Frame Net**
**in the Conectiv Impoundment, October 2004**

| | Macro 6 | Macro 7 | Macro 8 | Total |
|---|---|---|---|---|
| Annelida | | | | |
| Oligochaeta | 14 | 4 | 4 | 22 |
| Insecta | | | | |
| Ephemeroptera | | | | |
| Baetidae | | | | |
| *Callibaetis* | 1 | 10 | 40 | 51 |
| Odonata | | | | |
| Anisoptera | | | | |
| Aeshnidae | | | | |
| *Anax* | | 4 | 2 | 6 |
| Libellulidae | | | | |
| *Erythemis* | 4 | 5 | 22 | 31 |
| *Leucorrhinia* | 6 | | | 6 |
| *Libelulla* | 2 | 12 | 1 | 15 |
| Zygoptera | | | | |
| Coenagrionidae | | | | |
| *Enallagma* | 38 | 131 | | 169 |
| Hemiptera | | | | |
| Veliidae | | | | |
| *Microvelia* | | 1 | 8 | 9 |
| Pleidae | | | | |
| *Neoplea* | 4 | 31 | 161 | 196 |
| Corixidae | | | | |
| *Hesperocorixa* | 72 | | | 72 |
| *Trichocorixa* | 2 | | | 2 |
| Notonectidae | | | | |
| *Notonecta* | | 10 | 7 | 17 |
| Mesoveliidae | | | | |
| *Mesovelia* | | 19 | 11 | 30 |
| Megaloptera | | | | |
| Corydalidae | | | | |
| *Chauliodes* | | 1 | | 1 |
| Trichoptera | | | | |
| Hydropsychidae | | | | |
| *Hydropsyche* | | 1 | | 1 |
| Coleoptera | | | | |
| Haliplidae | | | | |
| *Haliplus* | 5 | 8 | 25 | 38 |
| *Peltodytes* | | 3 | 2 | 5 |
| Dytiscidae | | | | |
| *Agabus* | | 28 | 91 | 119 |
| *Cybister* | | 1 | | 1 |
| Diptera | | | | |
| Chironomidae | 40 | 35 | 59 | 134 |
| Stratiomyidae | | | 1 | 1 |
| Tipulidae | | 2 | | 2 |
| Mollusca | | | | |
| Gastropoda | | | | |
| Physidae | | | | |
| *Physella* | 6 | 2 | 25 | 33 |
| Planorbidae | 1 | 5 | 8 | 14 |
| Total specimens | 195 | 313 | 467 | 975 |
| Total taxa | 13 | 20 | 17 | 24 |



Source: ERC, Inc.

**Appendix Table T-7**
**Macroinvertebrates Collected by D-Frame Net**
**in the City Ditch, October 2004**

| | Macro 9 | Macro 10 | Macro 11 | Total |
|---|---|---|---|---|
| Annelida | | | | |
| Oligochaeta | 32 | 24 | 108 | 164 |
| Hirudinae | 1 | | | 1 |
| Crustacea | | | | |
| Amphipoda | | | | |
| Gammaridae | | | | |
| *Gammarus* | 13 | | | 13 |
| Decapoda | | | | |
| Palaemonidae | | | | |
| *Palaemonetes* | 4 | 1 | | 5 |
| Insecta | | | | |
| Ephemeroptera | | | | |
| Baetidae | | | | |
| *Callibaetis* | 1 | | | 1 |
| Odonata | | | | |
| Anisoptera | | | | |
| Aeshnidae | | | | |
| *Anax* | 1 | | | 1 |
| Corduliidae | | | | |
| *Neurocordulia* | | 3 | | 3 |
| Libellulidae | | | | |
| *Erythemis* | 4 | 3 | | 7 |
| *Libelulla* | 13 | 1 | | 14 |
| Zygoptera | | | | |
| Coenagrionidae | | | | |
| *Enallagma* | 38 | 27 | 1 | 66 |
| Hemiptera | | | | |
| Pleidae | | | | |
| *Neoplea* | | 1 | | 1 |
| Trichoptera | | | | |
| Hydropsychidae | | | | |
| *Hydropsyche* | | 1 | | 1 |
| Diptera | | | | |
| Chironomidae | 34 | 28 | 5 | 67 |
| Mollusca | | | | |
| Gastropoda | | | | |
| Physidae | | | | |
| *Physella* | | | 5 | 5 |
| Planorbidae | 4 | 1 | 7 | 12 |
| Hydrobiidae | 3 | | | 3 |
| Bivalvia | 19 | 9 | | 28 |
| Total specimens | 167 | 99 | 126 | 392 |
| Total taxa | 13 | 11 | 5 | 17 |

D-Net October 2004.xls\City Ditch

Source: ERC, Inc.

**Appendix Table T-8**
**Macroinvertebrates Collected by D-Frame Net**
**in Shellpot Creek, October 2004**

| | Macro 12 | Macro 13 | Macro 14 | Macro 15 | Total |
|---|---|---|---|---|---|
| Platyhelminthes | | | | | |
| Turbellaria | | | | | |
| Planariidae | | 1 | | | 1 |
| Annelida | | | | | |
| Oligochaeta | 22 | 51 | 51 | 128 | 252 |
| Hirudinae | | | | 1 | 1 |
| Nematoda | | | | 1 | 1 |
| Crustacea | | | | | |
| Amphipoda | | | | | |
| *Gammaridae* | | | | | |
| *Gammarus* | 67 | 32 | 33 | 52 | 184 |
| Isopoda | | | | | |
| Asellidae | | | | | |
| *Lirceus* | 1 | | | | 1 |
| Insecta | | | | | |
| Odonata | | | | | |
| Zygoptera | | | | | |
| Coenagrionidae | | | | | |
| *Enallagma* | 2 | 8 | 7 | 26 | 43 |
| Plecoptera | | | | | |
| Perlodidae | | | | | |
| *Isoperla* | | | | 1 | 1 |
| Hemiptera | | | | | |
| Gerridae | | | | | |
| *Gerris* | | | | 1 | 1 |
| Nepidae | | | | | |
| *Ranatra* | | | 1 | | 1 |
| Corixidae | | | | | |
| *Trichocorixa* | 48 | 97 | 90 | 137 | 372 |
| Notonectidae | | | | | |
| *Notonecta* | | 1 | | | 1 |
| Mesoveliidae | | | | | |
| *Mesovelia* | | | 1 | 1 | 2 |
| Trichoptera | | | | | |
| Hydropsychidae | | | | | |
| *Hydropsyche* | 1 | | | | 1 |
| Diptera | | | | | |
| Chaoboridae | 1 | | | | 1 |
| Chironomidae | 20 | 5 | 10 | 21 | 56 |
| Mollusca | | | | | |
| Gastropoda | | | | | |
| Physidae | | | | | |
| *Physella* | 5 | 20 | 6 | 18 | 49 |
| Planorbidae | 4 | 74 | 7 | 1 | 86 |
| Hydrobiidae | 272 | 1 | | | 273 |
| Ancylidae | 1 | 1 | 3 | | 5 |
| Bivalvia | 12 | 14 | 5 | 7 | 38 |
| Total specimens | 456 | 305 | 214 | 395 | 1370 |
| Total taxa | 13 | 12 | 11 | 13 | 21 |



Source: ERC, Inc.

**Appendix Table T-9**
**Macroinvertebrates Collected by D-Frame Net in the**
**Ditches Adjacent to the AMTRAK Former Fueling Facility, June 2005**

| | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 | Total |
|---|---|---|---|---|---|---|
| Platyhelminthes | | | | | | |
| Turbellaria | | | | | | |
| Planariidae | 1 | 2 | 2 | 2 | 1 | 8 |
| Annelida | | | | | | |
| Oligochaeta | 1942 | 458 | 61 | 1025 | 1521 | 5007 |
| Nematoda | 1 | | 1 | 1 | | 3 |
| Hirudinae | 1 | | | | | 1 |
| Crustacea | | | | | | |
| Decapoda | | | | | | |
| Palaemonidae | | | | | | |
| *Palaemonetes* | 2 | 2 | 15 | 2 | 1 | 22 |
| Insecta | | | | | | |
| Collembola | 2 | 5 | | | 4 | 11 |
| Odonata | | | | | | |
| Anisoptera | | | | | | |
| Cordulliidae | | | | | | |
| *Neurocordulia* | | | 12 | | 3 | 15 |
| Libellulidae | | | | | | |
| *Erythemis* | | | | | 3 | 3 |
| *Libelulla* | 1 | 1 | 4 | 1 | 6 | 13 |
| Zygoptera | | | | | | |
| Coenagrionidae | | | | | | |
| *Enallagma* | 4 | 8 | | 3 | 5 | 20 |
| Hemiptera | | | | | | |
| Gerridae | | | | | | |
| *Gerris* | | 1 | | | | 1 |
| Belostomatidae | | | | | | |
| *Belostoma* | | | | | 1 | 1 |
| Corixidae | | | | | | |
| *Hesperocorixa* | 1 | | | | | 1 |
| Mesoveliidae | | | | | | |
| *Mesovelia* | 4 | 16 | 1 | 2 | | 23 |
| Coleoptera | | | | | | |
| Haliplidae | | | | | | |
| *Peltodytes* | 5 | 5 | 17 | 5 | 40 | 72 |
| Dytiscidae | | | | | | |
| *Agabus* | | 7 | 2 | | 3 | 12 |
| *Laccophilus* | 1 | | | | | 1 |
| Hydrophilidae | | | | | | |
| *Tropisternus* | 5 | 1 | 1 | | 2 | 9 |
| Chrysomelidae | | | | | | |
| *Pyrrhalta* | | | | 2 | | 2 |
| Diptera | | | | | | |
| Ceratopogonidae | 1 | | | 2 | 1 | 4 |
| Chaoboridae | | | | | 2 | 2 |
| Chironomidae | 183 | 91 | 13 | 216 | 76 | 579 |
| Tipulidae | | | | | | |
| *Tipula* | 1 | 1 | | | | 2 |
| Stratiomyidae | 1 | | | | | 1 |
| Mollusca | | | | | | |
| Gastropoda | | | | | | |
| Physidae | | | | | | |
| *Physella* | 474 | 105 | 176 | 112 | 375 | 1242 |
| Planorbidae | 67 | 17 | 32 | 19 | 86 | 221 |
| Hydrobiidae | 37 | 2 | 3 | 2 | 6 | 50 |
| Bivalvia | 4 | 31 | 22 | 2 | 13 | 72 |
| Total specimens | 2738 | 753 | 362 | 1396 | 2149 | 7398 |
| Total taxa | 21 | 17 | 15 | 15 | 19 | 28 |



Source: ERC, Inc.

**Appendix Table T-10**
**Macroinvertebrates Collected by D-Frame Net**
**in the Conectiv Impoundment, June 2005**

| | Macro 6 | Macro 7 | Macro 8 | Total |
|---|---|---|---|---|
| Annelida | | | | |
| Oligochaeta | 84 | 25 | 7 | 116 |
| Acari | | | | |
| Hydrachnidia | 11 | 39 | 84 | 134 |
| Hirudinae | | 1 | | 1 |
| Crustacea | | | | |
| Amphipoda | | | | |
| Gammaridae | | | | |
| *Gammarus* | | 1 | | 1 |
| Isopoda | | | | |
| Aselidae | | | | |
| *Lirceus* | 5 | 5 | 13 | 23 |
| Insecta | | | | |
| Ephemeroptera | | | | |
| Baetidae | | | | |
| *Callibaetis* | 1 | 3 | 6 | 10 |
| Odonata | | | | |
| Anisoptera | | | | |
| Aeshnidae | | | | |
| *Anax* | 1 | | 1 | 2 |
| Libellulidae | | | | |
| *Erythemis* | 3 | | | 3 |
| *Libelulla* | 9 | 13 | | 22 |
| Zygoptera | | | | |
| Coenagrionidae | | | | |
| *Enallagma* | 14 | 10 | 12 | 36 |
| Hemiptera | | | | |
| Hydrometridae | | | | |
| *Hydrometra* | | 1 | | 1 |
| Veliidae | | | | |
| *Microvelia* | 1 | 4 | 3 | 8 |
| Gerridae | | | | |
| *Gerris* | | 3 | 1 | 4 |
| Belostomatidae | | | | |
| *Belostoma* | 2 | 11 | | 13 |
| Pleidae | | | | |
| *Neoplea* | 383 | 925 | 600 | 1908 |
| Corixidae | | | | |
| *Hesperocorixa* | 3 | 21 | 32 | 56 |
| *Trichocorixa* | | 15 | 4 | 19 |
| Notonectidae | | | | |
| *Notonecta* | 2 | 11 | 5 | 18 |
| Mesoveliidae | | | | |
| *Mesovelia* | | 4 | 3 | 7 |
| Coleoptera | | | | |
| Haliplidae | | | | |
| *Haliplus* | 1 | 1 | 2 | 4 |
| *Peltodytes* | 6 | 8 | 3 | 17 |
| Dytiscidae | | | | |
| *Agabus* | | 3 | 3 | 6 |
| *Hydroporus* | 1 | | | 1 |
| *Laccophilus* | | | 1 | 1 |
| Noteridae | | | | |
| *Hydrocanthus* | 1 | 2 | | 3 |
| Hydrophilidae | | | | |
| *Enochrus* | 1 | 6 | | 7 |
| *Tropisternus* | 1 | 3 | 4 | 8 |
| Chrysomelidae | | | | |
| *Pyrrhalta* | 27 | 60 | 25 | 112 |
| Hymenoptera | | | | |
| Braconidae | | 1 | | 1 |
| Diptera | | | | |
| Ceratopogonidae | | | 3 | 3 |
| Chironomidae | 77 | 80 | 44 | 201 |
| Tipulidae | | | | |
| *Tipula* | | 1 | | 1 |
| Simuliidae | | | | |
| *Simulium* | | | | |
| Stratiomyidae | | 10 | | 10 |
| Sciomyzidae | 5 | 6 | 5 | 16 |
| Mollusca | | | | |
| Gastropoda | | | | |
| Physidae | | | | |
| *Physella* | 659 | 1448 | 1162 | 3269 |
| Planorbidae | 12 | 46 | 20 | 78 |
| Hydrobiidae | 1 | | | 1 |
| Total specimens | 1311 | 2767 | 2043 | 6121 |
| *Total taxa* | 25 | 31 | 24 | 37 |



Source: ERC, inc.

**Appendix Table T-11**
**Macroinvertebrates Collected by D-Frame Net**
**in the City Ditch, June 2005**

| | Macro 9 | Macro 10 | Macro 11 | Total |
|---|---|---|---|---|
| Annelida | | | | |
| Oligochaeta | 54 | 48 | 117 | 219 |
| Insecta | | | | |
| Collembola | 5 | 43 | 8 | 56 |
| Hemiptera | | | | |
| Pleidae | | | | |
| *Neoplea* | | 1 | 3 | 4 |
| Mesoveliidae | | | | |
| *Mesovelia* | | 1 | | 1 |
| Coleoptera | | | | |
| Haliplidae | | | | |
| *Peltodytes* | | 2 | 1 | 3 |
| Diptera | | | | |
| Chironomidae | 3 | 2 | | 5 |
| Mollusca | | | | |
| Gastropoda | | | | |
| Physidae | | | | |
| *Physella* | 6 | 1 | 1 | 8 |
| Planorbidae | 1 | | | 1 |
| Hydrobiidae | 12 | 2 | | 14 |
| Bivalvia | | 1 | | 1 |
| Total specimens | 81 | 101 | 130 | 312 |
| Total taxa | 6 | 9 | 5 | 10 |

D-Net June 2005.xls\City Ditch

Source: ERC, Inc.

**Appendix Table T-12**
**Macroinvertebrates Collected by D-Frame Net**
**in Shellpot Creek, June 2005**

| | Macro 12 | Macro 13 | Macro 14 | Macro 15 | Total |
|---|---|---|---|---|---|
| Annelida | | | | | |
| Oligochaeta | 509 | 9 | 23 | 6 | 547 |
| Hirudinae | | | 3 | | 3 |
| Crustacea | | | | | |
| Amphipoda | | | | | |
| Gammaridae | | | | | |
| *Gammarus* | 12 | 16 | | 2 | 30 |
| Isopoda | | | | | |
| Asellidae | | | | | |
| *Lirceus* | | | 1 | 1 | 2 |
| Insecta | | | | | |
| Collembola | 188 | | 358 | | 546 |
| Hemiptera | | | | | |
| Veliidae | | | | | |
| *Microvelia* | | 1 | | | 1 |
| Corixidae | | | | | |
| *Trichocorixa* | 66 | | 1 | 1 | 68 |
| Mesoveliidae | | | | | |
| *Mesovelia* | | 1 | 1 | | 2 |
| Coleoptera | | | | | |
| Chrysomelidae | | | | | |
| *Pyrrhalta* | | 1 | | 1 | 2 |
| Hymenoptera | | | | | |
| Braconidae | | 1 | | 1 | 2 |
| Diptera | | | | | |
| Ceratopogonidae | 7 | | 3 | | 10 |
| Chironomidae | 11 | 5 | 32 | 6 | 54 |
| Psychodidae | | 1 | | | 1 |
| Tipulidae | | | | | |
| *Ormosia* | 4 | | | | 4 |
| *Tipula* | 4 | | | | 4 |
| Sciomyzidae | 3 | 1 | 1 | | 5 |
| Mollusca | | | | | |
| Gastropoda | | | | | |
| Physidae | | | | | |
| *Physella* | 12 | 13 | 8 | 1 | 34 |
| Planorbidae | | 2 | | | 2 |
| Hydrobiidae | 43 | 45 | 45 | 2 | 135 |
| Bivalvia | 3 | 1 | 2 | | 6 |
| Total specimens | 862 | 97 | 478 | 21 | 1458 |
| Total taxa | 12 | 13 | 12 | 9 | 20 |

D-Net June 2005.xls\Shellpot Creek

Source: ERC, Inc.

**Appendix Table T-13**
**Macroinvertebrates Collected by D-Frame Net in the**
**Ditches Adjacent to the AMTRAK Former Fueling Facility, August 2005**

| | Macro 1 | Macro 2 | Macro 3 | Macro 4 | Macro 5 | Total |
|---|---|---|---|---|---|---|
| Platyhelminthes | | | | | | |
| Turbellaria | | | | | | |
| Planariidae | 1 | | | | | 1 |
| Annelida | | | | | | |
| Oligochaeta | 1 | 2 | 67 | 631 | 3 | 704 |
| Acari | | | | | | |
| Hydrachnidia | | | 1 | | | 1 |
| Hirudinae | | | | | 1 | 1 |
| Crustacea | | | | | | |
| Amphipoda | | | | | | |
| Gammaridae | | | | | | |
| *Gammarus* | 7 | | | | | 7 |
| Decapoda | | | | | | |
| Palaemonidae | | | | | | |
| *Palaemonetes* | 11 | 41 | 122 | 14 | 47 | 235 |
| Insecta | | | | | | |
| Ephemeroptera | | | | | | |
| Baetidae | | | | | | |
| *Baetis* | | | 1 | 2 | | 3 |
| Odonata | | | | | | |
| Anisoptera | | | | | | |
| Gomphidae | | | | | | |
| *Gomphus* | | | 1 | | | |
| Aeshnidae | | | | | | |
| *Anax* | | 2 | | 1 | | 3 |
| Libellulidae | | | | | | |
| *Erythemis* | | | 5 | 11 | | 16 |
| *Libellula* | 3 | 24 | 44 | 56 | 6 | 133 |
| Zygoptera | | | | | | |
| Coenagrionidae | | | | | | |
| *Enallagma* | 85 | 65 | 147 | 44 | 140 | 481 |
| Hemiptera | | | | | | |
| Hydrometridae | | | | | | |
| *Hydrometra* | 1 | | | | | 1 |
| Veliidae | | | | | | |
| *Microvelia* | | | 2 | | | 2 |
| Nepidae | | | | | | |
| *Ranatra* | | | | | 2 | 2 |
| Corixidae | | | | | | |
| *Hesperocorixa* | | | 1 | 1 | 1 | 3 |
| *Trichocorixa* | | | 3 | 2 | | 5 |
| Notonectidae | | | | | | |
| *Notonecta* | | 1 | | | | 1 |
| Mesoveliidae | | | | | | |
| *Mesovelia* | 16 | 2 | 45 | 2 | 10 | 75 |
| Coleoptera | | | | | | |
| Haliplidae | | | | | | |
| *Peltodytes* | 7 | 6 | 39 | 20 | 3 | 75 |
| Dytiscidae | | | | | | |
| *Agabus* | | | | 4 | | 4 |
| Hydrophilidae | | | | | | |
| *Hydrobius* | 2 | 1 | 3 | | | 6 |
| *Tropisternus* | 6 | 3 | 2 | 1 | 4 | 16 |
| Diptera | | | | | | |
| Ceratopogonidae | 1 | | 3 | 5 | | 9 |
| Chironomidae | 2 | 6 | 215 | 413 | 20 | 656 |
| Stratiomyidae | | | | | | |
| *Odontomyia* | 1 | 1 | 1 | | 2 | 5 |
| Tipulidae | | | | | | |
| *Antocha* | | | 2 | | | 2 |
| Sciomyzidae | | | 1 | 1 | | 2 |
| Mollusca | | | | | | |
| Gastropoda | | | | | | |
| Physidae | | | | | | |
| *Physella* | 7 | 31 | 140 | 409 | 51 | 638 |
| Planorbidae | 8 | 12 | 57 | 132 | 63 | 272 |
| Hydrobiidae | 8 | | 1 | | 12 | 21 |
| Bivalvia | | 22 | 11 | 6 | 1 | 40 |
| Total specimens | 167 | 219 | 914 | 1755 | 366 | 3420 |
| Total taxa | 17 | 15 | 24 | 19 | 16 | 31 |



Source: ERC, Inc.

**Appendix Table T-14**
**Macroinvertebrates Collected by D-Frame Net**
**in the Conectiv Impoundment, August 2005**

| | Macro 6 | Macro 7 | Macro 8 | Total |
|---|---|---|---|---|
| Annelida | | | | |
| Oligochaeta | 71 | 103 | 4 | 178 |
| Acari | | | | |
| Hydrachnidia | 5 | 1 | 2 | 8 |
| Hirudinae | | 2 | | 2 |
| Crustacea | | | | |
| Isopoda | | | | |
| Asellidae | | | | |
| *Lirceus* | 6 | | 1 | 7 |
| Insecta | | | | |
| Ephemeroptera | | | | |
| Baetidae | | | | |
| *Callibaetis* | 22 | 3 | 22 | 47 |
| Odonata | | | | |
| Anisoptera | | | | |
| Aeshnidae | | | | |
| *Anax* | 1 | | | 1 |
| Libellulidae | | | | |
| *Erythemis* | 14 | 4 | 16 | 34 |
| *Libelulla* | 50 | 31 | 36 | 117 |
| Zygoptera | | | | |
| Coenagrionidae | | | | |
| *Enallagma* | 87 | 31 | 107 | 225 |
| Hemiptera | | | | |
| Veliidae | | | | |
| *Microvelia* | 5 | | 6 | 11 |
| Gerridae | | | | |
| *Aquarius* | | 2 | 2 | 4 |
| Belostomatidae | | | | |
| *Belostoma* | | | 7 | 7 |
| Pleidae | | | | |
| *Neoplea* | 163 | 97 | 436 | 696 |
| Notonectidae | | | | |
| *Notonecta* | 66 | 44 | 71 | 181 |
| Mesoveliidae | | | | |
| *Mesovelia* | 20 | 2 | 16 | 38 |
| Coleoptera | | | | |
| Haliplidae | | | | |
| *Haliplus* | 7 | | | 7 |
| *Peltodytes* | | 5 | | 5 |
| Dytiscidae | | | | |
| *Agabus* | 2 | | 4 | 6 |
| *Hydroporus* | 1 | | | 1 |
| Hydrophilidae | | | | |
| *Hydrobius* | 5 | | 6 | 11 |
| *Tropisternus* | 4 | | 1 | 5 |
| Elmidae | | | | |
| *Stenelmis* | 1 | | | 1 |
| Diptera | | | | |
| Ceratopogonidae | | | 2 | 2 |
| Chaoboridae | 1 | 3 | | |
| Chironomidae | 125 | 84 | 76 | 285 |
| Stratiomyidae | | | | |
| *Odontomyia* | 1 | 1 | 3 | 5 |
| Mollusca | | | | |
| Gastropoda | | | | |
| Physidae | | | | |
| *Physella* | 153 | 41 | 224 | 418 |
| Planorbidae | 23 | 4 | 8 | 35 |
| Hydrobiidae | 1 | 2 | | 3 |
| Total specimens | 834 | 460 | 1050 | 2340 |
| *Total taxa* | *24* | *19* | *21* | *28* |



Source: ERC, inc.