# APPENDIX A

# HISTORICAL SITE-WIDE ANALYTICAL SUMMARY

## Appendix A
## Summary of Groundwater Analytical Data
## May 1990
## IPC - Bozeman, Montana

| Sample ID: | 2-A | 3-A | 3-B | 4-B | 5-A | 5-B | 5-C | 6-A | 6-B |
|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | |
| Pentachlorophenol | < 50 | **13,000** | < 50 | < 50 | **14,000** | **800** | **68** | < 50 | < 50 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | |
| Benzo(a)anthracene | < 10 | < 800 | < 10 | < 10 | **J 540** | < 50 | < 10 | < 10 | < 10 |
| Benzo(a)pyrene | < 10 | < 800 | < 10 | < 10 | **J 210** | < 50 | < 10 | < 10 | < 10 |
| Benzo(b)fluoranthene | < 10 | < 800 | < 10 | < 10 | **J 260** | < 50 | < 10 | < 10 | < 10 |
| Benzo(k)fluoranthene | < 10 | < 800 | < 10 | < 10 | **J 300** | < 50 | < 10 | < 10 | < 10 |
| Chrysene | < 10 | < 800 | < 10 | < 10 | **J 590** | < 50 | < 10 | < 10 | < 10 |
| Dibenzo(a,h)anthracene | < 10 | < 800 | < 10 | < 10 | < 1000 | < 50 | < 10 | < 10 | < 10 |
| Indeno(1,2,3-cd)pyrene | < 10 | < 800 | < 10 | < 10 | < 1000 | < 50 | < 10 | < 10 | < 10 |
| **Total D PAHs** | | | | | | | | | |

| Sample ID: | 15-A | 18-A | 18-B | 19-A | 19-B | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|
| Sample Date: | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 | 5/90 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | |
| Pentachlorophenol | **420** | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | |
| Benzo(a)anthracene | < 20 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| Benzo(a)pyrene | < 20 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| Benzo(b)fluoranthene | < 20 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| Benzo(k)fluoranthene | < 20 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| Chrysene | < 20 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| Dibenzo(a,h)anthracene | < 20 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| Indeno(1,2,3-cd)pyrene | < 20 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| **Total D PAHs** | | | | | | | | |

Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92
and PAH data from Technical Memorandum 2 vol I by MSE, Inc. 9-90

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## August 1990
## IPC - Bozeman, Montana

| Sample ID:<br>Sample Date: | 1-A<br>8/90 | 1-B<br>8/90 | 2-A<br>8/90 | 2-B<br>8/90 | 3-A<br>8/90 | 3-B<br>8/90 | 4-A<br>8/90 | 4-B<br>8/90 | 5-A<br>8/90 | 5-B<br>8/90 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)**<br>Pentachlorophenol | < 5.9 | < 5.9 | < 5.9 | < 5.9 | **3,079** | < 5.9 | < 5.9 | < 5.9 | **63,454** | **35** |

| Sample ID:<br>Sample Date: | 5-C<br>8/90 | 6-A<br>8/90 | 6-B<br>8/90 | 7-A<br>8/90 | 7-B<br>8/90 | 8-A<br>8/90 | 8-B<br>8/90 | 9-A<br>8/90 | 9-B<br>8/90 | 9-C<br>8/90 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)**<br>Pentachlorophenol | **241** | < 5.9 | < 5.9 | < 5.9 | **32.9** | **158** | **1,331** | **5,920** | < 5,900 | < 5,900 |

| Sample ID:<br>Sample Date: | 10-A<br>8/90 | 10-B<br>8/90 | 11-A<br>8/90 | 12<br>8/90 | 13-A<br>8/90 | 14-A<br>8/90 | 14-B<br>8/90 | 15-A<br>8/90 | 16-A<br>8/90 | 16-B<br>8/90 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)**<br>Pentachlorophenol | < 5.9 | < 5.9 | < 5.9 | < 5.9 | **744** | < 5,900 | **65.8** | **1299** | **337** | < 5,900 |

| Sample ID:<br>Sample Date: | 18-A<br>8/90 | 18-B<br>8/90 | 19-A<br>8/90 | 19-B<br>8/90 | 20<br>8/90 | 21<br>8/90 | 22<br>8/90 |
|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)**<br>Pentachlorophenol | < 5.9 | < 5.9 | < 5.9 | < 5.9 | < 5.9 | < 5.9 | **1,641** |

Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92 and the quarterly contamination report 5-91

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## November 1990
## IPC - Bozeman, Montana

| Sample ID: | 1-A | 1-B | 2-A | 2-B | 3-A | 3-B | 4-A | 4-B | 5-A | 5-B | 5-C | 6-A | 6-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | < 7.4 | < 7.4 | < 7.4 | < 7.4 | **575** | **877** | < 7.4 | < 7.4 | **964** | < 370 | < 7.4 | < 7.4 | < 7.4 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | NA | -- | -- | NA | -- | **117** | NA | NA | NA | NA |
| Benzo(a)pyrene | NA | NA | NA | NA | -- | -- | NA | -- | -- | NA | NA | NA | NA |
| Benzo(b)fluoranthene | NA | NA | NA | NA | -- | -- | NA | -- | -- | NA | NA | NA | NA |
| Benzo(k)fluoranthene | NA | NA | NA | NA | -- | **1.86** | NA | **J 2.4** | **12.3** | NA | NA | NA | NA |
| Chrysene | NA | NA | NA | NA | **51.3** | **60.2** | NA | -- | **500** | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | -- | -- | NA | -- | -- | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | -- | -- | NA | -- | -- | NA | NA | NA | NA |

| Sample ID: | 7-A | 7-B | 8-A | 8-B | 9-A | 9-B* | 9-C* | 10-A | 10-B | 11-A | 12 | 13-A | 14-A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | **22.3** | < 7.4 | < 7.4 | < 7.4 | **44** | **16.3** | **26** | < 7.4 | < 7.4 | < 7.4 | < 7.4 | < 7.4 | **210** |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | NA | NA | NA | NA | NA | -- | NA | -- | -- | NA |
| Benzo(a)pyrene | NA | NA | NA | NA | NA | NA | NA | NA | -- | NA | -- | -- | NA |
| Benzo(b)fluoranthene | NA | NA | NA | NA | NA | NA | NA | NA | -- | NA | -- | -- | NA |
| Benzo(k)fluoranthene | NA | NA | NA | NA | NA | NA | NA | NA | -- | NA | **186** | **J 9.1** | NA |
| Chrysene | NA | NA | NA | NA | NA | NA | NA | NA | **221** | NA | **47.5** | **J 12.8** | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | NA | NA | NA | NA | -- | NA | -- | -- | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | NA | NA | NA | NA | -- | NA | -- | -- | NA |

-- -Compound non-detected
* - Suspected laboratory contamination of PCP concentration
NA - Not analyzed
Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92 and PAH data from the second quarterly contamination report 6-91

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## November 1990
## IPC - Bozeman, Montana

| Sample ID: | 14-B | 15-A | 16-A | 16-B | 18-A | 18-B | 18-C | 19-A | 19-B | 20* | 21 | 22 | 23-A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | < 7.4 | **67.2** | < 7.4 | < 7.4 | < 370 | < 7.4 | < 7.4 | < 7.4 | < 7.4 | < 7.9 | < 7.4 | **25.7** | **7.14** |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | | | |
| Benzo(a)anthracene | -- | -- | **J 19.5** | **J 16.6** | NA | -- | -- | NA | NA | NA | NA | -- | -- |
| Benzo(a)pyrene | -- | -- | -- | -- | NA | -- | -- | NA | NA | NA | NA | -- | -- |
| Benzo(b)fluoranthene | -- | -- | -- | -- | NA | **J 3.94** | **5.94** | NA | NA | NA | NA | -- | -- |
| Benzo(k)fluoranthene | **J 8.6** | **J 0.96** | -- | -- | NA | -- | -- | NA | NA | NA | NA | **J 4.3** | -- |
| Chrysene | **J 13** | **J 13.4** | **J 2.40** | -- | NA | **J 7.91** | **59.9** | NA | NA | NA | NA | **J 11.7** | **19.2** |
| Dibenzo(a,h)anthracene | -- | -- | -- | -- | NA | -- | -- | NA | NA | NA | NA | -- | -- |
| Indeno(1,2,3-cd)pyrene | -- | -- | -- | -- | NA | -- | -- | NA | NA | NA | NA | -- | -- |

| Sample ID: | 23-B | 23-C | 24-A1 | 24-A2 | 24-B | 25-A | 25-B | 26-A | 26-B | 26-C | 27-A | 27-B | 28-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 | 11/90 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | < 7.4 | < 7.4 | < 7.4 | < 7.4 | < 7.4 | < 7.4 | **52** | < 7.4 | < 7.4 | < 7.4 | < 7.4 | **38.5** | < 7.4 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | NA | -- | **J 21.1** | -- | NA | -- | NA | -- | -- | -- |
| Benzo(a)pyrene | NA | NA | NA | NA | -- | -- | -- | NA | -- | NA | -- | -- | -- |
| Benzo(b)fluoranthene | NA | NA | NA | NA | -- | -- | -- | NA | -- | NA | -- | -- | -- |
| Benzo(k)fluoranthene | NA | NA | NA | NA | **J 1.0** | -- | -- | NA | **J 1.4** | NA | **1.1** | -- | **J 2.6** |
| Chrysene | NA | NA | NA | NA | **J 34.7** | -- | **J 6.3** | NA | -- | NA | **141** | **79** | **J 32.4** |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | -- | -- | -- | NA | -- | NA | -- | -- | -- |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | -- | -- | -- | NA | -- | NA | -- | -- | -- |

-- -Compound non-detected
* - Suspected laboratory contamination of PCP concentration
NA - Not analyzed
Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92 and PAH data from the second quarterly contamination report 6-91

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## March 1991
## IPC - Bozeman, Montana

| Sample ID: | 1-A | 1-B | 2-A | 2-B | 3-A | 3-B | 4-A | 4-B | 5-A | 5-B | 5-C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | |
| Pentachlorophenol | < 25 | < 25 | < 25 | < 25 | **1900** | < 25 | < 25 | < 25 | **11000** | **C 51.1** | **32.7** |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.13 | NA | NA | NA | **Y 54.05** | NA | < 0.13 | NA | **CJ 190** | NA | NA |
| Benzo(a)pyrene | < 0.05 | NA | NA | NA | < 0.5 | NA | < 0.05 | NA | **CJ 94.56** | NA | NA |
| Benzo(b)fluoranthene | < 0.03 | NA | NA | NA | **Y 5.3** | NA | < 0.03 | NA | **CJ 100** | NA | NA |
| Benzo(k)fluoranthene | < 0.01 | NA | NA | NA | **Y 1.5** | NA | < 0.01 | NA | **CJ 41.57** | NA | NA |
| Chrysene | < 0.38 | NA | NA | NA | **C 12.44** | NA | < 0.38 | NA | **CJ 240** | NA | NA |
| Dibenzo(a,h)anthracene | < 0.50 | NA | NA | NA | < 0.5 | NA | < 0.50 | NA | **C 84.66** | NA | NA |
| Indeno(1,2,3-cd)pyrene | < 0.13 | NA | NA | NA | < 0.13 | NA | < 0.13 | NA | **CJ 17.62** | NA | NA |
| **Total D PAHs** | NA | NA | NA | NA | **458.1** | NA | NA | NA | **3370** | NA | NA |

| Sample ID: | 6-A | 6-B | 7-A | 7-B | 8-A | 8-B | 9-A | 9-B | 9-C | 10-A | 10-B |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | |
| Pentachlorophenol | < 25 | < 25 | < 25 | **J 9.0** | **31.2** | **160** | **980** | **750** | **270** | < 25 | < 25 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.13 | NA | < 0.13 | NA | NA | NA | < 0.13 | NA | NA | < 0.13 | NA |
| Benzo(a)pyrene | < 0.05 | NA | < 0.05 | NA | NA | NA | < 0.05 | NA | NA | < 0.05 | NA |
| Benzo(b)fluoranthene | < 0.03 | NA | < 0.03 | NA | NA | NA | **Y 0.08** | NA | NA | < 0.03 | NA |
| Benzo(k)fluoranthene | < 0.01 | NA | < 0.01 | NA | NA | NA | < 0.01 | NA | NA | < 0.01 | NA |
| Chrysene | < 0.38 | NA | < 0.38 | NA | NA | NA | < 0.38 | NA | NA | < 0.38 | NA |
| Dibenzo(a,h)anthracene | < 0.50 | NA | < 0.50 | NA | NA | NA | < 0.50 | NA | NA | < 0.50 | NA |
| Indeno(1,2,3-cd)pyrene | < 0.13 | NA | < 0.13 | NA | NA | NA | < 0.13 | NA | NA | < 0.13 | NA |
| **Total D PAHs** | NA | NA | NA | NA | NA | NA | **6.9** | NA | NA | NA | NA |

C - Constituent confirmed by GC/MS
J - Indicates an estimated value when the result is less than the detection limit
Y - Data qualified with more than one flag and definitions for qualifiers were not available for review.
-- - Not detected in sample
NA - Not analyzed
Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92 and Technical Memorandum 2, Addendum B 4-91 and Final Design Report-Groundwater Remedy by Geraghty & Miller, Inc. 8-96

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## March 1991
## IPC - Bozeman, Montana

| Sample ID: | 11-A | 12 | 13 | 14-A | 14-B | 15 | 16-A | 16-B | 18-A | 18-B | 18-C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | |
| Pentachlorophenol | < 25 | < 25 | **J 5.4** | **710** | **48** | **870** | < 25 | **340** | < 25 | < 25 | < 25 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.13 | < 0.13 | < 0.13 | **Y 6.3** | **0.44** | **Y 1.6** | < 0.13 | NA | < 0.13 | NA | NA |
| Benzo(a)pyrene | < 0.05 | < 0.05 | < 0.05 | **Y 1.1** | -- | **Y 0.10** | < 0.05 | NA | < 0.05 | NA | NA |
| Benzo(b)fluoranthene | < 0.03 | < 0.03 | < 0.03 | **Y 1.1** | | **Y 0.10** | < 0.03 | NA | < 0.03 | NA | NA |
| Benzo(k)fluoranthene | < 0.01 | < 0.01 | **Y 0.03** | **1.4** | **0.13** | **Y 0.07** | < 0.01 | NA | < 0.01 | NA | NA |
| Chrysene | < 0.38 | < 0.38 | < 0.38 | **Y 0.57** | **0.04** | **Y 0.07** | < 0.38 | NA | < 0.38 | NA | NA |
| Dibenzo(a,h)anthracene | < 0.50 | < 0.50 | < 0.50 | **Y 7.7** | -- | **Y 0.67** | < 0.50 | NA | < 0.50 | NA | NA |
| Indeno(1,2,3-cd)pyrene | < 0.13 | < 0.13 | < 0.13 | < 0.13 | -- | < 0.13 | < 0.13 | NA | < 0.13 | NA | NA |
| **Total D PAHs** | NA | NA | **0.45** | **152.2** | NA | **68.01** | NA | NA | NA | NA | NA |

| Sample ID: | 19-A | 19-B | 20 | 21 | 22 | 23-A | 23-B | 23-C | 24-A1 | 24-A2 | 24-B |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 | 3/91 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | |
| Pentachlorophenol | < 25 | < 25 | < 25 | < 25 | **140** | **200** | **130** | **40** | **70** | **60** | **250** |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | < 0.13 | NA | **Y 0.75** | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | NA | NA | < 0.05 | NA | **Y 0.41** | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | NA | NA | < 0.03 | NA | **Y 0.41** | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | NA | NA | < 0.01 | NA | **Y 0.2** | NA | NA | NA | NA | NA | NA |
| Chrysene | NA | NA | < 0.38 | NA | < 0.38 | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | NA | NA | < 0.50 | NA | **Y 0.31** | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | < 0.13 | NA | < 0.13 | NA | NA | NA | NA | NA | NA |
| **Total D PAHs** | NA | NA | NA | NA | **26.5** | NA | NA | NA | NA | NA | NA |

C - Constituent confirmed by GC/MS
J - Indicates an estimated value when the result is less than the detection limit
Y - Data qualified with more than one flag and definitions for qualifiers were not available for review.
-- - Not detected in sample
NA - Not analyzed
Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92 and Technical Memorandum 2, Addendum B 4-91 and Final Design Report-Groundwater Remedy by Geraghty & Miller, Inc. 8-96

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## March 1991
## IPC - Bozeman, Montana

| Sample ID:<br>Sample Date: | 25-A<br>3/91 | 25-B<br>3/91 | 26-A<br>3/91 | 26-B<br>3/91 | 26-C<br>3/91 | 27-A<br>3/91 | 27-B<br>3/91 | 28-A<br>3/91 | 28-B<br>3/91 |
|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | |
| Pentachlorophenol | **500** | **830** | < 25 | **J 24.3** | **67.5** | < 25 | **600** | < 25 | < 25 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Total D PAHs** | NA | NA | NA | NA | NA | NA | NA | NA | NA |

C - Constituent confirmed by GC/MS
J - Indicates an estimated value when the result is less than the detection limit
Y - Data qualified with more than one flag and definitions for qualifiers were not available for review.
-- - Not detected in sample
NA - Not analyzed
Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92 and Technical Memorandum 2, Addendum B 4-91 and Final Design Report-Groundwater Remedy by Geraghty & Miller, Inc. 8-96

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## June 1991
## IPC - Bozeman, Montana

| Sample ID: | 18-C | 23-A | 23-B | 23-C | 24-A1 | 24-A2 | 24-B | 25-A |
|---|---|---|---|---|---|---|---|---|
| Sample Date: | 6/91 | 6/91 | 6/91 | 6/91 | 6/91 | 6/91 | 6/91 | 6/91 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | |
| Pentachlorophenol | < 0.1 | **236** | **139** | **60** | **39.9** | **31** | **218** | **549** |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | |
| Benzo(a)anthracene | **16.59** | **1.10** | **3.56** | **10.38** | **0.45** | **1.19** | **0.50** | < 0.19 |
| Benzo(a)pyrene | < 0.37 | < 0.37 | < 0.37 | < 0.37 | < 0.37 | < 0.37 | < 0.37 | < 0.37 |
| Benzo(b)fluoranthene | < 0.27 | < 0.27 | < 0.27 | < 0.27 | < 0.27 | < 0.27 | < 0.27 | < 0.27 |
| Benzo(k)fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.26 | < 0.26 | < 0.26 | < 0.26 | < 0.10 |
| Chrysene | < 2.30 | < 2.3 | < 2.3 | < 2.3 | < 2.3 | < 2.3 | < 2.3 | < 0.23 |
| Dibenzo(a,h)anthracene | < 0.43 | < 0.43 | < 0.43 | < 0.43 | < 0.43 | < 0.43 | < 0.43 | < 0.43 |
| Indeno(1,2,3-cd)pyrene | < 0.63 | < 0.63 | < 0.63 | < 0.63 | < 0.63 | < 0.63 | < 0.63 | < 0.63 |

| Sample ID: | 25-B | 26-A | 26-B | 26-C | 27-A | 27-B | 28-B |
|---|---|---|---|---|---|---|---|
| Sample Date: | 6/91 | 6/91 | 6/91 | 6/91 | 6/91 | 6/91 | 6/91 |
| **PCP-Method 8040 (ug/L)** | | | | | | | |
| Pentachlorophenol | **927** | **4.3** | **54** | **28** | **14** | **647** | < 0.1 |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | |
| Benzo(a)anthracene | **0.82** | **0.82** | < 0.19 | < 0.19 | < 0.19 | **1.05** | < 0.19 |
| Benzo(a)pyrene | < 0.37 | < 0.37 | < 0.37 | < 0.37 | < 0.37 | < 0.37 | < 0.37 |
| Benzo(b)fluoranthene | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.27 | < 0.27 |
| Benzo(k)fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.26 | < 0.26 | < 0.26 | < 0.26 |
| Chrysene | < 2.3 | < 2.3 | < 2.3 | < 2.3 | < 2.3 | < 2.3 | < 2.3 |
| Dibenzo(a,h)anthracene | < 0.43 | < 0.43 | < 0.43 | < 0.43 | < 0.43 | < 0.43 | < 0.43 |
| Indeno(1,2,3-cd)pyrene | < 0.63 | < 0.63 | < 0.63 | < 0.63 | < 0.63 | < 0.63 | < 0.63 |

J - Indicates an estimated value when the result is less than the detection limit
NA - Not analyzed
Note: Sample data supplied by MSE, Inc. in Table 4-26 of Remedial Investigation Report 3-92
and the Technical Memorandum 2, Addendum C by MSE, Inc. 8-91
and the Fourth quarterly contamination report by MSE, Inc. 9-91
and the Final Design Report-Groundwater Remedy by Geraghty & Miller, Inc. 8-96

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 1991
## IPC - Bozeman, Montana

| Sample ID:<br>Sample Date: | 9-B<br>9/91 | 29-C<br>9/91 | 29-D<br>9/91 |
|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | |
| Pentachlorophenol | **750** | **17** | **0.53** |

Note: Sample data supplied by MSE in the Final Design Report- Groundwater Remedy by Geraghty & Miller, Inc. 8-96 and the Technical Memorandum 2, Addendum D by MSE, Inc. 10-91

Note: 29-C was taken in the "C" zone of aquifer at the time well 29-D was drilled.

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 1994
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 1-A 9/94 | 4-A 9/94 | 5-A 9/94 | 5-B 9/94 | 6-A 9/94 | 7-A 9/94 | 9-A 9/94 | 9-B 9/94 | 12 9/94 |
|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | |
| Pentachlorophenol | UJ 0.22 | **J 0.87** | **J 12000** | **J 21** | UJ 0.29 | **J 0.44** | **J 1100** | **J 480** | **J 0.42** |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | < 21 | NA | NA | NA | < 0.096 | NA | NA |
| Benzo(a)pyrene | NA | NA | < 21 | NA | NA | NA | < 0.096 | NA | NA |
| Benzo(b)fluoranthene | NA | NA | < 21 | NA | NA | NA | < 0.096 | NA | NA |
| Benzo(k)fluoranthene | NA | NA | < 21 | NA | NA | NA | < 0.096 | NA | NA |
| Chrysene | NA | NA | **J 2300** | NA | NA | NA | < 0.096 | NA | NA |
| Dibenzo(a,h)anthracene | NA | NA | < 42 | NA | NA | NA | < 0.19 | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | < 21 | NA | NA | NA | < 0.096 | NA | NA |
| **Total D PAHs** | NA | NA | **14150** | NA | NA | NA | **4.95** | NA | NA |

| Sample ID: / Sample Date: | 13 9/94 | 15 9/94 | 20 9/94 | 22 9/94 | 24-A2 9/94 | 25-A 9/94 | 26-A 9/94 | EW-1 9/94 | Eqt Blank |
|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | |
| Pentachlorophenol | **J 8.9** | **J 260** | UJ 0.36 | **J 190** | **J 1.1** | **J 310** | **J 0.6** | **J 2100** | **J 6.2** |
| **B2 PAHs- Method 8310 (ug/L)** | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | **0.12** | NA | < 0.10 | NA | < 1.0 | < 0.10 |
| Benzo(a)pyrene | NA | NA | NA | < 0.096 | NA | < 0.10 | NA | < 1.0 | < 0.10 |
| Benzo(b)fluoranthene | NA | NA | NA | < 0.096 | NA | < 0.10 | NA | < 1.0 | < 0.10 |
| Benzo(k)fluoranthene | NA | NA | NA | < 0.096 | NA | < 0.26 | NA | < 1.0 | < 0.10 |
| Chrysene | NA | NA | NA | **0.19** | NA | < 0.10 | NA | < 1.0 | < 0.10 |
| Dibenzo(a,h)anthracene | NA | NA | NA | **0.19** | NA | < 0.20 | NA | < 2.0 | < 0.21 |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | < 0.096 | NA | < 0.10 | NA | < 1.0 | < 0.10 |
| **Total D PAHs** | NA | NA | NA | **16.2** | NA | NA | NA | **15.8** | NA |

Eqt Blank - Equipment Blank rinsate sample
J - Indicates an estimated value
UJ - Indicates an estimated value when the result is less than the detection limit.
NA - Sample not analyzed
Note: Sample data supplied by Geraghty & Miller, Inc. in Appd. D of Pre-Final Design Report Groundwater Remedy 6-96 and Final Design Report 8-96

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## April 1998
## IPC - Bozeman, MT

| Sample ID: | 1-A | 4-A | 7-A | 9-A | (9-D) 9-ADup | 9-C | 10-A | 14-A | 23-A | 25-A | 25-B | 26-A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 4/20/98 | 4/20/98 | 4/21/98 | 4/21/98 | 4/21/98 | 4/21/98 | 4/22/98 | 4/22/98 | 4/21/98 | 4/22/98 | 4/22/98 | 4/21/98 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | |
| Pentachlorophenol | J 0.22 | < 0.25 | J 0.22 | D 940 | D 960 | D 360 | < 0.25 | D 380 | D 180 | D 160 | D 340 | D 73 |
| **Bio Parameters** | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | 300 | 630 | 410 | 360 | 370 | 340 | 330 | 360 | 460 | 440 | 370 | 390 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | 300 | 630 | 410 | 360 | 370 | 340 | 330 | 360 | 460 | 440 | 370 | 390 |
| N-Ammonia (mg-N/L) | 0.018 | 0.31 | 0.015 | 0.017 | 0.019 | < 0.010 | < 0.010 | 0.12 | 0.39 | < 0.010 | < 0.010 | < 0.010 |
| N-Nitrate (mg-N/L) | 8.5 | < 0.010 | 0.011 | 0.071 | 0.045 | 1.5 | 10 | 11 | 0.21 | 0.85 | 0.66 | 0.17 |
| N-Nitrite (mg-N/L) | < 0.010 | 0.012 | < 0.010 | < 0.010 | 0.012 | < 0.010 | < 0.010 | 0.1 | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| Nitrate + Nitrite (mg-N/L) | 8.5 | 0.019 | 0.011 | 0.071 | 0.057 | 1.5 | 10 | 11 | 0.21 | 0.85 | 0.66 | 0.17 |
| Ortho-Phosphorous (mg-P/L) | 0.072 | 0.008 | 0.005 | < 0.004 | < 0.004 | 0.02 | 0.05 | 0.02 | 0.011 | 0.031 | 0.013 | < 0.004 |
| Sulfate (mg/L) | 58 | 12 | 45 | 54 | 55 | 40 | 39 | 48 | 37 | 74 | 45 | 50 |
| Sulfite (mg/L) | < 2.3 | < 2.3 | < 2.3 | < 2.6 | < 2.6 | < 2.6 | < 2.6 | < 2.6 | < 2.3 | < 2.6 | < 2.6 | < 2.6 |
| Total Organic Carbon (mg/L) | 3.7 | 42 | 5 | 13 | 11 | 5.6 | 3.1 | 240 | 35 | 9 | 3.2 | 72 |

| Sample ID: | (26-D) 26-ADup | 26-C | 28-B | GM-4 | GM-6 | GM-7 | GM-8 | BFEG | PPEG | (1-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 4/21/98 | 4/21/98 | 4/21/98 | 4/21/98 | 4/21/98 | 4/20/98 | 4/22/98 | 4/21/98 | 4/21/98 | | |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | |
| Pentachlorophenol | E 79 | D 200 | < 0.25 | D 4000 | D 220 | < 0.25 | < 0.25 | D 430 | D 640 | < 0.25 | < 0.25 |
| **Bio Parameters** | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | 350 | 340 | 240 | 440 | 350 | 380 | 360 | 330 | 320 | 1.9 | < 1.0 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | 350 | 340 | 240 | 440 | 350 | 380 | 360 | 330 | 320 | 1.9 | < 1.0 |
| N-Ammonia (mg-N/L) | 0.014 | 0.0 | < 0.010 | 0.034 | 0.25 | 0.029 | < 0.010 | 0.18 | 0.23 | < 0.010 | < 0.01 |
| N-Nitrate (mg-N/L) | 0.16 | 9 | 0.74 | 0.034 | 0.36 | 5.4 | 8 | 4.7 | 2.8 | 0.014 | < 0.01 |
| N-Nitrite (mg-N/L) | < 0.010 | 0.082 | < 0.010 | < 0.010 | 0.013 | 0.037 | 0.019 | 0.049 | < 0.010 | < 0.010 | < 0.01 |
| Nitrate + Nitrite (mg-N/L) | 0.16 | 9.1 | 0.74 | 0.034 | 0.37 | 5.4 | 8 | 4.7 | 2.8 | 0.014 | < 0.01 |
| Ortho-Phosphorous (mg-P/L) | 0.005 | 0.013 | 0.02 | 0.019 | 0.008 | 0.31 | 0.061 | 0.82 | 1.2 | < 0.004 | < 0.004 |
| Sulfate (mg/L) | 44 | 44 | 86 | 39 | 36 | 44 | 46 | 46 | 45 | < 2.5 | < 2.5 |
| Sulfite (mg/L) | < 2.6 | < 2.6 | < 2.6 | < 2.3 | < 2.3 | < 2.3 | < 2.6 | < 2.3 | < 2.3 | < 2.3 | < 2.3 |
| Total Organic Carbon (mg/L) | 23 | 3.4 | 2.1 | 18 | 57 | 37 | 5.9 | 3.9 | 3.7 | < 1.5 | < 1.5 |

(#) - Indicates the sample identification for duplicate sample.
E - Indicates a value above the linear range of the detector.
D -Indicates the surrogate was diluted.
J - Indicates an estimated value when the result is less than the detection limit
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 1998
## IPC - Bozeman, MT

| Sample ID: | 1-A | 4-A | 5-A | 5-C | 7-A | 9-A | (9-D) 9-ADup | 9-C | 10-A | 15 | 22 | 23-A | 25-A | 25-B | 26-A | (26-D) 26-ADup | 26-C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/1/98 | 9/1/98 | 9/1/98 | 9/1/98 | 9/2/98 | 9/3/98 | 9/3/98 | 9/3/98 | 9/2/98 | 9/1/98 | 9/1/98 | 9/2/98 | 9/2/98 | 9/2/98 | 9/2/98 | 9/2/98 | 9/2/98 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | < 0.25 | **D 3100** | **D 21** | < 0.25 | **D 950** | **D 910** | **D 450** | < 0.25 | **D 280** | **D 20** | **150** | **D 240** | **D 210** | **32** | **35** | **120** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | | | | |
| Acenaphthylene | < 5.3 | NA | Y 2500 | NA | NA | Y 71 | Y 72 | NA | NA | Y 280 | **40** | NA | < 5.3 | Y 41 | NA | NA | Y 8 |
| Acenaphthene | < 1.8 | NA | < 90 | NA | NA | **3.3** | < 1.8 | NA | NA | < 1.8 | < 1.8 | NA | Y 6.4 | **J 1.2** | NA | NA | < 1.8 |
| **D PAH compounds** | | | | | | | | | | | | | | | | | |
| Naphthalene | < 2.5 | NA | **150** | NA | NA | **J 2.3** | < 2.5 | NA | NA | **20** | **3.1** | NA | < 2.5 | < 2.5 | NA | NA | < 2.5 |
| Fluorene | < 0.46 | NA | **D 1000** | NA | NA | **3.2** | < 0.46 | NA | NA | **D 64** | < 0.46 | NA | < 0.46 | < 0.46 | NA | NA | < 0.46 |
| Phenanthrene | < 0.64 | NA | **D 830** | NA | NA | < 0.64 | < 0.64 | NA | NA | **D 42** | < 0.64 | NA | < 0.64 | < 0.64 | NA | NA | < 0.64 |
| Anthracene | < 0.66 | NA | **D 310** | NA | NA | < 0.66 | < 0.66 | NA | NA | **D 14** | **1.4** | NA | < 0.66 | < 0.66 | NA | NA | < 0.66 |
| Fluoranthene | < 0.49 | NA | **D 1400** | NA | NA | < 0.49 | < 0.49 | NA | NA | **D 65** | **D 7.5** | NA | < 0.49 | < 0.49 | NA | NA | < 0.49 |
| Pyrene | < 0.27 | NA | Y 4000 | NA | NA | < 0.27 | < 0.27 | NA | NA | Y 290 | **D 5.8** | NA | < 0.27 | < 0.27 | NA | NA | < 0.27 |
| Benzo(g,h,i)perylene | < 0.11 | NA | **72** | NA | NA | < 0.11 | < 0.11 | NA | NA | Y 0.66 | **0.45** | NA | < 0.11 | < 0.11 | NA | NA | < 0.11 |
| **B2 PAH compounds** | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.05 | NA | **D 410** | NA | NA | < 0.05 | < 0.05 | NA | NA | Y 95 | **0.36** | NA | < 0.05 | < 0.05 | NA | NA | < 0.05 |
| Chrysene | < 0.15 | NA | **D 240** | NA | NA | < 0.15 | < 0.15 | NA | NA | **D 9.3** | **0.26** | NA | < 0.15 | < 0.15 | NA | NA | < 0.15 |
| Benzo(b)fluoranthene | < 0.04 | NA | **36** | NA | NA | < 0.04 | **J 0.03** | NA | NA | Y 3.8 | **0.22** | NA | < 0.04 | < 0.04 | NA | NA | < 0.04 |
| Benzo(k)fluoranthene | < 0.06 | NA | **31** | NA | NA | < 0.06 | < 0.06 | NA | NA | **2** | **0.08** | NA | < 0.06 | < 0.06 | NA | NA | < 0.06 |
| Benzo(a)pyrene | < 0.07 | NA | **49** | NA | NA | < 0.07 | < 0.07 | NA | NA | **1.3** | **0.23** | NA | < 0.07 | < 0.07 | NA | NA | < 0.07 |
| Dibenzo(a,h)anthracene | < 0.1 | NA | < 5 | NA | NA | < 0.1 | < 0.1 | NA | NA | < 0.1 | Y 0.35 | NA | < 0.1 | < 0.1 | NA | NA | < 0.1 |
| Indeno(1,2,3-cd)pyrene | < 0.07 | NA | **17** | NA | NA | < 0.07 | < 0.07 | NA | NA | Y 0.92 | **0.12** | NA | < 0.07 | < 0.07 | NA | NA | < 0.07 |
| **Bio Parameters** | | | | | | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | **300** | **420** | **390** | **330** | **360** | **340** | **340** | **250** | **320** | **370** | **330** | **330** | **360** | **350** | **340** | **330** | **320** |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | **300** | **420** | **390** | **330** | **360** | **340** | **340** | **250** | **320** | **370** | **330** | **330** | **360** | **350** | **340** | **330** | **320** |
| N-Ammonia (mg-N/L) | < 0.01 | **0.21** | **0.73** | < 0.01 | < 0.01 | < 0.01 | **0.012** | < 0.01 | < 0.010 | **0.39** | **0.34** | **0.094** | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| N-Nitrate (mg-N/L) | **2.4** | < 0.01 | **0.03** | **3.2** | **0.016** | **0.14** | **0.15** | **2.4** | **3.2** | **0.11** | **2.9** | **0.022** | **0.55** | **0.6** | **0.47** | **0.69** | **3.3** |
| N-Nitrite (mg-N/L) | < 0.01 | < 0.01 | **0.057** | < 0.01 | **0.011** | **0.036** | **0.039** | < 0.01 | **0.012** | **0.032** | **0.012** | < 0.01 | < 0.01 | < 0.01 | **0.02** | **0.02** | **0.09** |
| Nitrate + Nitrite (mg-N/L) | **2.4** | < 0.01 | **0.087** | **3.2** | **0.027** | **0.17** | **0.19** | **2.4** | **3.2** | **0.15** | **2.9** | **0.022** | **0.55** | **0.6** | **0.49** | **0.71** | **3.4** |
| Ortho-Phosphorous (mg-P/L) | **0.092** | < 0.008 | **0.073** | **0.039** | < 0.008 | < 0.008 | **0.04** | **0.025** | **0.056** | **0.016** | **1.4** | **0.02** | **0.028** | **0.02** | < 0.01 | < 0.01 | **0.02** |
| Sulfate (mg/L) | **27** | **12** | **26** | **41** | **78** | **56** | **55** | **48** | **36** | **29** | **40** | **32** | **51** | **52** | **64** | **62** | **50** |
| Sulfite (mg/L) | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Total Organic Carbon (mg/L) | **3.2** | **18** | **430** | **9.8** | **5.1** | **5.3** | **6.1** | **4.0** | **3.3** | **24** | **38** | **19** | **3.6** | **4.0** | **9.9** | **5.2** | **2.2** |

(#) - Indicates the sample identification for duplicate sample.
D - Indicates the surrogate was diluted.
J - Indicates an estimated value when the result is less than the detection limit
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 1998
## IPC - Bozeman, MT

| Sample ID: / Sample Date: | 28-B 9/2/98 | GM-4 9/2/98 | GM-6 9/2/98 | GM-7 9/1/98 | GM-8 9/2/98 | BFEG 9/1/98 | PPEG 9/1/98 | (1-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **D 1800** | **D 230** | < 0.25 | < 0.25 | NA | NA | < 0.25 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | |
| Acenaphthylene | NA | NA | NA | NA | < 5.3 | NA | NA | < 5.3 | < 5.3 |
| Acenaphthene | NA | NA | NA | NA | < 1.8 | NA | NA | < 1.8 | < 1.8 |
| **D PAH compounds** | | | | | | | | | |
| Naphthalene | NA | NA | NA | NA | < 2.5 | NA | NA | < 2.5 | < 2.5 |
| Fluorene | NA | NA | NA | NA | < 0.46 | NA | NA | < 0.46 | < 0.46 |
| Phenanthrene | NA | NA | NA | NA | < 0.64 | NA | NA | < 0.64 | < 0.64 |
| Anthracene | NA | NA | NA | NA | < 0.66 | NA | NA | < 0.66 | < 0.66 |
| Fluoranthene | NA | NA | NA | NA | < 0.49 | NA | NA | < 0.49 | < 0.49 |
| Pyrene | NA | NA | NA | NA | < 0.27 | NA | NA | < 0.27 | < 0.27 |
| Benzo(g,h,i)perylene | NA | NA | NA | NA | < 0.11 | NA | NA | < 0.11 | < 0.11 |
| **B2 PAH compounds** | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | NA | < 0.05 | NA | NA | < 0.05 | < 0.05 |
| Chrysene | NA | NA | NA | NA | < 0.15 | NA | NA | < 0.15 | < 0.15 |
| Benzo(b)fluoranthene | NA | NA | NA | NA | < 0.04 | NA | NA | < 0.04 | < 0.04 |
| Benzo(k)fluoranthene | NA | NA | NA | NA | < 0.06 | NA | NA | < 0.06 | < 0.06 |
| Benzo(a)pyrene | NA | NA | NA | NA | < 0.07 | NA | NA | < 0.07 | < 0.07 |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | < 0.1 | NA | NA | < 0.1 | < 0.1 |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | < 0.07 | NA | NA | < 0.07 | < 0.07 |
| **Bio Parameters** | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | **260** | **380** | **340** | **340** | **330** | **340** | **330** | **1.0** | < 0.01 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | **260** | **380** | **340** | **340** | **330** | **340** | **330** | **1.0** | < 0.01 |
| N-Ammonia (mg-N/L) | < 0.01 | < 0.01 | **0.16** | < 0.01 | < 0.01 | **0.01** | **0.19** | < 0.01 | < 0.01 |
| N-Nitrate (mg-N/L) | **0.21** | **0.01** | **0.17** | **3.5** | **3.4** | **1.9** | **2.0** | < 0.01 | < 0.01 |
| N-Nitrite (mg-N/L) | < 0.01 | **0.01** | **0.02** | **0.03** | **0.02** | **0.06** | **0.01** | < 0.01 | < 0.01 |
| Nitrate + Nitrite (mg-N/L) | **0.21** | **0.03** | **0.18** | **3.5** | **3.4** | **1.9** | **2.0** | < 0.01 | < 0.01 |
| Ortho-Phosphorous (mg-P/L) | **0.03** | **0.03** | **0.02** | **0.14** | **0.06** | **0.27** | **1.0** | < 0.01 | < 0.01 |
| Sulfate (mg/L) | **71** | **51** | **48** | **32** | **51** | **38** | **40** | < 2.5 | < 2.5 |
| Sulfite (mg/L) | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Total Organic Carbon (mg/L) | **2.8** | **11** | **8.8** | **10** | **2.3** | **8.1** | **13** | < 1.5 | < 1.5 |

(#) - Indicates the sample identification for duplicate
D - Indicates the surrogate was diluted.
J - Indicates an estimated value when the result is le
Y - Indicates a raised reporting limit due to matrix int
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

# Appendix A (Continued)
## Summary of Groundwater Analytical Data
## March 1999
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 1-A 3/16/99 | 4-A 3/16/99 | 7-A 3/17/99 | 9-A 3/16/99 | (9-D) 9-ADup 3/16/99 | 9-C 3/16/99 | 10-A 3/17/99 | 14-A 3/18/99 | 23-A 3/17/99 | 25-A 3/17/99 | 25-B 3/18/99 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | |
| Pentachlorophenol | **0.48** | < 0.25 | < 0.25 | **D 750** | **D 620** | **D 280** | < 0.25 | **D 240** | **D 120** | **D 37** | **D 270** |
| **Bio Parameters** | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | **460** | **350** | **380** | **370** | **370** | **350** | **330** | **370** | **410** | **570** | **370** |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | **460** | **350** | **380** | **370** | **370** | **350** | **330** | **370** | **410** | **570** | **370** |
| N-Ammonia (mg-N/L) | **0.12** | **0.052** | < 0.01 | **0.038** | **0.041** | < 0.01 | < 0.01 | **0.2** | **0.24** | < 0.01 | < 0.01 |
| N-Nitrate (mg-N/L) | **2.9** | **U 0.027** | **U 0.012** | < 0.01 | < 0.01 | **2.4** | **2.9** | **1.8** | **0.34** | **U 0.031** | **0.67** |
| N-Nitrite (mg-N/L) | **0.034** | < 0.01 | < 0.01 | **J 0.052** | **J 0.061** | < 0.01 | < 0.01 | **0.15** | < 0.01 | < 0.01 | < 0.01 |
| Nitrate + Nitrite (mg-N/L) | **3.0** | **U 0.027** | **U 0.012** | **U 0.017** | **U 0.022** | **2.4** | **2.9** | **1.9** | **0.34** | **U 0.031** | **0.67** |
| Ortho-Phosphorous (mg-P/L) | **0.087** | < 0.004 | < 0.004 | < 0.004 | < 0.004 | **0.025** | **0.052** | < 0.004 | **0.013** | **0.029** | **0.019** |
| Sulfate (mg/L) | **44** | **U 9.4** | **52** | **48** | **47** | **43** | **31** | **30** | **25** | **44** | **42** |
| Sulfite (mg/L) | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 |
| Total Organic Carbon (mg/L) | **5.7** | **34** | **2.8** | **9.3** | **9.4** | **2.0** | **1.5** | **170** | **17** | **8.0** | **2.2** |

| Sample ID: / Sample Date: | 26-A 3/17/99 | (26-D) 26-ADup 3/17/99 | 26-C 3/17/99 | 28-B 3/18/99 | GM-4 3/17/99 | GM-6 3/17/99 | GM-7 3/17/99 | GM-8 3/18/99 | (1-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **D 20** | **D 20** | **D 150** | NA | **D 820** | **D 130** | < 0.25 | < 0.25 | < 0.25 | < 0.25 |
| **Bio Parameters** | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | **380** | **370** | **350** | **250** | **340** | **380** | **290** | NA | < 1.0 | < 1.0 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | **380** | **370** | **350** | **250** | **340** | **380** | **290** | NA | < 1.0 | < 1.0 |
| N-Ammonia (mg-N/L) | < 0.01 | < 0.01 | < 0.01 | < 0.01 | **0.055** | **0.28** | **0.021** | NA | < 0.01 | < 0.01 |
| N-Nitrate (mg-N/L) | **0.096** | **0.076** | **3.1** | **0.13** | **0.08** | **0.08** | **3.7** | NA | **0.013** | < 0.01 |
| N-Nitrite (mg-N/L) | < 0.01 | < 0.01 | **0.052** | < 0.01 | < 0.01 | **0.017** | < 0.01 | NA | < 0.01 | < 0.01 |
| Nitrate + Nitrite (mg-N/L) | **0.096** | **0.076** | **3.2** | **0.13** | **0.08** | **0.097** | **3.7** | NA | **0.013** | < 0.01 |
| Ortho-Phosphorous (mg-P/L) | < 0.004 | **2.8** | **0.016** | **0.021** | **0.019** | **0.026** | **0.082** | NA | < 0.004 | < 0.004 |
| Sulfate (mg/L) | **52** | **52** | **44** | **41** | **46** | **29** | **32** | NA | **3.1** | < 2.5 |
| Sulfite (mg/L) | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | < 1.8 | NA | < 1.8 | < 2.3 |
| Total Organic Carbon (mg/L) | **J 5.5** | **J 9.6** | < 1.5 | **4.9** | **7.9** | **20** | **5.4** | NA | < 1.5 | < 1.5 |

(#) - Indicates blind duplicate number assignment on Chain-of-Custody.

D -Indicates the sample was diluted.

J - Indicates an estimated value due to background interference or sample heterogeneity. See data validation report.

U - Indicates a no detection due to possible contamination in the associated field blank.

NA - Not analyzed

PPEG -Pressure Plant Extraction Gallery

BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 1999
## IPC - Bozeman, Montana

| Sample ID: | 1-A | 4-A | 5-A | 5-C | 7-A | 9-A | (9-D) 9-ADup | 9-C | 10-A | 15-A | 22 | 23-A | 25-A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 8/31/99 | 8/31/99 | 8/31/99 | 8/31/99 | 9/2/99 | 9/2/99 | 9/2/99 | 9/2/99 | 9/1/99 | 8/31/99 | 8/31/99 | 9/2/99 | 9/1/99 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | < 0.25 | **D 2500** | **2.4** | < 0.25 | **D 650** | **D 710** | **D 210** | < 0.25 | **D 810** | **D 360** | **78** | **D 150** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | |
| Acenaphthylene | < 5.3 | NA | < 1100 | NA | NA | Y 71 | Y 70 | NA | NA | < 1100 | Y 170 | NA | **30** |
| Acenaphthene | < 1.8 | NA | Y 9400 | NA | NA | Y 27 | Y 24 | NA | NA | < 360 | **23** | NA | **2.7** |
| **D PAH compounds** | | | | | | | | | | | | | |
| Naphthalene | < 2.5 | NA | < 500 | NA | NA | Y 6.8 | Y 7.1 | NA | NA | < 500 | **16** | NA | < 2.5 |
| Fluorene | < 0.46 | NA | **270** | NA | NA | < 0.46 | **2.7** | NA | NA | < 92 | Y 1.9 | NA | < 0.46 |
| Phenanthrene | < 0.64 | NA | **D 850** | NA | NA | **2.9** | < 0.64 | NA | NA | < 130 | **1.2** | NA | < 0.64 |
| Anthracene | < 0.66 | NA | **D 2300** | NA | NA | < 0.66 | < 0.66 | NA | NA | < 130 | **1.7** | NA | < 0.66 |
| Fluoranthene | < 0.49 | NA | **DY 11000** | NA | NA | < 0.49 | < 0.49 | NA | NA | Y 220 | **D 21** | NA | < 0.49 |
| Pyrene | < 0.27 | NA | **D1 8300** | NA | NA | < 0.27 | < 0.27 | NA | NA | **160** | **D 14** | NA | < 0.27 |
| Benzo(g,h,i)perylene | < 0.11 | NA | < 22 | NA | NA | < 0.11 | < 0.11 | NA | NA | < 22 | < 0.11 | NA | < 0.11 |
| **B2 PAH Compounds** | | | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.05 | NA | **490** | NA | NA | < 0.05 | < 0.05 | NA | NA | **11** | **1.1** | NA | < 0.05 |
| Chrysene | < 0.15 | NA | **320** | NA | NA | < 0.15 | < 0.15 | NA | NA | < 30 | **0.40** | NA | < 0.15 |
| Benzo(b)fluoranthene | < 0.04 | NA | **76** | NA | NA | < 0.04 | < 0.04 | NA | NA | < 8.0 | **0.47** | NA | < 0.04 |
| Benzo(k)fluoranthene | < 0.06 | NA | **30** | NA | NA | < 0.06 | < 0.06 | NA | NA | < 12 | **0.14** | NA | < 0.06 |
| Benzo(a)pyrene | < 0.07 | NA | **48** | NA | NA | < 0.07 | < 0.07 | NA | NA | < 14 | **0.35** | NA | < 0.07 |
| Dibenzo(a,h)anthracene | < 0.10 | NA | < 20 | NA | NA | < 0.10 | < 0.10 | NA | NA | < 20 | Y 0.20 | NA | < 0.10 |
| Indeno(1,2,3-cd)pyrene | < 0.07 | NA | < 14 | NA | NA | < 0.07 | < 0.07 | NA | NA | < 14 | **0.10** | NA | < 0.07 |
| **Bio Parameters** | | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | **530** | **420** | **410** | **320** | **360** | **340** | **340** | **340** | **320** | **320** | **320** | **360** | **380** |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | **530** | **420** | **410** | **320** | **360** | **340** | **340** | **340** | **320** | **320** | **320** | **360** | **380** |
| N-Ammonia (mg-N/L) | < 0.010 | **U 0.098** | **0.46** | < 0.010 | **U 0.051** | **U 0.030** | **U 0.074** | < 0.010 | U **0.024** | **0.18** | **0.13** | **U 0.13** | **U 0.015** |
| N-Nitrate (mg-N/L) | **2.7** | < 0.010 | **0.21** | **3.3** | < 0.010 | **0.14** | **0.19** | **2.9** | **3.0** | < 0.010 | **1.1** | **U 0.019** | **0.56** |
| N-Nitrite (mg-N/L) | **0.029** | **0.035** | **0.050** | < 0.010 | **0.011** | **J 0.038** | **J 0.052** | **0.016** | < 0.010 | **0.015** | **0.061** | < 0.010 | **0.014** |
| Nitrate + Nitrite (mg-N/L) | **2.7** | **0.22** | **0.26** | **3.3** | **0.010** | **0.18** | **0.24** | **2.9** | **3.0** | **0.016** | **1.2** | **U 0.019** | **0.58** |
| Ortho-Phosphorous (mg-P/L) | **0.091** | < 0.004 | **0.055** | **0.031** | **0.024** | **J 0.010** | **J 0.016** | **0.022** | **0.058** | **0.006** | **1.5** | **0.019** | **0.038** |
| Sulfate (mg/L) | **29** | **12** | **16** | **37** | **73** | **41** | **41** | **42** | **38** | **27** | **32** | **30** | **44** |
| Sulfite (mg/L) | < 2.1 | < 2.1 | < 2.1 | < 2.1 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.1 | < 2.1 | < 2.0 | < 2.0 |
| Total Organic Carbon (mg/L) | **20** | **6.1** | **110** | **2.8** | **2.4** | **J 4.1** | **J 6.2** | **2.2** | **2.1** | **6.5** | **4.1** | **22** | **3.4** |

(#) - Indicates blind duplicate number assignment on Chain-of-Custody.

D - Indicates the sample was diluted.

D1 - Indicates the sample was diluted twice.

J - Indicates surrogate out of limits due to field blank contamination. See validation report.

U - Indicates surrogate detection due to field blank contamination, otherwise surrogate undetected. See validation report.

Y - Indicates a raised reporting limit due to matrix interferences.

NA - Not analyzed

BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 1999
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 25-B 9/1/99 | 26-A 9/1/99 | (26-D) 26-ADup 9/1/99 | 26-C 9/1/99 | 28-B 9/1/99 | GM-4 9/2/99 | GM-6 9/2/99 | GM-7 8/31/99 | GM-8 9/1/99 | BFEG 8/31/99 | (1-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | |
| Pentachlorophenol | **D 280** | **D 21** | **D 17** | **D 150** | < 0.25 | **D 1300** | **D 140** | < 0.25 | < 0.25 | **D 630** | < 0.25 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | |
| Acenaphthylene | **50** | NA | NA | **16** | NA | NA | NA | NA | < 5.3 | < 5.3 | < 5.3 | < 5.3 |
| Acenaphthene | < 1.8 | NA | NA | < 1.8 | NA | NA | NA | NA | < 1.8 | **37** | < 1.8 | < 1.8 |
| **D PAH compounds** | | | | | | | | | | | | |
| Naphthalene | Y 2.6 | NA | NA | < 2.5 | NA | NA | NA | NA | < 2.5 | **J 11** | < 2.5 | < 2.5 |
| Fluorene | < 0.46 | NA | NA | < 0.46 | NA | NA | NA | NA | < 0.46 | **1.9** | < 0.46 | < 0.46 |
| Phenanthrene | < 0.64 | NA | NA | < 0.64 | NA | NA | NA | NA | < 0.64 | < 0.64 | < 0.64 | < 0.64 |
| Anthracene | < 0.66 | NA | NA | < 0.66 | NA | NA | NA | NA | < 0.66 | **2.3** | < 0.66 | < 0.66 |
| Fluoranthene | < 0.49 | NA | NA | < 0.49 | NA | NA | NA | NA | < 0.49 | **J 4.4** | < 0.49 | < 0.49 |
| Pyrene | < 0.27 | NA | NA | < 0.27 | NA | NA | NA | NA | < 0.27 | **DJ 5.2** | < 0.27 | < 0.27 |
| Benzo(g,h,i)perylene | < 0.11 | NA | NA | < 0.11 | NA | NA | NA | NA | < 0.11 | < 0.11 | < 0.11 | < 0.11 |
| **B2 PAH Compounds** | | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.05 | NA | NA | < 0.05 | NA | NA | NA | NA | < 0.05 | **0.08** | < 0.05 | < 0.05 |
| Chrysene | < 0.15 | NA | NA | < 0.15 | NA | NA | NA | NA | < 0.15 | < 0.15 | < 0.15 | < 0.15 |
| Benzo(b)fluoranthene | < 0.04 | NA | NA | < 0.04 | NA | NA | NA | NA | < 0.04 | < 0.04 | < 0.04 | < 0.04 |
| Benzo(k)fluoranthene | < 0.06 | NA | NA | < 0.06 | NA | NA | NA | NA | < 0.06 | < 0.06 | < 0.06 | < 0.06 |
| Benzo(a)pyrene | < 0.07 | NA | NA | < 0.07 | NA | NA | NA | NA | < 0.07 | < 0.07 | < 0.07 | < 0.07 |
| Dibenzo(a,h)anthracene | < 0.10 | NA | NA | < 0.10 | NA | NA | NA | NA | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Indeno(1,2,3-cd)pyrene | < 0.07 | NA | NA | < 0.07 | NA | NA | NA | NA | < 0.07 | < 0.07 | < 0.07 | < 0.07 |
| **Bio Parameters** | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | **360** | **360** | **340** | **340** | **250** | **360** | **380** | **340** | **340** | **320** | < 1.0 | < 1.0 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | **360** | **360** | **340** | **340** | **250** | **360** | **380** | **340** | **340** | **320** | < 1.0 | < 1.0 |
| N-Ammonia (mg-N/L) | **U 0.076** | **U 0.049** | **U 0.035** | **U 0.012** | **U 0.059** | **U 0.41** | **U 0.20** | **U 0.010** | < 0.010 | **0.039** | **0.091** | < 0.010 |
| N-Nitrate (mg-N/L) | **0.90** | **0.57** | **0.49** | **2.9** | **0.18** | < 0.010 | < 0.010 | **3.6** | **2.3** | **1.4** | **0.031** | < 0.010 |
| N-Nitrite (mg-N/L) | **0.023** | **0.014** | **0.011** | **0.063** | < 0.010 | **0.010** | **0.019** | **0.04** | **0.016** | **0.039** | < 0.010 | < 0.010 |
| Nitrate + Nitrite (mg-N/L) | **0.92** | **0.58** | **0.50** | **3.0** | **0.18** | **0.015** | **0.018** | **3.6** | **2.3** | **1.4** | **0.031** | < 0.10 |
| Ortho-Phosphorous (mg-P/L) | **0.012** | < 0.004 | < 0.004 | **0.017** | **0.026** | **0.041** | **0.013** | **0.099** | **0.063** | **0.36** | < 0.004 | < 0.004 |
| Sulfate (mg/L) | **38** | **50** | **50** | **44** | **56** | **36** | **33** | **28** | **41** | **29** | **3.1** | < 2.5 |
| Sulfite (mg/L) | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.1 | < 2.0 | < 2.1 | < 2.1 | < 2.1 |
| Total Organic Carbon (mg/L) | **2.2** | **3.3** | **3.8** | **2.1** | **1.7** | **5.8** | **8.8** | **7.8** | **3.9** | **4.2** | < 1.5 | < 1.5 |

(#) - Indicates blind duplicate number assignment on Chain-of-Custody.

D - Indicates the sample was diluted.

D1 - Indicates the sample was diluted twice.

J - Indicates surrogate out of limits due to field blank contamination. See validation report.

U - Indicates surrogate detection due to field blank contamination, otherwise surrogate undetected. See validation report.

Y - Indicates a raised reporting limit due to matrix interferences.

NA - Not analyzed

BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## March 2000
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 1-A 3/7/00 | 4-A 3/7/2000 | 7-A 3/7/2000 | 9-A 3/8/2000 | (9-D) 9-ADup 3/8/2000 | 9-C 3/8/2000 | 10-A 3/8/2000 | 14-A NA | 23-A 3/7/2000 | 25-A 3/8/2000 | 25-B 3/8/2000 | 26-A 3/8/2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | |
| Pentachlorophenol | NA | < 0.25 | < 0.25 | **350** | **420** | **160** | < 0.25 | NA | **190** | **27** | **170** | **6.7** |
| **Bio Parameters** | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | NA | 450 | 350 | 350 | 350 | 340 | 320 | NA | 340 | 530 | 360 | 350 |
| Carbonate (Alkalinity) (mg/L CaCO3) | NA | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | < 1 | < 1 | < 1 | < 1 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | NA | 450 | 350 | 350 | 350 | 340 | 320 | NA | 340 | 530 | 360 | 350 |
| N-Ammonia (mg-N/L) | NA | 0.094 | 0.016 | 0.028 | 0.026 | < 0.01 | < 0.01 | NA | 0.089 | < 0.01 | < 0.01 | < 0.01 |
| N-Nitrate (mg-N/L) | NA | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 2.8 | 2.4 | NA | 0.054 | 0.01 | 0.56 | 0.13 |
| N-Nitrite (mg-N/L) | NA | < 0.01 | < 0.01 | 0.018 | 0.033 | 0.015 | < 0.01 | NA | < 0.01 | 0.013 | 0.012 | 0.018 |
| Nitrate + Nitrite (mg-N/L) | NA | < 0.01 | < 0.01 | 0.025 | 0.035 | 2.8 | 2.4 | NA | 0.054 | 0.023 | 0.57 | 0.14 |
| Ortho-Phosphorous (mg-P/L) | NA | < 0.004 | 0.025 | 0.005 | < 0.004 | 0.03 | 0.053 | NA | 0.055 | 0.03 | 0.012 | < 0.004 |
| Sulfate (mg/L) | NA | 7.9 | 75 | 43 | 44 | 39 | 28 | NA | 24 | 34 | 38 | 46 |
| Sulfite (mg/L) | NA | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | NA | < 2 | < 2 | < 2 | < 2 |
| Total Organic Carbon (mg/L) | NA | 6.2 | 2.6 | 6.6 | 6.3 | 1.6 | 1.9 | NA | 9 | 7.7 | 1.8 | 2.7 |

| Sample ID: / Sample Date: | (26-D) 26-ADup 3/8/2000 | 26-C 3/8/2000 | 28-B 3/8/2000 | GM-4 3/7/2000 | GM-6 3/7/2000 | GM-7 3/7/2000 | GM-8 3/7/2000 | BFEG 3/9/2000 | PPEG 3/9/2000 | (Field) EG-F Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | |
| Pentachlorophenol | **5.8** | **110** | < 0.25 | **1300** | **72** | < 0.25 | < 0.25 | **66** | **75** | < 0.25 | < 0.25 |
| **Bio Parameters** | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | 350 | 330 | 220 | 390 | 370 | 300 | 320 | 320 | 310 | < 1 | < 1 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | 350 | 330 | 220 | 390 | 370 | 300 | 320 | 320 | 310 | < 1 | < 1 |
| N-Ammonia (mg-N/L) | < 0.01 | < 0.01 | < 0.01 | 0.063 | 0.2 | 0.025 | < 0.01 | 0.013 | < 0.01 | < 0.01 | < 0.01 |
| N-Nitrate (mg-N/L) | 0.098 | 2.8 | 0.13 | 0.023 | 0.081 | 4.4 | 1.8 | 3.3 | 3.3 | 0.013 | < 0.01 |
| N-Nitrite (mg-N/L) | 0.016 | 0.061 | 0.01 | < 0.01 | 0.026 | 0.035 | 0.018 | 0.097 | 0.14 | < 0.01 | < 0.01 |
| Nitrate + Nitrite (mg-N/L) | 0.11 | 2.9 | 0.14 | 0.023 | 0.11 | 4.4 | 1.8 | 3.4 | 3.4 | 0.013 | < 0.01 |
| Ortho-Phosphorous (mg-P/L) | < 0.004 | 0.018 | 0.024 | 0.023 | US 0.004 | 0.13 | < 0.004 | 0.32 | 0.8 | < 0.004 | < 0.004 |
| Sulfate (mg/L) | 48 | 42 | 43 | 34 | 35 | 28 | 37 | 32 | 32 | < 2.5 | < 2.5 |
| Sulfite (mg/L) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2.7 | < 2.7 | < 2.7 | < 2 |
| Total Organic Carbon (mg/L) | 4.3 | < 1.5 | < 1.5 | 6 | 12 | 4.6 | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |

(#) - Indicates blind duplicate number assigment on chain of custody.
D -Indicates the surrogate was diluted.
U - Indicates no detection at reported detection limit.
S - Indicates no value reported due to saturation of the detector.
NA - Well not sampled (1-A did not have enough water for collection; 14-A is broken above water level)
EG-F - Indicates a Field blank taken at the Extraction Galleries.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2000
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 4-A 9/5/2000 | 5-A 9/5/2000 | 5-C 9/5/2000 | 7-A 9/7/2000 | 9-A 9/7/2000 | (9-D) 9-ADup 9/7/2000 | 9-C 9/7/2000 | 10-A 9/6/2000 | 15 9/5/2000 | 22 9/5/2000 | 23-A 9/7/2000 | 25-A 9/6/2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **2,300** | 0.61 | < 0.25 | **450** | **430** | **120** | < 0.25 | **260** | **7.6** | **81** | **47** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | |
| Acenaphthylene | NA | < 26,000 | NA | NA | Y 55 | Y 56 | NA | NA | Y 160 | Y 25 | NA | Y 7.9 |
| Acenaphthene | NA | < 9,000 | NA | NA | Y 21 | Y 21 | NA | NA | < 36 | J 3.9 | NA | < 1.8 |
| **D PAH compounds** | | | | | | | | | | | | |
| Naphthalene | NA | < 12,000 | NA | NA | J 6.5 | J 6.7 | NA | NA | < 50 | < 2.5 | NA | < 2.5 |
| Fluorene | NA | < 2,300 | NA | NA | J 1.4 | J 1.4 | NA | NA | **14** | < 0.46 | NA | < 0.46 |
| Phenanthrene | NA | J 2,500 | NA | NA | < 0.64 | < 0.64 | NA | NA | **34** | < 0.64 | NA | < 0.64 |
| Anthracene | NA | < 3,300 | NA | NA | < 0.66 | < 0.66 | NA | NA | < 13 | < 0.66 | NA | < 0.66 |
| Fluoranthene | NA | **12,000** | NA | NA | < 0.49 | < 0.49 | NA | NA | **68** | JD 5.8 | NA | < 0.49 |
| Pyrene | NA | **9,400** | NA | NA | < 0.27 | < 0.27 | NA | NA | **45** | J 2.4 | NA | < 0.27 |
| Benzo(g,h,i)perylene | NA | < 550 | NA | NA | < 0.11 | < 0.11 | NA | NA | < 2.2 | 0.51 | NA | < 0.11 |
| **B2 PAH compounds** | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | **4,800** | NA | NA | < 0.05 | < 0.05 | NA | NA | **8.3** | J 0.43 | NA | < 0.05 |
| Chrysene | NA | < 750 | NA | NA | < 0.15 | < 0.15 | NA | NA | < 3 | J 0.23 | NA | < 0.15 |
| Benzo(b)fluoranthene | NA | < 200 | NA | NA | < 0.04 | < 0.04 | NA | NA | < 0.8 | J 0.65 | NA | < 0.04 |
| Benzo(k)fluoranthene | NA | < 300 | NA | NA | < 0.06 | < 0.06 | NA | NA | < 1.2 | J 0.18 | NA | < 0.06 |
| Benzo(a)pyrene | NA | < 350 | NA | NA | < 0.07 | < 0.07 | NA | NA | < 1.4 | J 0.42 | NA | < 0.07 |
| Dibenzo(a,h)anthracene | NA | < 500 | NA | NA | < 0.10 | < 0.10 | NA | NA | < 2.0 | J 0.47 | NA | < 0.10 |
| Indeno(1,2,3-cd)pyrene | NA | < 350 | NA | NA | < 0.07 | < 0.07 | NA | NA | < 1.4 | 0.08 | NA | < 0.07 |
| **Bio Parameters** | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | 470 | 440 | 310 | 320 | 310 | 340 | 340 | 310 | 360 | 320 | 330 | 430 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | 470 | 440 | 310 | 320 | 310 | 340 | 340 | 310 | 360 | 320 | 330 | 430 |
| N-Ammonia (mg-N/L) | U 0.10 | 0.33 | U 0.029 | < 0.010 | < 0.010 | U 0.011 | < 0.010 | < 0.010 | U 0.12 | U 0.031 | U 0.096 | < 0.010 |
| N-Nitrate (mg-N/L) | < 0.010 | U 0.22 | 2.8 | U 0.012 | U 0.29 | 0.38 | 2.9 | 2.8 | U 0.18 | 2.0 | U 0.013 | U 0.017 |
| N-Nitrite (mg-N/L) | < 0.010 | 0.060 | < 0.010 | < 0.010 | 0.027 | 0.032 | 0.011 | < 0.010 | 0.023 | 0.055 | 0.011 | < 0.010 |
| Nitrate + Nitrite (mg-N/L) | < 0.010 | U 0.28 | 2.8 | U 0.012 | 0.31 | 0.41 | 2.9 | 2.8 | U 0.20 | 2.0 | U 0.024 | U 0.017 |
| Ortho-Phosphorous (mg-P/L) | 0.044 | 0.11 | 0.036 | < 0.004 | 0.005 | < 0.004 | 0.025 | 0.060 | 0.006 | 1.7 | 0.017 | 0.03 |
| Sulfate (mg/L) | 9.8 | 30 | 37 | 92 | 41 | 42 | 39 | 35 | 29 | 32 | 33 | 36 |
| Sulfite (mg/L) | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| Total Organic Carbon (mg/L) | 7.4 | 600 | 2.5 | 3.7 | 5.6 | 7.2 | 2.0 | 2.5 | 4.7 | < 1.5 | 10 | 6 |

(#) - Indicates blind duplicate number assignment on Chain-of-custody.
Note: Well 1-A did not have enough water to collect sample and well 14-A is broken above the water level.
D - Indicates the surrogate was diluted.
J - Indicates estimated concentration. See validation report.
R - Indicates rejected data due to severe QC noncompliance defined by surrogate recovery outlier. See validation report.
U - Indicates analyte undetected, result is considered a false positive defined by field blank contamination. See validation report.
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery and BFEG - Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2000
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 25-B 9/6/2000 | 26-A 9/6/2000 | (26-D) 26-ADup 9/6/2000 | 26-C 9/6/2000 | 28-B 9/8/2000 | GM-4 9/7/2000 | GM-6 9/7/2000 | GM-7 9/5/2000 | GM-8 9/6/2000 | BFEG 9/5/2000 | PPEG 9/5/2000 | (1-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | **160** | **14** | **13** | **130** | **5.4** | **710** | **93** | < 0.25 | < 0.25 | **52** | **55** | < 0.25 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | |
| Acenaphthylene | Y 36 | NA | NA | Y 19 | NA | NA | NA | NA | < 5.3 | < 26 | R 5.3 | < 5.3 | < 5.3 |
| Acenaphthene | < 1.8 | NA | NA | < 1.8 | NA | NA | NA | NA | < 1.8 | Y 9.2 | R 1.8 | < 1.8 | < 1.8 |
| **D PAH compounds** | | | | | | | | | | | | | |
| Naphthalene | < 2.5 | NA | NA | < 2.5 | NA | NA | NA | NA | < 2.5 | < 12 | J 4.6 | < 2.5 | < 2.5 |
| Fluorene | < 0.46 | NA | NA | < 0.46 | NA | NA | NA | NA | < 0.46 | < 2.3 | R 0.46 | < 0.46 | < 0.46 |
| Phenanthrene | < 0.64 | NA | NA | < 0.64 | NA | NA | NA | NA | < 0.64 | < 3.2 | R 0.64 | < 0.64 | < 0.64 |
| Anthracene | < 0.66 | NA | NA | < 0.66 | NA | NA | NA | NA | < 0.66 | < 3.3 | R 0.66 | < 0.66 | < 0.66 |
| Fluoranthene | < 0.49 | NA | NA | < 0.49 | NA | NA | NA | NA | < 0.49 | J 5.3 | J 1.8 | < 0.49 | < 0.49 |
| Pyrene | < 0.27 | NA | NA | < 0.27 | NA | NA | NA | NA | < 0.27 | J 5.6 | JD 3.4 | < 0.27 | < 0.27 |
| Benzo(g,h,i)perylene | < 0.11 | NA | NA | < 0.11 | NA | NA | NA | NA | < 0.11 | J 0.55 | R 0.11 | < 0.11 | < 0.11 |
| **B2 PAH compounds** | | | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.05 | NA | NA | < 0.05 | NA | NA | NA | NA | < 0.05 | J 0.52 | J 0.11 | < 0.05 | < 0.05 |
| Chrysene | < 0.15 | NA | NA | < 0.15 | NA | NA | NA | NA | < 0.15 | < 0.75 | R 0.15 | < 0.15 | < 0.15 |
| Benzo(b)fluoranthene | < 0.04 | NA | NA | < 0.04 | NA | NA | NA | NA | < 0.04 | J 0.34 | R 0.04 | < 0.04 | < 0.04 |
| Benzo(k)fluoranthene | < 0.06 | NA | NA | < 0.06 | NA | NA | NA | NA | < 0.06 | J 0.30 | R 0.06 | < 0.06 | < 0.06 |
| Benzo(a)pyrene | < 0.07 | NA | NA | < 0.07 | NA | NA | NA | NA | < 0.07 | < 0.35 | R 0.07 | < 0.07 | < 0.07 |
| Dibenzo(a,h)anthracene | < 0.10 | NA | NA | < 0.10 | NA | NA | NA | NA | < 0.10 | < 0.50 | R 0.10 | < 0.10 | < 0.10 |
| Indeno(1,2,3-cd)pyrene | < 0.07 | NA | NA | < 0.07 | NA | NA | NA | NA | < 0.07 | J 0.35 | R 0.07 | < 0.07 | < 0.07 |
| **Bio Parameters** | | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | 350 | 330 | 320 | 330 | 220 | 340 | 350 | 340 | 320 | 330 | 330 | 2.0 | < 1.0 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | 350 | 330 | 320 | 330 | 220 | 340 | 350 | 340 | 320 | 330 | 330 | 2.0 | < 1.0 |
| N-Ammonia (mg-N/L) | < 0.010 | U 0.013 | U 0.016 | < 0.010 | < 0.010 | < 0.010 | 0.20 | 0.30 | < 0.010 | U 0.033 | U 0.028 | 0.039 | < 0.010 |
| N-Nitrate (mg-N/L) | 0.40 | 0.51 | 0.47 | 2.5 | U 0.030 | U 0.019 | U 0.12 | 3.2 | 2.1 | 2.0 | 2.4 | 0.059 | < 0.010 |
| N-Nitrite (mg-N/L) | 0.018 | 0.016 | 0.014 | 0.022 | < 0.010 | 0.010 | 0.014 | 0.025 | 0.011 | 0.032 | 0.021 | < 0.010 | < 0.010 |
| Nitrate + Nitrite (mg-N/L) | 0.42 | 0.53 | 0.48 | 2.6 | U 0.030 | U 0.029 | U 0.14 | 3.3 | 2.1 | 2.0 | 2.4 | 0.059 | < 0.010 |
| Ortho-Phosphorous (mg-P/L) | < 0.004 | < 0.004 | < 0.004 | 0.019 | 0.027 | 0.037 | < 0.004 | 0.094 | 0.063 | 0.26 | 1.0 | < 0.004 | < 0.004 |
| Sulfate (mg/L) | 41 | 44 | 44 | 43 | 46 | 35 | 38 | 31 | 38 | 30 | 31 | < 2.5 | < 2.5 |
| Sulfite (mg/L) | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| Total Organic Carbon (mg/L) | 2.3 | 3.2 | 2.3 | < 1.5 | 1.8 | 5.3 | 29 | 5.6 | 1.6 | < 1.5 | 3.9 | < 1.5 | < 1.5 |

(#) - Indicates blind duplicate number assignment on Chain-of-custody.
Note: Well 1-A did not have enough water to collect sample and well 14-A is broken above the water level.
D - Indicates the surrogate was diluted.
J - Indicates estimated concentration. See validation report.
R - Indicates rejected data due to severe QC noncompliance defined by surrogate recovery outlier. See validation report.
U - Indicates analyte undetected, result is considered a false positive defined by field blank contamination. See validation report.
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery and BFEG - Bark Fill Extraction Gallery

# Appendix A (Continued)
## Summary of Groundwater Analytical Data
## March 2001
## IPC - Bozeman, Montana

| Sample ID: | 4-A | 5-A | 5-C | 7-A | 9-A | (9-D) 9-ADup | 9-C | 10-A | 11-A | 12-A | 15-A | 22 | 23-A | 24-A1 | 25-A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 3/27/01 | 3/26/01 | 3/26/01 | 3/29/01 | 3/26/01 | 3/26/01 | 3/28/01 | 3/28/01 | 3/28/01 | 3/27/01 | 3/26/01 | 3/27/01 | 3/29/01 | 3/29/01 | 3/28/01 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **D 1,900** | **0.98** | < 0.25 | **340** | **330** | **90** | < 0.25 | **16** | < 0.25 | **120** | **5.1** | **36** | < 0.25 | **34** |
| **Alkalinity (mg/L CaCO3)** | 450 | NA | NA | 380 | NA | NA | 340 | 340 | 370 | NA | NA | 330 | 430 | 400 | 470 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 450 | NA | NA | 380 | NA | NA | 340 | 340 | 370 | NA | NA | 330 | 430 | 400 | 470 |
| **N-Ammonia (mg-N/L)** | < 0.010 | NA | NA | < 0.010 | NA | NA | < 0.010 | < 0.010 | < 0.010 | NA | NA | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| **N-Nitrate (mg-N/L)** | 0.011 | NA | NA | < 0.010 | NA | NA | 3.7 | 3.3 | 2.5 | NA | NA | 4.1 | 1.6 | < 0.010 | 0.26 |
| **N-Nitrite (mg-N/L)** | < 0.010 | NA | NA | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.025 | NA | NA | 0.10 | < 0.010 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 0.011 | NA | NA | < 0.010 | NA | NA | 3.7 | 3.3 | 2.5 | NA | NA | 4.2 | 1.6 | < 0.010 | 0.26 |
| **Ortho-Phosphorous (mg-P/L)** | < 0.004 | NA | NA | < 0.004 | NA | NA | 0.026 | 0.058 | 0.036 | NA | NA | 2.3 | 0.007 | 0.005 | 0.028 |
| **Sulfate (mg/L)** | 10.0 | NA | NA | 66 | NA | NA | 33 | 28 | 140 | NA | NA | 37 | 35 | 43 | 48 |
| **Sulfite (mg/L)** | < 2.0 | NA | NA | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | 33 | NA | NA | 3 | NA | NA | 2.2 | 3.4 | 5.3 | NA | NA | 3.6 | 17 | 15 | 9.1 |

| Sample ID: | 25-B | 26-A | 26-C | 27-A | 28-B | (28-D) 28-BDup | GM-4 | GM-6 | GM-7 | GM-8 | BFEG | PPEG | (4-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 3/28/01 | 3/28/01 | 3/28/01 | 3/26/01 | 3/27/01 | 3/27/01 | 3/26/01 | 3/26/01 | 3/26/01 | 3/27/01 | 3/27/01 | 3/27/01 | | |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | |
| Pentachlorophenol | **160** | **23** | **120** | < 0.25 | **16** | **13** | **D 1000** | **54** | < 0.25 | < 0.25 | **46** | **68** | < 0.25 | < 0.50 |
| **Alkalinity (mg/L CaCO3)** | 370 | 360 | 340 | NA | 230 | 230 | NA | NA | 310 | 360 | 340 | 340 | < 1.0 | < 1.0 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | < 1.0 | < 1.0 | NA | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 370 | 360 | 340 | NA | 230 | 230 | NA | NA | 310 | 360 | 340 | 340 | < 1.0 | < 1.0 |
| **N-Ammonia (mg-N/L)** | < 0.010 | < 0.010 | < 0.010 | NA | < 0.010 | < 0.010 | NA | NA | < 0.01 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| **N-Nitrate (mg-N/L)** | 1.6 | 0.082 | 3.3 | NA | 0.11 | 0.11 | NA | NA | 4.6 | 1.6 | 2.8 | 3.8 | < 0.010 | < 0.010 |
| **N-Nitrite (mg-N/L)** | < 0.010 | < 0.010 | 0.027 | NA | < 0.010 | < 0.010 | NA | NA | < 0.010 | 0.019 | 0.095 | 0.052 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 1.6 | 0.082 | 3.3 | NA | 0.11 | 0.11 | NA | NA | 4.6 | 1.6 | 2.9 | 3.8 | < 0.010 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.009 | 0.004 | 0.023 | NA | 0.022 | 0.022 | NA | NA | 0.092 | 0.053 | 0.4 | 1.4 | < 0.004 | < 0.004 |
| **Sulfate (mg/L)** | 34 | 50 | 34 | NA | 58 | 58 | NA | NA | 28 | 37 | 32 | 37 | < 2.5 | < 2.5 |
| **Sulfite (mg/L)** | < 2.0 | < 2.0 | < 2.0 | NA | < 2.0 | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | 3.4 | 5.8 | 2.4 | NA | 2.6 | 2.7 | NA | NA | 2.9 | 3.2 | 4.7 | 3.3 | < 1.5 | < 1.5 |

Note: Well 1-A did not have enough water to collect sample and well 14-A is broken above the water level.
Well 11-A was sampled in replacement of 14-A which is broken above the water level.
D - Indicates the sample dilution.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**September 2001**
**IPC - Bozeman, Montana**

| Sample ID: | 4-A | 5-C | 7-A | 9-A | (9-D) 9-ADup | 9-C | 10-A | 11-A | 12-A | 15-A | 22 | 23-A | 24-A1 | 25-A | 25-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/10/01 | 9/19/01 | 9/19/01 | 9/19/01 | 9/19/01 | 9/19/01 | 9/18/01 | 9/19/01 | 9/19/01 | 9/19/01 | 9/10/01 | 9/19/01 | 9/18/01 | 9/18/01 | 9/18/01 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | UJ 0.25 | < 0.25 | < 0.25 | **340** | **380** | **63** | < 0.25 | **35** | < 0.25 | **120** | **J 18** | **33** | < 0.25 | **11** | **88** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | | |
| Acenaphthylene | NA | NA | NA | 58 | 56 | NA | NA | NA | NA | D 110 | 19 | NA | NA | Y 5.6 | Y 29 |
| Acenaphthene | NA | NA | NA | 3.2 | 3.3 | NA | NA | NA | NA | 10 | 7.1 | NA | NA | < 1.8 | < 1.8 |
| **D PAH Compounds** | | | | | | | | | | | | | | | |
| Naphthalene | NA | NA | NA | Y 3.4 | Y 3.1 | NA | NA | NA | NA | Y 5.4 | 3.2 | NA | NA | < 2.5 | < 2.5 |
| Fluorene | NA | NA | NA | 2.5 | 2.5 | NA | NA | NA | NA | D 27 | 6.0 | NA | NA | < 0.46 | 0.52 |
| Phenanthrene | NA | NA | NA | < 0.64 | < 0.64 | NA | NA | NA | NA | D 8.3 | < 0.64 | NA | NA | < 0.64 | < 0.64 |
| Anthracene | NA | NA | NA | < 0.66 | < 0.66 | NA | NA | NA | NA | D 3.6 | 1.8 | NA | NA | < 0.66 | < 0.66 |
| Fluoranthene | NA | NA | NA | < 0.49 | < 0.49 | NA | NA | NA | NA | 4.9 | 6.6 | NA | NA | < 0.49 | < 0.49 |
| Benzo(g,h,i)perylene | NA | NA | NA | < 0.11 | < 0.11 | NA | NA | NA | NA | 0.19 | < 0.11 | NA | NA | < 0.11 | < 0.11 |
| Pyrene | NA | NA | NA | < 0.27 | < 0.27 | NA | NA | NA | NA | D 5.6 | 4.4 | NA | NA | < 0.27 | < 0.27 |
| **B2 PAH Compounds** | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | < 0.05 | < 0.05 | NA | NA | NA | NA | D **13** | **0.20** | NA | NA | < 0.05 | < 0.05 |
| Chrysene | NA | NA | NA | < 0.15 | < 0.15 | NA | NA | NA | NA | 3.2 | < 0.15 | NA | NA | < 0.15 | < 0.15 |
| Benzo(b)fluoranthene | NA | NA | NA | < 0.04 | < 0.04 | NA | NA | NA | NA | 0.09 | < 0.04 | NA | NA | < 0.04 | < 0.04 |
| Benzo(k)fluoranthene | NA | NA | NA | < 0.06 | < 0.06 | NA | NA | NA | NA | 0.09 | < 0.06 | NA | NA | < 0.06 | < 0.06 |
| Benzo(a)pyrene | NA | NA | NA | < 0.07 | < 0.07 | NA | NA | NA | NA | 0.16 | < 0.07 | NA | NA | < 0.07 | < 0.07 |
| Dibenzo(a,h)anthracene | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | Y 1.0 | < 0.10 | NA | NA | < 0.10 | < 0.10 |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | < 0.07 | < 0.07 | NA | NA | NA | NA | < 0.07 | < 0.07 | NA | NA | < 0.07 | < 0.07 |
| **Bio Parameters** | | | | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | 470 | NA | 580 | NA | NA | 320 | 310 | 340 | NA | NA | 340 | 380 | 260 | 410 | 360 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | 470 | NA | 580 | NA | NA | 320 | 310 | 340 | NA | NA | 340 | 380 | 260 | 410 | 360 |
| N-Ammonia (mg-N/L) | 0.080 | NA | 0.069 | NA | NA | 0.028 | 0.11 | 0.030 | NA | NA | 0.012 | 0.058 | 0.021 | 0.035 | 0.018 |
| N-Nitrate (mg-N/L) | < 0.010 | NA | < 0.010 | NA | NA | 3.7 | 4.2 | 4.5 | NA | NA | 3.6 | 0.23 | < 0.010 | < 0.010 | 0.27 |
| N-Nitrite (mg-N/L) | < 0.010 | NA | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.048 | NA | NA | 0.23 | 0.59 | < 0.010 | < 0.010 | 0.021 |
| Nitrate + Nitrite (mg-N/L) | < 0.010 | NA | < 0.010 | NA | NA | 3.7 | 4.2 | 4.5 | NA | NA | 3.8 | 0.29 | < 0.010 | < 0.010 | 0.29 |
| Ortho-Phosphorous (mg-P/L) | 2.3 | NA | < 0.004 | NA | NA | U 0.028 | 0.057 | U 0.042 | NA | NA | 1.4 | U 0.039 | U 0.011 | U 0.032 | U 0.005 |
| Sulfate (mg/L) | J 11.0 | NA | 32 | NA | NA | 29 | 35 | 36 | NA | NA | J 37 | 32 | 31 | 33 | 34 |
| Sulfite (mg/L) | < 2.0 | NA | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| Total Organic Carbon (mg/L) | 5.3 | NA | 9.2 | NA | NA | 3.7 | 6.3 | 4.7 | NA | NA | 2.3 | 18 | 8.5 | 8.5 | 5.0 |

Note: Well 1-A did not have enough water to collect sample and well 5-A was not sampled due to product in well.
D - Indicates sample dilution.
J - Indicates estimated concentration. See validation report.
R - Indicates rejected data due to severe QC noncompliance defined by surrogate recovery outlier. See validation report.
U - Indicates analyte undetected, result is considered a false positive defined by field blank contamination. See validation report.
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**September 2001**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 26-A 9/18/01 | 26-C 9/18/01 | 27-A 9/20/01 | 28-B 9/18/01 | (28-D) 28-BDup 9/18/01 | GM-4 9/19/01 | GM-6 9/19/01 | GM-7 9/10/01 | GM-8 9/10/01 | BFEG 9/10/01 | PPEG 9/10/01 | (4-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | **11** | **98** | < 0.25 | **8.1** | **7.4** | **390** | **56** | R 0.25 | UJ 0.25 | **J 71** | **J 59** | UJ 0.25 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | |
| Acenaphthylene | NA | Y 18 | NA | NA | NA | NA | NA | NA | NA | 9.3 | J 6.4 | NA | < 5.3 |
| Acenaphthene | NA | < 1.8 | NA | NA | NA | NA | NA | NA | NA | 5.9 | Y 4.3 | NA | < 1.8 |
| **D PAH Compounds** | | | | | | | | | | | | | |
| Naphthalene | NA | < 2.5 | NA | NA | NA | NA | NA | NA | NA | Y 4.9 | < 2.5 | NA | < 2.5 |
| Fluorene | NA | < 0.46 | NA | NA | NA | NA | NA | NA | NA | 4.4 | J 1.5 | NA | < 0.46 |
| Phenanthrene | NA | < 0.64 | NA | NA | NA | NA | NA | NA | NA | 2.3 | < 0.64 | NA | < 0.64 |
| Anthracene | NA | < 0.66 | NA | NA | NA | NA | NA | NA | NA | 1.1 | < 0.66 | NA | < 0.66 |
| Fluoranthene | NA | < 0.49 | NA | NA | NA | NA | NA | NA | NA | 3.9 | J 0.79 | NA | < 0.49 |
| Benzo(g,h,i)perylene | NA | < 0.11 | NA | NA | NA | NA | NA | NA | NA | < 0.11 | < 0.11 | NA | < 0.11 |
| Pyrene | NA | < 0.27 | NA | NA | NA | NA | NA | NA | NA | 2.8 | J 0.68 | NA | < 0.27 |
| **B2 PAH Compounds** | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | < 0.05 | NA | NA | NA | NA | NA | NA | NA | **0.33** | **J 0.13** | NA | < 0.05 |
| Chrysene | NA | < 0.15 | NA | NA | NA | NA | NA | NA | NA | 0.18 | < 0.15 | NA | < 0.15 |
| Benzo(b)fluoranthene | NA | < 0.04 | NA | NA | NA | NA | NA | NA | NA | < 0.04 | < 0.04 | NA | < 0.04 |
| Benzo(k)fluoranthene | NA | < 0.06 | NA | NA | NA | NA | NA | NA | NA | < 0.06 | < 0.06 | NA | < 0.06 |
| Benzo(a)pyrene | NA | < 0.07 | NA | NA | NA | NA | NA | NA | NA | 0.16 | < 0.07 | NA | < 0.07 |
| Dibenzo(a,h)anthracene | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Indeno(1,2,3-cd)pyrene | NA | < 0.07 | NA | NA | NA | NA | NA | NA | NA | < 0.07 | < 0.07 | NA | < 0.07 |
| **Bio Parameters** | | | | | | | | | | | | | |
| Alkalinity (mg/L CaCO3) | 360 | 340 | NA | 230 | 230 | NA | NA | 340 | 330 | 330 | 330 | < 1.0 | < 1.0 |
| Carbonate (Alkalinity) (mg/L CaCO3) | < 1.0 | < 1.0 | NA | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bicarbonate (Alkalinity) (mg/L CaCO3) | 360 | 340 | NA | 230 | 230 | NA | NA | 340 | 330 | 330 | 330 | < 1.0 | < 1.0 |
| N-Ammonia (mg-N/L) | 0.056 | 0.030 | NA | 0.017 | 0.019 | NA | NA | < 0.010 | < 0.010 | 0.026 | 0.017 | < 0.010 | < 0.010 |
| N-Nitrate (mg-N/L) | 0.66 | 3.2 | NA | 0.026 | 0.031 | NA | NA | 4.7 | 2.6 | 3.4 | 4.7 | < 0.010 | < 0.010 |
| N-Nitrite (mg-N/L) | 0.016 | 0.060 | NA | < 0.010 | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.10 | 0.086 | < 0.010 | < 0.010 |
| Nitrate + Nitrite (mg-N/L) | 0.67 | 3.2 | NA | 0.026 | 0.031 | NA | NA | 4.7 | 2.6 | 3.5 | 4.8 | < 0.010 | < 0.010 |
| Ortho-Phosphorous (mg-P/L) | U 0.005 | U 0.022 | NA | U 0.029 | U 0.025 | NA | NA | 0.099 | 0.064 | 0.72 | 1.6 | 0.010 | < 0.004 |
| Sulfate (mg/L) | 45 | 31 | NA | 36 | 36 | NA | NA | J 37 | J 35 | J 37 | J 33 | < 2.5 | < 2.5 |
| Sulfite (mg/L) | < 2.0 | < 2.0 | NA | < 2.0 | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| Total Organic Carbon (mg/L) | 9.3 | 4.6 | NA | J 3.7 | J 5.4 | NA | NA | 2.6 | 1.8 | 2.1 | 2.0 | < 1.5 | < 1.5 |

Note: Well 1-A did not have enough water to collect sample and well 5-A was not sampled due to product in well.
D - Indicates sample dilution.
J - Indicates estimated concentration. See validation report.
R - Indicates rejected data due to severe QC noncompliance defined by surrogate recovery outlier. See validation report.
U - Indicates analyte undetected, result is considered a false positive defined by field blank contamination. See validation report.
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## April 2002
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 1-A | 4-A 4/1/02 | 7-A 4/2/02 | 9-C 4/3/02 | 10-A 4/3/02 | 11-A 4/2/02 | 12-A 4/2/02 | 22 4/1/02 | 23-A 4/2/02 | 24-A1 4/2/02 | 25-A 4/3/02 | 25-B 4/3/02 | 26-A 4/3/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | NS | < 0.25 | < 0.25 | OD | OD | **22** | < 0.25 | **5.6** | **24** | UJ 0.25 | OD | OD | OD |
| **Alkalinity (mg/L CaCO3)** | NS | 440 | 470 | 330 | 310 | 360 | NA | 310 | 390 | 400 | 360 | 360 | 370 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | NS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | < 1.0 | < 1.0 | 0.14 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | NS | 440 | 470 | 330 | 310 | 360 | NA | 310 | 390 | 400 | 360 | 360 | 370 |
| **N-Ammonia (mg-N/L)** | NS | U 0.12 | 0.091 | < 0.010 | 0.021 | 0.041 | NA | U 0.023 | 0.14 | 0.14 | 0.045 | 0.01 | 0.023 |
| **N-Nitrate (mg-N/L)** | NS | < 0.010 | < 0.010 | 4.1 | 3.5 | 2.6 | NA | 5.2 | 0.51 | 0.03 | 0.06 | 0.81 | 0.30 |
| **N-Nitrite (mg-N/L)** | NS | < 0.010 | < 0.010 | < 0.010 | < 0.010 | 0.048 | NA | 0.41 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | NS | < 0.010 | < 0.010 | 4.1 | 3.5 | 2.7 | NA | 5.6 | 0.51 | 0.03 | 0.06 | 0.81 | 0.30 |
| **Ortho-Phosphorous (mg-P/L)** | NS | 0.02 | 0.005 | 0.034 | 0.069 | 0.042 | NA | 2.4 | 0.019 | 0.008 | 0.038 | 0.017 | 0.012 |
| **Sulfate (mg/L)** | NS | 9.5 | 36 | 31 | 28 | 110 | NA | 33 | 40 | 29 | 35 | 36 | 76 |
| **Sulfite (mg/L)** | NS | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | NS | 23 | 3.8 | 1.9 | 2.6 | 7.7 | NA | U 2.7 | 17 | 29 | 6.0 | 3.1 | 7.4 |
| **Dissolved Oxygen (mg/L) (field data)** | NS | 0.094 | 3.1 | 0.4 | 4.64 | 2.1 | NA | 1.33 | 1.05 | 0.086 | 3.14 | 3.39 | 2.86 |

| Sample ID: / Sample Date: | 26-C 4/3/02 | 27-A 4/2/02 | 28-B 4/2/02 | (28-D) 28-Bdup 4/2/02 | GM-4 4/2/02 | GM-6 4/2/02 | GM-7 4/1/02 | GM-8 4/2/02 | BFEG 4/1/02 | PPEG 4/1/02 | (4-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | |
| Pentachlorophenol | OD | < 0.25 | **12** | **11** | **D 450** | **12** | < 0.25 | < 0.25 | **29** | **32** | < 0.25 | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | 330 | NA | 230 | 230 | NA | NA | 280 | 320 | 320 | 310 | 1.2 | < 1.0 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | NA | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 330 | NA | 230 | 230 | NA | NA | 280 | 320 | 320 | 310 | 1.2 | < 1.0 |
| **N-Ammonia (mg-N/L)** | 0.026 | NA | 0.024 | 0.023 | NA | NA | U 0.02 | 0.032 | U 0.030 | U 0.045 | 0.024 | < 0.010 |
| **N-Nitrate (mg-N/L)** | 4.1 | NA | 0.076 | 0.079 | NA | NA | 5.6 | 2.6 | 5.3 | 5.9 | < 0.010 | < 0.010 |
| **N-Nitrite (mg-N/L)** | 0.018 | NA | < 0.010 | < 0.010 | NA | NA | < 0.01 | 0.01 | 0.081 | 0.089 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 4.1 | NA | 0.076 | 0.079 | NA | NA | 5.6 | 2.6 | 5.4 | 6.0 | < 0.010 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.032 | NA | 0.025 | 0.025 | NA | NA | 0.088 | 0.053 | 0.53 | 1.7 | < 0.004 | < 0.004 |
| **Sulfate (mg/L)** | 31 | NA | 44 | 44 | NA | NA | 29 | 37 | 30 | 32 | < 2.5 | < 2.5 |
| **Sulfite (mg/L)** | < 2.0 | NA | < 2.0 | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | 1.6 | NA | 3.1 | 3.0 | NA | NA | U 2.3 | 2.6 | U 5.5 | U 3.3 | 1.8 | < 1.0 |
| **Dissolved oxygen (mg/L) (field data)** | 2.91 | NA | 3.61 | NA | NA | NA | 10.11 | 0.092 | NA | NA | NA | NA |

D - Indicated sample dilution.
OD - Indicates outlier data due to contamination of PCP analytical procedure. PCP data are presented in Table 2-3 of this 2002 groundwater report to indicate the data is not representative of site conditions. Biological parameters were not affected and the data remains in this table.
Wells 5-C, 9-A, 15-A were sampled for PCP only and the data was not representative and considered outliers. The data was not included in this table, see Table 2-3 for outlier data.
U - Indicates undetected concentration due to field blank contamination. See validation report.
UJ - Indicates analyte undetected due to surrogate standard outside QC limits. See validation report.
Well 1-A did not have enough water to collect sample and well 5-A contained product and was not sampled.
PPEG -Pressure Plant Extraction Gallery.
BFEG -Barkfill Extraction Gallery.
NA - Not Analyzed.
NS - Not Sampled due to low groundwater level in well.

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**September 2002**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 4-A 9/17/02 | 5-C 9/19/02 | 7-A 9/18/02 | 9-A 9/18/02 | (9-D) 9-ADup 9/18/02 | 9-C 9/18/02 | 10-A 9/18/02 | 11-A 9/18/02 | 12-A 9/18/02 | 15-A 9/19/02 | 19-A 9/17/02 | 22 9/17/02 | 23-A 9/18/02 | 24-A1 9/18/02 | 25-A 9/18/02 | 25-B 9/18/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.27 | < 0.25 | < 0.26 | **320** | **310** | **57** | < 2.5 | **29** | < 0.25 | **70** | < 0.25 | **6.3** | **27** | < 0.26 | **17** | **80** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | | | |
| Acenaphthylene | NA | NA | NA | 42 | 39 | NA | NA | NA | NA | D 110 | < 5.3 | 28 | NA | NA | < 5.4 | 22 |
| Acenaphthene | NA | NA | NA | Y 5.4 | Y 4.9 | NA | NA | NA | NA | 30 | < 1.8 | 6.8 | NA | NA | < 1.8 | < 1.8 |
| **D PAH compounds** | | | | | | | | | | | | | | | | |
| Naphthalene | NA | NA | NA | < 2.5 | < 2.5 | NA | NA | NA | NA | < 2.5 | < 2.5 | < 2.5 | NA | NA | < 2.5 | < 2.5 |
| Fluorene | NA | NA | NA | 1.8 | 1.7 | NA | NA | NA | NA | D 36 | < 0.46 | 2.7 | NA | NA | < 0.46 | 0.48 |
| Phenanthrene | NA | NA | NA | < 0.64 | < 0.64 | NA | NA | NA | NA | D 46 | < 0.64 | 0.67 | NA | NA | < 0.65 | < 0.64 |
| Anthracene | NA | NA | NA | < 0.66 | < 0.66 | NA | NA | NA | NA | 4.3 | < 0.66 | 0.74 | NA | NA | < 0.67 | < 0.66 |
| Fluoranthene | NA | NA | NA | < 0.49 | < 0.49 | NA | NA | NA | NA | D 44 | < 0.49 | 4.6 | NA | NA | < 0.49 | < 0.49 |
| Pyrene | NA | NA | NA | < 0.27 | < 0.27 | NA | NA | NA | NA | D 46 | < 0.27 | 3.3 | NA | NA | < 0.27 | < 0.27 |
| Benzo(g,h,i)perylene | NA | NA | NA | < 0.11 | < 0.11 | NA | NA | NA | NA | < 0.11 | < 0.11 | < 0.11 | NA | NA | < 0.11 | < 0.11 |
| **Total D PAHs** | NA | NA | NA | 1.8 | 1.7 | NA | NA | NA | NA | **176** | 0 | 12 | NA | NA | 0 | 0.48 |
| **B2 PAH compounds** | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | < 0.05 | < 0.05 | NA | NA | NA | NA | **11** | < 0.05 | 0.25 | NA | NA | < 0.05 | < 0.05 |
| Chrysene | NA | NA | NA | < 0.15 | < 0.15 | NA | NA | NA | NA | **D 15** | < 0.15 | < 0.15 | NA | NA | < 0.15 | < 0.15 |
| Benzo(b)fluoranthene | NA | NA | NA | < 0.04 | < 0.04 | NA | NA | NA | NA | **1.6** | < 0.04 | < 0.04 | NA | NA | < 0.04 | < 0.04 |
| Benzo(k)fluoranthene | NA | NA | NA | < 0.06 | < 0.06 | NA | NA | NA | NA | **0.81** | < 0.06 | < 0.06 | NA | NA | < 0.06 | < 0.06 |
| Benzo(a)pyrene | NA | NA | NA | < 0.07 | < 0.07 | NA | NA | NA | NA | **0.94** | < 0.07 | < 0.07 | NA | NA | < 0.07 | < 0.07 |
| Dibenzo(a,h)anthracene | NA | NA | NA | U 0.13 | U 0.14 | NA | NA | NA | NA | U **2.6** | U 0.13 | U 0.20 | NA | NA | U 0.14 | U 0.12 |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | < 0.07 | < 0.07 | NA | NA | NA | NA | Y 0.40 | < 0.07 | < 0.07 | NA | NA | < 0.07 | < 0.07 |
| **Alkalinity (mg/L CaCO3)** | 440 | NA | 520 | NA | NA | 310 | 290 | 310 | NA | NA | 390 | 300 | 360 | 240 | 370 | 330 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 440 | NA | 520 | NA | NA | 310 | 290 | 310 | NA | NA | 390 | 300 | 360 | 240 | 370 | 330 |
| **N-Ammonia (mg-N/L)** | J 0.083 | NA | 0.14 | NA | NA | < 0.010 | 0.042 | 0.022 | NA | NA | < 0.010 | < 0.010 | 0.089 | 0.021 | 0.046 | 0.020 |
| **N-Nitrate (mg-N/L)** | < 0.010 | NA | < 0.010 | NA | NA | 4.3 | 4.6 | 5.0 | NA | NA | 3.5 | 4.1 | 0.55 | < 0.010 | < 0.010 | 1.0 |
| **N-Nitrite (mg-N/L)** | < 0.010 | NA | 0.020 | NA | NA | < 0.010 | < 0.010 | 0.062 | NA | NA | < 0.010 | 0.24 | 0.052 | < 0.010 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | < 0.010 | NA | 0.023 | NA | NA | 4.3 | 4.6 | 5.1 | NA | NA | 3.5 | 4.4 | 0.60 | < 0.010 | < 0.010 | 1.0 |
| **Ortho-Phosphorous (mg-P/L)** | < 0.004 | NA | 0.068 | NA | NA | 0.029 | 0.067 | 0.065 | NA | NA | 0.025 | 2.3 | 0.035 | 0.029 | 0.040 | 0.006 |
| **Sulfate (mg/L)** | 14 | NA | 84 | NA | NA | 30 | 39 | 37 | NA | NA | 45 | 43 | 34 | 25 | 23 | 31 |
| **Sulfite (mg/L)** | < 2.0 | NA | UJ 2.0 | NA | NA | UJ 2.0 | UJ 2.0 | UJ 2.0 | NA | NA | UJ 2.0 | UJ 2.0 | UJ 2.0 | UJ 2.0 | UJ 2.0 | UJ 2.0 |
| **Total Organic Carbon (mg/L)** | 3.4 | NA | 4.2 | NA | NA | < 1.5 | < 1.5 | 2.0 | NA | NA | < 1.5 | < 1.5 | 14 | J 5.3 | J 4.2 | < 1.5 |
| **Dissolved oxygen (mg/L) (field data)** | 0.034 | NA | 0.35 | NA | NA | 0.55 | 3.22 | 0.52 | NA | NA | 2.47 | 0.62 | 1.19 | 0.53 | 0.59 | 3.4 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A and GM-4 did not have enough water to collect samples and well 5-A was not sampled due to product in well.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Indicates the surrogate was diluted.

J - Indicates estimated analyte concentration due to laboratory duplicate outside QC limits. See validation report.

U - Indicates analyte undetected, result is considered a false positive defined by method blank contamination. See validation report.

UJ - Indicates analyte undetected, reporting limit estimated due to holding time outside QC limits. See validation report.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**September 2002**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 26-A 9/18/02 | 26-C 9/18/02 | 27-A 9/17/02 | 28-B 9/17/02 | (28-D) 28-BDup 9/17/02 | GM-6 9/19/02 | GM-7 9/17/02 | GM-8 9/17/02 | BFEG 9/17/02 | PPEG 9/17/02 | (4-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | |
| Pentachlorophenol | **9.2** | **77** | < 0.25 | **8.2** | **8.7** | **31** | < 0.25 | < 0.25 | **46** | **60** | < 0.26 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | |
| Acenaphthylene | NA | 15 | NA | NA | NA | NA | NA | NA | 15 | J 6.4 | NA | < 5.3 |
| Acenaphthene | NA | < 1.8 | NA | NA | NA | NA | NA | NA | 8.1 | 3 | NA | < 1.8 |
| **D PAH compounds** | | | | | | | | | | | | |
| Naphthalene | NA | < 2.5 | NA | NA | NA | NA | NA | NA | < 2.5 | < 2.5 | NA | < 2.5 |
| Fluorene | NA | < 0.46 | NA | NA | NA | NA | NA | NA | 1.8 | < 0.46 | NA | < 0.46 |
| Phenanthrene | NA | < 0.64 | NA | NA | NA | NA | NA | NA | < 0.65 | < 0.64 | NA | < 0.64 |
| Anthracene | NA | < 0.66 | NA | NA | NA | NA | NA | NA | < 0.67 | < 0.66 | NA | < 0.66 |
| Fluoranthene | NA | < 0.49 | NA | NA | NA | NA | NA | NA | 3.2 | < 0.49 | NA | < 0.49 |
| Pyrene | NA | < 0.27 | NA | NA | NA | NA | NA | NA | 2.2 | 1.0 | NA | < 0.27 |
| Benzo(g,h,i)perylene | NA | < 0.11 | NA | NA | NA | NA | NA | NA | < 0.11 | < 0.11 | NA | < 0.11 |
| **Total D PAHs** | NA | 0 | NA | NA | NA | NA | NA | NA | 7.2 | 1.0 | NA | 0 |
| **B2 PAH compounds** | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | < 0.05 | NA | NA | NA | NA | NA | NA | **0.17** | Y 0.05 | NA | < 0.05 |
| Chrysene | NA | < 0.15 | NA | NA | NA | NA | NA | NA | < 0.15 | < 0.15 | NA | < 0.15 |
| Benzo(b)fluoranthene | NA | < 0.04 | NA | NA | NA | NA | NA | NA | 0.05 | < 0.04 | NA | < 0.04 |
| Benzo(k)fluoranthene | NA | < 0.06 | NA | NA | NA | NA | NA | NA | < 0.06 | < 0.06 | NA | < 0.06 |
| Benzo(a)pyrene | NA | < 0.07 | NA | NA | NA | NA | NA | NA | < 0.07 | < 0.07 | NA | < 0.07 |
| Dibenzo(a,h)anthracene | NA | U 0.13 | NA | NA | NA | NA | NA | NA | U 0.12 | U 0.12 | NA | 0.13 |
| Indeno(1,2,3-cd)pyrene | NA | < 0.07 | NA | NA | NA | NA | NA | NA | < 0.07 | < 0.07 | NA | < 0.07 |
| **Alkalinity (mg/L CaCO3)** | 320 | 320 | NA | 210 | 200 | NA | 310 | 310 | 310 | 320 | < 1.0 | < 1.0 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | < 1.0 | NA | < 1.0 | < 1.0 | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 320 | 320 | NA | 210 | 200 | NA | 310 | 310 | 310 | 320 | < 1.0 | < 1.0 |
| **N-Ammonia (mg-N/L)** | 0.045 | 0.026 | NA | J 0.010 | < 0.010 | NA | < 0.010 | J 0.017 | < 0.010 | J 0.015 | < 0.010 | < 0.010 |
| **N-Nitrate (mg-N/L)** | 0.79 | 3.9 | NA | 0.024 | 0.020 | NA | 4.6 | 3.3 | 3.8 | 5.4 | < 0.010 | < 0.010 |
| **N-Nitrite (mg-N/L)** | < 0.010 | 0.026 | NA | < 0.010 | < 0.010 | NA | < 0.010 | < 0.010 | 0.10 | 0.082 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 0.79 | 4.0 | NA | 0.024 | 0.020 | NA | 4.6 | 3.3 | 3.9 | 5.5 | < 0.010 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.006 | 0.030 | NA | 0.028 | 0.025 | NA | 0.099 | 0.049 | 0.71 | 1.8 | < 0.004 | < 0.004 |
| **Sulfate (mg/L)** | 54 | 32 | NA | 40 | 43 | NA | 37 | 33 | 37 | 43 | < 2.5 | < 2.5 |
| **Sulfite (mg/L)** | UJ 2.0 | UJ 2.0 | NA | < 2.0 | < 2.0 | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | 3.5 | < 1.5 | NA | < 1.5 | < 1.5 | NA | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| **Dissolved oxygen (mg/L) (field data)** | 3.3 | 3.3 | NA | 0.83 | NA | NA | 4.59 | 0.58 | NA | NA | NA | NA |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A and GM-4 did not have enough water to collect samples and well 5-A was not sampled due to product in well.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Indicates the surrogate was diluted.

J - Indicates estimated analyte concentration due to laboratory duplicate outside QC limits. See validation report.

U - Indicates analyte undetected, result is considered a false positive defined by field blank contamination. See validation report.

UJ - Indicates analyte undetected, reporting limit estimated due to holding time outside QC limits. See validation report.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Bark Fill Extraction Gallery

**Appendix A (Continued**
**Summary of Groundwater Analytical Data**
**April 2003**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 1-A 4/8/03 | 4-A 4/8/03 | 5-A 4/7/03 | 5-C 4/7/03 | 7-A 4/9/03 | 9-A 4/7/03 | (9-D) 9-A Dup 4/7/03 | 9-C 4/9/2003 | 10-A 4/9/03 | 11-A 4/8/03 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | < 0.25 | **3900** | < 0.25 | < 0.25 | **120** | **110** | **49** | < 0.25 | **21** |
| **Alkalinity (mg/L CaCO3)** | 340 | 470 | NA | NA | 430 | NA | NA | 330 | 310 | 370 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 340 | 470 | NA | NA | 430 | NA | NA | 330 | 310 | 370 |
| **N-Ammonia (mg-N/L)** | 0.014 | 0.049 | NA | NA | 0.048 | NA | NA | < 0.010 | 0.016 | < 0.010 |
| **N-Nitrate (mg-N/L)** | 8.9 | < 0.010 | NA | NA | < 0.010 | NA | NA | 4.2 | 2.9 | 4.0 |
| **N-Nitrite (mg-N/L)** | < 0.010 | < 0.010 | NA | NA | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.024 |
| **Nitrate + Nitrite (mg-N/L)** | 8.9 | < 0.010 | NA | NA | < 0.010 | NA | NA | 4.2 | 2.9 | 4.0 |
| **Ortho-Phosphorous (mg-P/L)** | 0.11 | 0.012 | NA | NA | 0.016 | NA | NA | 0.024 | 0.045 | 0.057 |
| **Sulfate (mg/L)** | 86 | 5.2 | NA | NA | 69 | NA | NA | 32 | 28 | 79 |
| **Sulfite (mg/L)** | < 2.0 | < 2.0 | NA | NA | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | 3.4 | 30 | NA | NA | 7.4 | NA | NA | 1.9 | 3.8 | 5.7 |
| **Dissolved Oxygen (mg/L) (field)** | 4.08 | 0.57 | NA | NA | 0.55 | NA | NA | 0.55 | 1.84 | 0.36 |

| Sample ID: / Sample Date: | 12-A 4/8/03 | 15-A 4/7/03 | 22 4/8/03 | 23-A 4/9/03 | 24-A1 4/9/03 | 25-A 4/9/03 | 25-B 4/9/03 | 26-A 4/9/03 | 26-C 4/9/03 | 27-A 4/7/03 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **61** | **7.8** | **15** | < 0.25 | **30** | **80** | **6.0** | **72** | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | NA | NA | 320 | 430 | 350 | 390 | 360 | 350 | 340 | NA |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | NA | NA | 320 | 430 | 350 | 390 | 360 | 350 | 340 | NA |
| **N-Ammonia (mg-N/L)** | NA | NA | < 0.010 | 0.24 | 0.036 | 0.014 | 0.029 | 0.028 | < 0.010 | NA |
| **N-Nitrate (mg-N/L)** | NA | NA | 5.8 | 0.34 | < 0.010 | 0.85 | 2.4 | 0.64 | 4.5 | NA |
| **N-Nitrite (mg-N/L)** | NA | NA | 0.15 | 0.014 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | NA |
| **Nitrate + Nitrite (mg-N/L)** | NA | NA | 6.0 | 0.35 | < 0.010 | 0.85 | 2.4 | 0.64 | 4.5 | NA |
| **Ortho-Phosphorous (mg-P/L)** | NA | NA | 2.9 | 0.006 | 0.006 | 0.056 | < 0.004 | < 0.004 | 0.025 | NA |
| **Sulfate (mg/L)** | NA | NA | 39 | 35 | 35 | 42 | 33 | 53 | 36 | NA |
| **Sulfite (mg/L)** | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | NA |
| **Total Organic Carbon (mg/L)** | NA | NA | < 1.5 | 23 | 13 | 5.6 | 2.3 | 4.4 | 2.0 | NA |
| **Dissolved Oxygen (mg/L) (field)** | NA | NA | 1.51 | NA | 0.76 | 0.88 | 0.64 | 0.67 | 0.85 | NA |

| Sample ID: / Sample Date: | (27-D) 27-A Dup 4/7/03 | 28-B 4/8/03 | GM-4 4/7/03 | GM-6 4/7/03 | GM-7 4/8/03 | GM-8 4/8/03 | BFEG 4/8/03 | PPEG 4/8/03 | (4-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **1.8** | **470** | **5.3** | < 0.25 | < 0.25 | **37** | **45** | < 0.25 | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | NA | 210 | NA | NA | 280 | 330 | 330 | 320 | < 1.0 | < 1.0 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | NA | 210 | NA | NA | 280 | 330 | 330 | 320 | < 1.0 | < 1.0 |
| **N-Ammonia (mg-N/L)** | NA | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.042 | 0.014 | < 0.010 | < 0.010 |
| **N-Nitrate (mg-N/L)** | NA | < 0.010 | NA | NA | 5.5 | 2.6 | 4.2 | 6.3 | 0.019 | < 0.010 |
| **N-Nitrite (mg-N/L)** | NA | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.096 | 0.045 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | NA | < 0.010 | NA | NA | 5.5 | 2.6 | 4.3 | 6.4 | 0.019 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | NA | 0.027 | NA | NA | 0.11 | 0.054 | 1.0 | 1.8 | < 0.004 | < 0.004 |
| **Sulfate (mg/L)** | NA | 44 | NA | NA | 21 | 42 | 33 | 39 | < 2.5 | < 2.5 |
| **Sulfite (mg/L)** | NA | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | NA | < 1.5 | NA | NA | 1.8 | 2.7 | 2.8 | 1.9 | < 1.5 | < 1.5 |
| **Dissolved Oxygen (mg/L) (field)** | NA | 0.64 | NA | NA | 4.57 | 0.64 | NA | NA | NA | NA |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Bolded concentration indicates exceedence of treatment level.
NA - Not analyzed.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**September 2003**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 4-A 9/9/03 | 5-A 9/8/03 | 5-C 9/8/03 | 7-A 9/9/03 | 9-A 9/10/03 | (9-D) 9-ADup 9/10/03 | 9-C 9/10/03 | 10-A 9/10/03 | 11-A 9/10/03 | 12-A 9/10/03 | 15-A 9/8/03 | 19-A 9/9/03 | 22 9/9/03 | 23-A 9/10/03 | 24-A1 9/10/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **2,200** | < 0.25 | < 0.25 | **D 250** | **D 240** | **57** | < 0.25 | **24** | < 0.25 | **100** | < 0.25 | **6.2** | **76** | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | | |
| Acenaphthylene | NA | 260 | NA | NA | J 9.3 | J 32 | NA | NA | NA | NA | D 99 | < 2.0 | 10 | NA | NA |
| Acenaphthene | NA | D 230 | NA | NA | 16 | 13 | NA | NA | NA | NA | 20 | < 2.0 | < 2.0 | NA | NA |
| **D PAH Compounds** | | | | | | | | | | | | | | | |
| Naphthalene | NA | **54** | NA | NA | < 1.0 | < 1.0 | NA | NA | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA |
| Fluorene | NA | **D 850** | NA | NA | 2.2 | 1.9 | NA | NA | NA | NA | D 24 | < 0.20 | 1.4 | NA | NA |
| Phenanthrene | NA | **D2 420** | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | D 11 | < 0.20 | < 0.2 | NA | NA |
| Anthracene | NA | **D 150** | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | 2.1 | < 0.20 | 1.0 | NA | NA |
| Fluoranthene | NA | **D2 1000** | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | D 25 | < 0.20 | 7.3 | NA | NA |
| Pyrene | NA | **D 98** | NA | NA | < 0.3 | < 0.3 | NA | NA | NA | NA | 2.3 | < 0.30 | 2.3 | NA | NA |
| Benzo(g,h,i)perylene | NA | **35** | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | < 0.20 | < 0.20 | < 0.20 | NA | NA |
| **Total D PAHs** | NA | **2607** | NA | NA | 2.2 | 1.9 | NA | NA | NA | NA | 64.4 | 0.00 | 12.00 | NA | NA |
| **B2 PAH Compounds** | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | **D 80** | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | **1.3** | < 0.20 | **0.39** | NA | NA |
| Chrysene | NA | < 20 | NA | NA | Y 1.8 | Y 1.6 | NA | NA | NA | NA | **2.3** | < 0.20 | < 0.20 | NA | NA |
| Benzo(b)fluoranthene | NA | **D 62** | NA | NA | < 0.3 | < 0.3 | NA | NA | NA | NA | **1.1** | < 0.30 | < 0.30 | NA | NA |
| Benzo(k)fluoranthene | NA | < 20 | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | **0.35** | < 0.20 | < 0.20 | NA | NA |
| Benzo(a)pyrene | NA | < 20 | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | **0.36** | < 0.20 | < 0.20 | NA | NA |
| Dibenzo(a,h)anthracene | NA | < 3.0 | NA | NA | < 0.30 | < 0.30 | NA | NA | NA | NA | Y 0.54 | < 0.30 | < 0.30 | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | **26** | NA | NA | < 0.2 | < 0.2 | NA | NA | NA | NA | < 0.20 | < 0.20 | < 0.20 | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 500 | NA | NA | 1400 | NA | NA | 330 | 310 | 330 | NA | NA | 440 | 340 | 420 | 370 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 500 | NA | NA | 1400 | NA | NA | 330 | 310 | 330 | NA | NA | 440 | 340 | 420 | 370 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.055 | NA | NA | 0.026 | NA | NA | < 0.010 | 0.011 | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.066 | 0.040 |
| **N-Nitrate -Calculated (mg-N/L)** | < 0.010 | NA | NA | < 0.010 | NA | NA | 3.9 | 3.6 | 4.4 | NA | NA | 2.4 | 1.2 | 0.28 | < 0.010 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | < 0.010 | NA | NA | 0.049 | NA | NA | < 0.010 | < 0.010 | 0.066 | NA | NA | < 0.010 | 0.043 | 0.035 | < 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | < 0.010 | NA | NA | < 0.010 | NA | NA | 3.9 | 3.6 | 4.5 | NA | NA | 2.4 | 4.2 | 0.31 | < 0.010 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | U 0.006 | NA | NA | U 0.007 | NA | NA | 0.023 | 0.059 | 0.097 | NA | NA | 0.038 | 2.4 | U 0.020 | < 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | 15 | NA | NA | 100 | NA | NA | 29 | 34 | 33 | NA | NA | 36 | 36 | 37 | 34 |
| **Sulfite -Method 377.1 (mg/L)** | < 2.0 | NA | NA | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 3.6 | NA | NA | 16 | NA | NA | 10.0 | 8.9 | 10.0 | NA | NA | 4.8 | 3.6 | 22 | 11 |
| **Dissolved Oxygen (mg/L) (field)** | 1.65 | NA | 2.62 | NA | NA | NA | 0.76 | NA | 0.74 | NA | NA | 2.21 | 1.93 | 0.50 | 0.63 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect a sample, therefore Well 19-A was sampled for background data to replace Well 1-A.
D - Indicates the surrogate was diluted.
D2 - Indicates the surrogate was diluted twice.
J - Indicates an estimated concentration due to the outlier between field duplicate samples. See validation report.
U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank, evidence of field contamination. See validation report.
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**September 2003**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 25-A 9/10/03 | 25-B 9/10/03 | 26-A 9/10/03 | 26-C 9/10/03 | 27-A 9/9/03 | 28-B 9/9/03 | (28-D) 28-B Dup 9/9/03 | GM-4 9/8/03 | GM-6 9/8/03 | GM-7 9/9/03 | GM-8 9/9/03 | BFEG 9/9/03 | PPEG 9/9/03 | (4-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | **86** | **92** | **12** | **58** | < 0.25 | 0.72 | 0.72 | **350** | **31** | < 0.25 | < 0.25 | **30** | **19** | < 0.25 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | | |
| Acenaphthylene | < 2.0 | 21 | NA | < 2.0 | NA | NA | NA | NA | NA | NA | NA | 12 | < 2.0 | NA | < 2.0 |
| Acenaphthene | < 2.0 | < 2.0 | NA | < 2.0 | NA | NA | NA | NA | NA | NA | NA | 16 | 5.6 | NA | < 2.0 |
| **D PAH Compounds** | | | | | | | | | | | | | | | |
| Naphthalene | < 1.0 | < 1.0 | NA | 10 | NA | NA | NA | NA | NA | NA | NA | < 1.0 | < 1.0 | NA | < 1.0 |
| Fluorene | < 0.2 | 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | 2.3 | < 0.2 | NA | < 0.20 |
| Phenanthrene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | 1.4 | < 0.2 | NA | < 0.20 |
| Anthracene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | 0.73 | < 0.2 | NA | < 0.20 |
| Fluoranthene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | 6.9 | < 0.20 | NA | < 0.20 |
| Pyrene | < 0.3 | Y 0.46 | NA | < 0.3 | NA | NA | NA | NA | NA | NA | NA | 4 | 0.84 | NA | < 0.30 |
| Benzo(g,h,i)perylene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | 0.35 | < 0.20 | NA | < 0.20 |
| **Total D PAHs** | 0.0 | 0.2 | NA | 10 | NA | NA | NA | NA | NA | NA | NA | 15.68 | 0.84 | NA | 0.0 |
| **B2 PAH Compounds** | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | **1.80** | < 0.20 | NA | < 0.20 |
| Chrysene | < 0.2 | Y 10 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | **0.70** | < 0.20 | NA | < 0.20 |
| Benzo(b)fluoranthene | < 0.3 | < 0.3 | NA | < 0.3 | NA | NA | NA | NA | NA | NA | NA | **1.2** | < 0.30 | NA | < 0.30 |
| Benzo(k)fluoranthene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | **0.57** | < 0.20 | NA | < 0.20 |
| Benzo(a)pyrene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | **1.30** | < 0.20 | NA | < 0.20 |
| Dibenzo(a,h)anthracene | < 0.30 | < 0.30 | NA | < 0.30 | NA | NA | NA | NA | NA | NA | NA | **0.60** | < 0.30 | NA | < 0.30 |
| Indeno(1,2,3-cd)pyrene | < 0.2 | < 0.2 | NA | < 0.2 | NA | NA | NA | NA | NA | NA | NA | **0.56** | < 0.20 | NA | < 0.20 |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 350 | 350 | 340 | 370 | NA | 240 | 240 | NA | NA | 320 | 330 | 320 | 340 | 2.1 | < 1.0 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 350 | 350 | 340 | 370 | NA | 240 | 240 | NA | NA | 320 | 330 | 320 | 340 | 2.1 | < 1.0 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.011 | 0.024 | 0.026 | 0.010 | NA | < 0.010 | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.014 | 0.072 | < 0.010 | < 0.010 |
| **N-Nitrate -Calculated (mg-N/L)** | 1.400 | 1.5 | 1.0 | 4.1 | NA | UJ 0.010 | J 0.027 | NA | NA | 3.8 | 2.8 | 3.2 | 3.9 | < 0.010 | < 0.010 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | 0.022 | 0.027 | 0.025 | 0.043 | NA | < 0.010 | < 0.010 | NA | NA | < 0.010 | < 0.010 | 0.066 | 0.018 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | 1.40 | 1.6 | 1.0 | 4.2 | NA | UJ 0.010 | J 0.027 | NA | NA | 3.8 | 2.8 | 3.2 | 3.9 | < 0.010 | < 0.010 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | 0.039 | < 0.004 | 0.006 | 0.026 | NA | 0.032 | 0.031 | NA | NA | 0.11 | 0.052 | 0.95 | 1.7 | 0.006 | < 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | 29 | 30 | 38 | 40 | NA | J 70 | J 15 | NA | NA | 30 | 37 | 32 | 40 | < 2.0 | < 2.0 |
| **Sulfite -Method 377.1 (mg/L)** | < 2.0 | 2.5 | < 2.0 | < 2.0 | NA | < 2.0 | < 2.0 | NA | NA | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 10 | 10.0 | 9.0 | 5.5 | NA | 2.3 | 1.7 | NA | NA | 5.3 | 3.1 | 3.1 | 3.9 | < 1.5 | < 1.5 |
| **Dissolved Oxygen (mg/L) (field)** | 0.47 | 0.38 | 0.70 | 0.61 | NA | 1.25 | 1.7 | NA | NA | 5.06 | 0.40 | NA | NA | NA | NA |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
D - Indicates the surrogate was diluted.
D2 - Indicates the surrogate was diluted twice.
J - Indicates an estimated concentration due to the outlier between field duplicate samples. See validation report.
U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank, evidence of field contamination. See validation report.
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

**Appendix A (continued)**
**Summary of Groundwater Analytical Data**
**April 2004**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 4-A 4/6/2004 | 5-A 4/6/2004 | 5-C 4/6/2004 | 7-A 4/6/2004 | 9-A 4/6/2004 | (9-D) 9-A Dup 4/6/2004 | 9-C 4/7/2004 | 10-A 4/7/2004 | 11-A 4/7/2004 | 12-A 4/6/2004 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **2300** | < 0.25 | < 0.25 | **71** | **68** | **45** | < 0.25 | **20** | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | 518.0 | NA | NA | 890.0 | NA | NA | 356.0 | 306.0 | 363.0 | NA |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1 | NA | NA | < 1 | NA | NA | < 1 | < 1 | < 1 | NA |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 518.000 | NA | NA | 890.000 | NA | NA | 356.000 | 306.000 | 363.000 | NA |
| **N-Ammonia (mg-N/L)** | 0.1 | NA | NA | 0.027 | NA | NA | < 0.01 | < 0.01 | < 0.01 | NA |
| **N-Nitrate (mg-N/L)** | < 0.010 | NA | NA | < 0.010 | NA | NA | 4.560 | 2.950 | 1.660 | NA |
| **N-Nitrite (mg-N/L)** | < 0.01 | NA | NA | 0.043 | NA | NA | 0.02 | 0.016 | 0.025 | NA |
| **Nitrate + Nitrite (mg-N/L)** | < 0.01 | NA | NA | < 0.010 | NA | NA | 4.580 | 2.970 | 1.690 | NA |
| **Ortho-Phosphorous (mg-P/L)** | < 0.004 | NA | NA | < 0.004 | NA | NA | 0.027 | 0.057 | 0.133 | NA |
| **Sulfate (mg/L)** | 7.1 | NA | NA | 68.3 | NA | NA | 30.4 | 26.5 | 145.0 | NA |
| **Sulfite (mg/L)** | < 1.5 | NA | NA | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | NA |
| **Total Organic Carbon (mg/L)** | 19.7 | NA | NA | 8.34 | NA | NA | 2.57 | 5.81 | 6.65 | NA |

| Sample ID: / Sample Date: | 15-A 4/6/2004 | 19-A 4/6/2004 | 22 4/6/2004 | 23-A 4/6/2004 | 24-A1 4/7/2004 | 25-A 4/7/2004 | 25-B 4/7/2004 | 26-A 4/7/2004 | 26-C 4/7/2004 | 27-A 4/6/2004 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **78** | < 0.25 | 0.46 | **62** | < 0.25 | **70** | **100** | **4.2** | **64** | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | NA | NA | 333.0 | 422.0 | 357.0 | 381.0 | 381.0 | 360.0 | 332.0 | NA |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | NA | NA | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | NA | NA | 333.000 | 422.00 | 357.000 | 381.000 | 381.000 | 360.000 | 332.000 | NA |
| **N-Ammonia (mg-N/L)** | NA | NA | < 0.01 | 0.211 | 0.038 | < 0.01 | < 0.01 | 0.18 | 0.011 | NA |
| **N-Nitrate (mg-N/L)** | NA | NA | 2.89 | 0.205 | < 0.010 | 1.850 | 2.680 | 0.289 | 5.090 | NA |
| **N-Nitrite (mg-N/L)** | NA | NA | 0.02 | 0.021 | < 0.010 | 0.02 | 0.044 | < 0.01 | 0.043 | NA |
| **Nitrate + Nitrite (mg-N/L)** | NA | NA | 2.91 | 0.226 | < 0.010 | 1.870 | 2.720 | 0.289 | 5.130 | NA |
| **Ortho-Phosphorous (mg-P/L)** | NA | NA | 1.42 | < 0.004 | 0.005 | 0.04 | < 0.004 | < 0.004 | 0.026 | NA |
| **Sulfate (mg/L)** | NA | NA | 38.5 | 32.5 | 61.2 | 34.1 | 31.2 | 61.1 | 30.9 | NA |
| **Sulfite (mg/L)** | NA | NA | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 | NA |
| **Total Organic Carbon (mg/L)** | NA | NA | 5.34 | 19.6 | 11.6 | 11.40 | 3.75 | 9.45 | 2.61 | NA |

| Sample ID: / Sample Date: | (27-D) 27-A Dup 4/6/2004 | 28-B 4/6/2004 | GM-4 4/6/2004 | GM-6 4/6/2004 | GM-7 4/6/2004 | GM-8 4/6/2004 | BFEG 4/6/2004 | PPEG 4/6/2004 | (4-F) Field Blank 38083 | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **0.96** | **400** | **9.9** | < 0.25 | < 0.25 | **7.5** | **10** | < 0.25 | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | NA | 239.0 | NA | NA | 264.0 | 322.0 | 305.0 | 344.0 | < 1.0 | < 1.0 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | NA | < 1 | NA | NA | < 1 | < 1 | < 1 | < 1 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | NA | 239.000 | NA | NA | 264.000 | 322.000 | 305.000 | 344.000 | < 1.000 | < 1.000 |
| **N-Ammonia (mg-N/L)** | NA | < 0.010 | NA | NA | < 0.01 | < 0.01 | < 0.0 | < 0.01 | 0.013 | < 0.010 |
| **N-Nitrate (mg-N/L)** | NA | 0.077 | NA | NA | 5.790 | 2.500 | 2.440 | 2.280 | < 0.010 | < 0.010 |
| **N-Nitrite (mg-N/L)** | NA | < 0.010 | NA | NA | 0.03 | 0.017 | 0.019 | 0.018 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | NA | 0.077 | NA | NA | 5.82 | 2.520 | 2.5 | 2.3 | < 0.010 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | NA | 0.032 | NA | NA | 0.08 | 0.049 | 0.518 | 1.01 | < 0.004 | < 0.004 |
| **Sulfate (mg/L)** | NA | 73.2 | NA | NA | 30.6 | 36.8 | 31.4 | 37.0 | < 2.0 | < 2.0 |
| **Sulfite (mg/L)** | NA | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | < 1.5 | 1.5 | < 1.5 |
| **Total Organic Carbon (mg/L)** | NA | 1.84 | NA | NA | 6.02 | 3.22 | 3.96 | 3.97 | < 1.5 | < 1.5 |

Note: Bolded concentration indicates accidence of treatment level.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

**Appendix A (continued)**
**Summary of Groundwater Analytical Data**
**September 2004**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 4-A 9/28/2004 | 5-A 9/28/2004 | 5-C 9/28/2004 | 7-A 9/29/2004 | 9-A 9/29/2004 | (9-D) 9-ADup 9/29/2004 | 9-C 9/29/2004 | 10-A 9/29/2004 | 11-A 9/29/2004 | 12-A 9/29/2004 | 15-A 9/28/2004 | 19-A 9/28/2004 | 22 9/28/2004 | 23-A 9/29/2004 | 24-A1 9/29/2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **D 6,900** | < 0.25 | < 0.25 | **110** | **94** | **39** | < 0.25 | **7.2** | < 0.25 | **46** | < 0.25 | **6.8** | **D 28** | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | | |
| Naphthalene | NA | **J 330** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | 1.2 | < 0.10 | 0.2 | NA | NA |
| Acenaphthylene | NA | < 100 | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | < 0.1 | < 0.10 | < 0.10 | NA | NA |
| Acenaphthene | NA | **J 3700** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | 3.8 | < 0.10 | < 0.10 | NA | NA |
| Fluorene | NA | **J 3800** | NA | NA | **0.99** | **1.1** | NA | NA | NA | NA | 9.5 | < 0.10 | < 0.10 | NA | NA |
| Phenanthrene | NA | **J 5600** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | D 17 | < 0.10 | < 0.10 | NA | NA |
| Anthracene | NA | **J 1300** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | 1.9 | < 0.10 | 0.80 | NA | NA |
| Fluoranthene | NA | **J 3900** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | 2.1 | < 0.10 | 3.3 | NA | NA |
| Pyrene | NA | **J 2800** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | 3.2 | < 0.10 | 2.4 | NA | NA |
| Benzo(a)anthracene | NA | **J 1000** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | **0.62** | < 0.10 | **0.14** | NA | NA |
| Chrysene | NA | **J 1100** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | **0.66** | < 0.10 | < 0.10 | NA | NA |
| Benzo(b)fluoranthene | NA | **J 660** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | **0.31** | < 0.10 | 0.14 | NA | NA |
| Benzo(k)fluoranthene | NA | **J 510** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | **0.31** | < 0.10 | < 0.10 | NA | NA |
| Benzo(a)pyrene | NA | **J 550** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | **0.19** | < 0.10 | 0.12 | NA | NA |
| Dibenzo(a,h)anthracene | NA | < 100 | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | < 0.10 | < 0.10 | < 0.10 | NA | NA |
| Benzo(g,h,i)perylene | NA | **J 180** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | 0.10 | < 0.10 | < 0.10 | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | **J 240** | NA | NA | < 0.10 | < 0.10 | NA | NA | NA | NA | 0.13 | < 0.10 | < 0.10 | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 513 | NA | NA | 1250 | NA | NA | 351 | 310 | 329 | NA | NA | 434 | 314 | 415 | 416 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 513 | NA | NA | 1250 | NA | NA | 351 | 310 | 329 | NA | NA | 434 | 314 | 415 | 416 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | U 0.103 | NA | NA | 0.069 | NA | NA | < 0.010 | 0.012 | 0.019 | NA | NA | U 0.012 | U 0.078 | 0.216 | 0.055 |
| **N-Nitrate -Calculated (mg-N/L)** | U 0.014 | NA | NA | 0.020 | NA | NA | 3.99 | 4.66 | 3.40 | NA | NA | 2.62 | 7.39 | 1.50 | 0.012 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | < 0.010 | NA | NA | < 0.010 | NA | NA | < 0.010 | 0.011 | 0.028 | NA | NA | 0.013 | 0.029 | 0.047 | < 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | U 0.014 | NA | NA | 0.020 | NA | NA | 3.99 | 4.67 | 3.43 | NA | NA | 2.63 | 7.42 | 1.55 | 0.012 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | < 0.004 | NA | NA | 0.026 | NA | NA | 0.030 | 0.063 | 0.169 | NA | NA | 0.027 | 2.76 | 0.029 | 0.012 |
| **Sulfate -Method 375.2 (mg/L)** | 10.6 | NA | NA | 68.2 | NA | NA | 33.0 | 38.6 | 39.3 | NA | NA | 37.3 | 35.9 | 36.7 | 44.6 |
| **Sulfite -Method 377.1 (mg/L)** | < 1.5 | NA | NA | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 7.88 | NA | NA | 3.92 | NA | NA | < 1.50 | 1.74 | 3.41 | NA | NA | 2.42 | 2.92 | 11.3 | 5.64 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Indicates the surrogate was diluted.

J - Indicates an estimated concentration due to holding time exceedence. See validation report.

U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank, evidence of field contamination. See validation report.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Bark Fill Extraction Gallery

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**September 2004**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 25-A 9/29/2004 | 25-B 9/29/2004 | 26-A 9/29/2004 | 26-C 9/29/2004 | 27-A 9/28/2004 | (27-D) 27-A Dup 9/28/2004 | 28-B 9/28/2004 | GM-4 9/27/2004 | GM-6 9/27/2004 | GM-7 9/28/2004 | GM-8 9/28/2004 | BFEG 9/28/2004 | PPEG 9/28/2004 | (4-F) Field Blank 9/28/2004 | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | **63** | **76** | **3.7** | **44** | < 0.25 | < 0.25 | 0.69 | **300** | **D 21** | < 0.25 | < 0.25 | **7.1** | **20** | < 0.25 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | | |
| Naphthalene | **0.10** | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | 0.77 | NA | < 0.10 |
| Acenaphthylene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Acenaphthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | 0.31 | 0.86 | NA | < 0.10 |
| Fluorene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | 0.80 | NA | < 0.10 |
| Phenanthrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | 0.30 | NA | < 0.10 |
| Anthracene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | 0.44 | NA | < 0.10 |
| Fluoranthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | 0.25 | 1.1 | NA | < 0.10 |
| Pyrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | 0.23 | 1.2 | NA | < 0.10 |
| Benzo(a)anthracene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Chrysene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Benzo(b)fluoranthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Benzo(k)fluoranthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Benzo(a)pyrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Dibenzo(a,h)anthracene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Benzo(g,h,i)perylene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Indeno(1,2,3-cd)pyrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 374 | 357 | 352 | 338 | NA | NA | 240 | NA | NA | 353 | 321 | 317 | 317 | 1.2 | < 1.0 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 374 | 357 | 352 | 338 | NA | NA | 240 | NA | NA | 353 | 321 | 317 | 317 | 1.2 | < 1.0 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.020 | 0.038 | 0.037 | 0.017 | NA | NA | < 0.010 | NA | NA | U 0.015 | U 0.014 | U 0.01 | U 0.068 | 0.022 | < 0.010 |
| **N-Nitrate -Calculated (mg-N/L)** | 1.24 | 1.54 | 0.222 | 4.55 | NA | NA | U 0.040 | NA | NA | 4.02 | 2.57 | 4.32 | 7.64 | 0.011 | < 0.010 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | 0.015 | 0.024 | < 0.010 | 0.034 | NA | NA | < 0.010 | NA | NA | 0.022 | 0.014 | 0.033 | 0.055 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | 1.25 | 1.56 | 0.222 | 4.58 | NA | NA | U 0.040 | NA | NA | 4.04 | 2.58 | 4.35 | 7.70 | 0.011 | < 0.010 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | 0.035 | < 0.004 | 0.005 | 0.029 | NA | NA | 0.032 | NA | NA | 0.148 | 0.054 | 0.337 | 1.83 | < 0.004 | < 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | 38.0 | 34.9 | 47.2 | 34.5 | NA | NA | 67.0 | NA | NA | 28.2 | 37.0 | 28.2 | 35.7 | < 2.0 | < 2.0 |
| **Sulfite -Method 377.1 (mg/L)** | < 1.5 | < 1.5 | < 1.5 | < 1.5 | NA | NA | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 3.61 | 1.92 | 3.34 | < 1.50 | NA | NA | < 1.50 | NA | NA | < 1.50 | < 1.50 | < 1.50 | 1.60 | < 1.50 | < 1.5 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Indicates the surrogate was diluted.

J - Indicates an estimated concentration due to the outlier between field duplicate samples. See validation report.

U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank, evidence of field contamination. See validation report.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Bark Fill Extraction Gallery

**Appendix A (continued)**
**Summary of Groundwater Analytical Data**
**April 2005**
**IPC - Bozeman, Montana**

| Sample ID: / Sample Date: | 4-A 4/20/2005 | 5-A 4/20/2005 | 5-C 4/20/2005 | 7-A 4/21/2005 | 9-A 4/21/2005 | (9-D) 9-A Dup 4/21/2005 | 9-C 4/21/2005 | 10-A 4/21/2005 | 11-A 4/21/2005 | 12-A 4/21/2005 | 15-A 4/20/2005 | 19-A 4/20/2005 | 22 4/20/2005 | 23-A 4/21/2005 | 24-A1 4/21/2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | D **2200** | < 0.25 | < 0.25 | **3.9** | **3.0** | **40** | < 0.25 | **0.56** | < 0.25 | **36** | < 0.25 | **5.2** | **15** | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | 548 | NA | NA | 597 | NA | NA | 348 | 325 | 377 | NA | NA | 428 | 328 | 458 | 402 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 548 | NA | NA | 597 | NA | NA | 348 | 325 | 377 | NA | NA | 428 | 328 | 458 | 402 |
| **N-Ammonia (mg-N/L)** | 0.079 U | NA | NA | 0.035 | NA | NA | < 0.010 | 0.011 | 0.019 | NA | NA | 0.01 U | 0.127 U | 0.491 | 0.036 |
| **N-Nitrate (mg-N/L)** | 0.061 U | NA | NA | < 0.010 | NA | NA | 3.29 | 3.67 | 2.07 | NA | NA | 0.588 | 1.54 | 0.944 | < 0.010 |
| **N-Nitrite (mg-N/L)** | < 0.010 | NA | NA | 0.014 | NA | NA | 0.016 | 0.019 | 0.022 | NA | NA | < 0.010 | < 0.010 | 0.039 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 0.061 U | NA | NA | 0.016 | NA | NA | 3.31 | 3.69 | 2.09 | NA | NA | 0.588 | 1.54 | 0.983 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.005 | NA | NA | 0.060 | NA | NA | 0.028 | 0.070 | 0.195 | NA | NA | 0.027 | 1.72 | 0.036 | 0.011 |
| **Sulfate (mg/L)** | 10.8 U | NA | NA | 78.7 | NA | NA | 35.0 | 30.8 | 94.5 | NA | NA | 34.9 | 35.9 | 34.8 | 64.4 |
| **Sulfite (mg/L)** | < 1.5 | NA | NA | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| **Total Organic Carbon (mg/L)** | 9.31 | NA | NA | 3.06 | NA | NA | < 1.50 | < 1.50 | 4.26 | NA | NA | 2.39 | 1.55 | 16.5 | 5.52 |

| Sample ID: / Sample Date: | 25-A 4/21/2005 | 25-B 4/21/2005 | 26-A 4/21/2005 | 26-C 4/21/2005 | 27-A 4/20/2005 | (27-D) 27-A Dup 4/20/2005 | 28-B 4/20/2005 | GM-4 4/20/2005 | GM-6 4/20/2005 | GM-7 4/21/2005 | GM-8 4/20/2005 | BFEG 4/21/2005 | PPEG 4/21/2005 | (4-F) Field Blank 4/20/2005 | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | **31** | **96** | **3.3** | **45** | < 0.25 | < 0.25 | 0.71 | D **460** | **7.5** | < 0.25 | < 0.25 | **29** | **10** | < 0.25 | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | 423 | 360 | 359 | 341 | NA | NA | 253 | NA | NA | 300 | 329 | 326 | 331 | < 1.0 | < 1.0 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 423 | 360 | 359 | 341 | NA | NA | 253 | NA | NA | 300 | 329 | 326 | 331 | < 1.0 | < 1.0 |
| **N-Ammonia (mg-N/L)** | 0.033 | < 0.010 | 0.236 | 0.032 | NA | NA | < 0.010 | NA | NA | 0.018 | < 0.010 | 0.013 | 0.041 | 0.027 | < 0.010 |
| **N-Nitrate (mg-N/L)** | 1.23 | 2.64 | 0.314 | 3.62 | NA | NA | 0.093 U | NA | NA | 4.94 | 2.60 | 2.44 | 2.40 | 0.015 | < 0.010 |
| **N-Nitrite (mg-N/L)** | 0.018 | 0.020 | 0.013 | 0.054 | NA | NA | < 0.010 | NA | NA | 0.026 | 0.017 | 0.050 | 0.025 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 1.25 | 2.66 | 0.327 | 3.67 | NA | NA | 0.093 U | NA | NA | 4.97 | 2.62 | 2.49 | 2.43 | 0.015 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.058 | 0.014 | 0.004 | 0.026 | NA | NA | 0.034 | NA | NA | 0.100 | 0.050 | 0.672 | 0.940 | < 0.004 | < 0.004 |
| **Sulfate (mg/L)** | 69.4 | 36.5 | 98.2 | 37.6 | NA | NA | 89.0 | NA | NA | 39.0 | 39.7 | 32.0 | 35.6 | 3.3 | < 2.0 |
| **Sulfite (mg/L)** | < 1.5 | < 1.5 | < 1.5 | < 1.5 | NA | NA | < 1.5 | NA | NA | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| **Total Organic Carbon (mg/L)** | 4.5 | 1.78 | 7.22 | < 1.50 | NA | NA | < 1.50 | NA | NA | < 1.50 | < 1.50 | 1.66 | < 1.50 | < 1.50 | < 1.50 |

Note: Bolded concentration indicates exceedance of treatment level.
U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank.
D - Sample result taken from dilution.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2005
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 4-A 9/27/2005 | 5-A 9/28/2005 | 5-C 9/28/2005 | 7-A 9/29/2005 | 9-A 9/28/2005 | (9-D) 9-ADup 9/28/2005 | 9-C 9/28/2005 | 10-A 9/28/2005 |
|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | |
| Pentachlorophenol | < 0.25 | **1,400** | < 0.25 | < 0.25 | **2.8 J** | **26 J** | **34** | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | |
| Naphthalene | NA | **74** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Acenaphthylene | NA | < 88 Y | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Acenaphthene | NA | **690** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Fluorene | NA | **610** | NA | NA | **0.74** | **0.77** | NA | NA |
| Phenanthrene | NA | **D 1300** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Anthracene | NA | **350** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Fluoranthene | NA | **760** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Pyrene | NA | **650** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Benzo(a)anthracene | NA | **190** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Chrysene | NA | **240** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Benzo(b)fluoranthene | NA | **80** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Benzo(k)fluoranthene | NA | **100** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Benzo(a)pyrene | NA | **98** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Dibenzo(a,h)anthracene | NA | **35** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Benzo(g,h,i)perylene | NA | **15** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | **34** | NA | NA | < 0.10 | < 0.10 | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 492 | NA | NA | 675 | NA | NA | 339 | 316 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 492 | NA | NA | 675 | NA | NA | 339 | 316 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.112 | NA | NA | 0.140 | NA | NA | < 0.010 | 0.018 |
| **N-Nitrate -Calculated (mg-N/L)** | 0.024 | NA | NA | 0.371 | NA | NA | 3.79 | 3.91 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | < 0.010 | NA | NA | 0.034 | NA | NA | 0.019 | 0.018 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | 0.024 | NA | NA | 0.405 | NA | NA | 3.81 | 3.93 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | 0.004 | NA | NA | 0.016 | NA | NA | 0.029 | 0.062 |
| **Sulfate -Method 375.2 (mg/L)** | 19.8 | NA | NA | 86.1 | NA | NA | 35.6 | 39.2 |
| **Sulfite -Method 377.1 (mg/L)** | < 1.5 | NA | NA | < 1.3 | NA | NA | < 1.5 | < 1.5 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 9.12 | NA | NA | 4.33 | NA | NA | < 1.50 | 1.54 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Sample result taken from dilution.

J - Indicates an estimated. See validation report.

U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated method blank.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2005
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 11-A 9/28/2005 | 12-A 9/28/2005 | (12-D) 12-ADup 9/28/2005 | 15-A 9/28/2005 | 19-A 9/27/2005 | 22 9/27/2005 | 23-A 9/29/2005 | 24-A1 9/29/2005 |
|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | |
| Pentachlorophenol | **0.37** | < 0.25 | < 0.25 | **16** | < 0.25 | **2.3** | **11** | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | |
| Naphthalene | NA | NA | NA | 1.4 | < 0.10 | < 0.10 | NA | NA |
| Acenaphthylene | NA | NA | NA | Y< 2.0 | < 0.10 | < 0.10 | NA | NA |
| Acenaphthene | NA | NA | NA | 5.1 | < 0.10 | < 0.10 | NA | NA |
| Fluorene | NA | NA | NA | 17 | < 0.10 | < 0.10 | NA | NA |
| Phenanthrene | NA | NA | NA | 44 | < 0.10 | < 0.10 | NA | NA |
| Anthracene | NA | NA | NA | 9.1 | < 0.10 | 0.16 | NA | NA |
| Fluoranthene | NA | NA | NA | 8.5 | < 0.10 | 2.0 | NA | NA |
| Pyrene | NA | NA | NA | 11 | < 0.10 | 0.73 | NA | NA |
| Benzo(a)anthracene | NA | NA | NA | 2.4 | < 0.10 | < 0.10 | NA | NA |
| Chrysene | NA | NA | NA | 3.4 | < 0.10 | < 0.10 | NA | NA |
| Benzo(b)fluoranthene | NA | NA | NA | 1.0 | < 0.10 | < 0.10 | NA | NA |
| Benzo(k)fluoranthene | NA | NA | NA | 1.4 | < 0.10 | < 0.10 | NA | NA |
| Benzo(a)pyrene | NA | NA | NA | 1.1 | < 0.10 | < 0.10 | NA | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | < 1.0 | < 0.10 | < 0.10 | NA | NA |
| Benzo(g,h,i)perylene | NA | NA | NA | < 1.0 | < 0.10 | < 0.10 | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | < 1.0 | < 0.10 | < 0.10 | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 343 | NA | NA | NA | 374 | 336 | 431 | 401 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | < 1.0 | NA | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 343 | NA | NA | NA | 374 | 336 | 431 | 401 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | < 0.010 | NA | NA | NA | < 0.010 | 0.077 | 0.313 | 0.081 |
| **N-Nitrate -Calculated (mg-N/L)** | 2.60 | NA | NA | NA | 3.24 | 2.05 | 0.636 | 0.016 U |
| **N-Nitrite -Method 353.2 (mg-N/L)** | 0.015 | NA | NA | NA | 0.015 | 0.010 | 0.047 | < 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | 2.62 | NA | NA | NA | 3.26 | 2.06 | 0.683 | 0.016 U |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | 0.253 | NA | NA | NA | 0.025 | 0.970 | 0.033 | 0.008 |
| **Sulfate -Method 375.2 (mg/L)** | 37.2 | NA | NA | NA | 34.6 | 19.3 | 35.9 | 46.3 |
| **Sulfite -Method 377.1 (mg/L)** | < 1.5 | NA | NA | NA | < 1.5 | < 1.5 | < 1.3 | < 1.3 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 2.77 | NA | NA | NA | 1.92 | 2.37 | 14.8 | 7.04 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Sample result taken from dilution.

J - Indicates an estimated concentration. See validation report.

U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated method blank.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2005
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 25-A 9/28/2005 | 25-B 9/28/2005 | 26-A 9/28/2005 | 26-C 9/28/2005 | 27-A 9/29/2005 | (27-D) 27-A Dup 9/29/2005 | 28-B 9/29/2005 | GM-4 9/29/2005 |
|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | |
| Pentachlorophenol | **68** | **72** | **3.2** | **30** | < 0.25 | < 0.25 | **0.87** | **280** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | |
| Naphthalene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Acenaphthylene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Acenaphthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Fluorene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Phenanthrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Anthracene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Fluoranthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Pyrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Benzo(a)anthracene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Chrysene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Benzo(b)fluoranthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Benzo(k)fluoranthene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Benzo(a)pyrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | < 0.10 | < 0.10 | NA | < 0.10 | NA | NA | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 363 | 363 | 351 | 331 | NA | NA | 240 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | NA | 9.4 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 363 | 363 | 351 | 331 | NA | NA | 231 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.024 | 0.025 | 0.104 | 0.029 | NA | NA | 0.145 | NA |
| **N-Nitrate -Calculated (mg-N/L)** | 1.66 | 2.10 | 0.390 | 3.60 | NA | NA | 0.043 U | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | 0.025 | 0.015 | 0.010 | 0.043 | NA | NA | < 0.010 | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | 1.69 | 2.12 | 0.400 | 3.64 | NA | NA | 0.043 U | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | 0.032 | 0.007 | 0.004 | 0.026 | NA | NA | 0.035 | NA |
| **Sulfate -Method 375.2 (mg/L)** | 38.5 | 36.8 | 49.1 | 36.0 | NA | NA | 76.5 | NA |
| **Sulfite -Method 377.1 (mg/L)** | < 1.5 | < 1.5 | < 1.5 | < 1.5 | NA | NA | < 1.3 | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 3.49 | 2.24 | 5.92 | 1.57 | NA | NA | < 1.50 | NA |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Sample result taken from dilution.

J - Indicates an estimated. See validation report.

U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated method blank.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2005
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | GM-6 9/29/2005 | GM-7 9/27/2005 | GM-8 9/29/2005 | BFEG 9/29/2005 | PPEG 9/29/2005 | (4-F) Field Blank 9/27/2005 | Method Blank |
|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | |
| Pentachlorophenol | **7.0** | **42** | < 0.25 | **60** | **7.8** | < 0.25 | < 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | |
| Naphthalene | NA | NA | NA | < 0.66 | 0.25 | NA | < 0.10 |
| Acenaphthylene | NA | NA | NA | < 0.22 | < 0.10 | NA | < 0.10 |
| Acenaphthene | NA | NA | NA | 3.1 | 0.46 | NA | < 0.10 |
| Fluorene | NA | NA | NA | 2.2 | 0.28 | NA | < 0.10 |
| Phenanthrene | NA | NA | NA | 0.72 | < 0.10 | NA | < 0.10 |
| Anthracene | NA | NA | NA | 1.8 | < 0.10 | NA | < 0.10 |
| Fluoranthene | NA | NA | NA | 6.4 | 0.58 | NA | < 0.10 |
| Pyrene | NA | NA | NA | 4.0 | 0.48 | NA | < 0.10 |
| Benzo(a)anthracene | NA | NA | NA | 0.26 | < 0.10 | NA | < 0.10 |
| Chrysene | NA | NA | NA | 0.17 | < 0.10 | NA | < 0.10 |
| Benzo(b)fluoranthene | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Benzo(k)fluoranthene | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Benzo(a)pyrene | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Dibenzo(a,h)anthracene | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Benzo(g,h,i)perylene | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | < 0.10 | < 0.10 | NA | < 0.10 |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 306 | 328 | 337 | 367 | < 1.0 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 306 | 328 | 337 | 367 | < 1.0 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | < 0.010 | 0.012 | 0.045 | 0.028 | < 0.010 | < 0.010 |
| **N-Nitrate -Calculated (mg-N/L)** | NA | 4.65 | 2.76 | 1.94 | 2.62 | < 0.010 | < 0.010 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | 0.020 | 0.016 | 0.082 | 0.024 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | 4.67 | 2.78 | 2.02 | 2.64 | < 0.010 | 0.010 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.122 | 0.049 | 1.10 | 0.875 | < 0.004 | < 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | NA | 32.2 | 37.4 | 28.7 | 33.5 | < 2.0 | < 2.0 |
| **Sulfite -Method 377.1 (mg/L)** | NA | < 1.5 | < 1.3 | < 1.3 | < 1.3 | < 1.5 | < 1.3 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | 2.28 | 1.72 | 2.41 | 1.67 | < 1.50 | < 1.50 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

D - Sample result taken from dilution.

J - Indicates an estimated. See validation report.

U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated method blank.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## April 2006
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 4-A 4/24/2006 | 5-A 4/26/2006 | 5-C 4/26/2006 | 7-A 4/24/2006 | 9-A 4/27/2006 | (9-D) 9-A Dup 4/27/2006 | 9-C 4/24/2006 | 10-A 4/24/2006 | (10-D) 10-A Dup 4/24/2006 | 11-A 4/24/2006 | 12-A 4/27/2006 | 15-A 4/26/2006 | 19-A 4/24/2006 | 22 4/24/2006 | 23-A 4/24/2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | D **730** | U< 0.25 | U< 0.25 | **46** | **42** | **28** | U< 0.25 | U< 0.25 | 0.36 | U< 0.25 | **7.0** | U< 0.25 | **2.6** | **9.8** |
| **Alkalinity (mg/L CaCO3)** | 522 | NA | NA | 392 | NA | NA | 363 | 311 | NA | 371 | NA | NA | 404 | 344 | 409 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | U< 1.0 | NA | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 522 | NA | NA | 392 | NA | NA | 363 | 311 | NA | 371 | NA | NA | 404 | 344 | 409 |
| **N-Ammonia (mg-N/L)** | 0.066 | NA | NA | 0.052 | NA | NA | U< 0.010 | 0.034 | NA | U< 0.010 | NA | NA | U< 0.100 | U< 0.010 | 0.131 |
| **N-Nitrate (mg-N/L)** | U< 0.010 | NA | NA | U< 0.010 | NA | NA | 3.18 | 4.06 | NA | 0.953 | NA | NA | 2.88 | 1.41 | 0.762 |
| **N-Nitrite (mg-N/L)** | U< 0.010 | NA | NA | 0.025 | NA | NA | 0.023 | 0.024 | NA | 0.013 | NA | NA | 0.016 | 0.014 | 0.032 |
| **Nitrate + Nitrite (mg-N/L)** | U< 0.010 | NA | NA | U< 0.010 | NA | NA | 3.20 | 4.08 | NA | 0.966 | NA | NA | 2.90 | 1.42 | 0.794 |
| **Ortho-Phosphorous (mg-P/L)** | 0.004 | NA | NA | 0.047 | NA | NA | 0.031 | 0.061 | NA | 0.239 | NA | NA | 0.036 | 1.13 | 0.010 |
| **Sulfate (mg/L)** | 8.6 | NA | NA | 76.5 | NA | NA | 32.6 | 33.4 | NA | 68.7 | NA | NA | 34.5 | 40.3 | 39.4 |
| **Sulfite (mg/L)** | U< 1.5 | NA | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon (mg/L)** | 9.45 | NA | NA | 2.83 | NA | NA | U< 1.50 | U< 1.50 | NA | 4.17 | NA | NA | 1.81 | 2.35 | 6.37 |

| Sample ID: / Sample Date: | 24-A1 4/24/2006 | 25-A 4/24/2006 | 25-B 4/24/2006 | 26-A 4/24/2006 | 26-C 4/24/2006 | 27-A 4/27/2006 | 28-B 4/24/2006 | GM-4 4/26/2006 | GM-6 4/26/2006 | GM-7 4/24/2006 | GM-8 4/24/2006 | BFEG 4/24/2006 | PPEG 4/24/2006 | (4-F) Field Blank 4/24/2006 | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | **8.7** | ES **40** | **4.0** | **28** | < 0.25 | ES **40** | **330** | **18** | U< 0.25 | U< 0.25 | **32** | **34** | U< 0.25 | U< 0.25 |
| **Alkalinity (mg/L CaCO3)** | 444 | 423 | 349 | 398 | 334 | NA | 247 | NA | NA | 326 | 342 | 358 | 348 | U< 1.0 | NA |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 444 | 423 | 349 | 398 | 334 | NA | 247 | NA | NA | 326 | 342 | 358 | 348 | U< 1.0 | NA |
| **N-Ammonia (mg-N/L)** | 0.050 | 0.013 | 0.012 | 0.031 | U< 0.010 | NA | U< 0.010 | NA | NA | U< 0.010 | U< 0.010 | 0.031 | U< 0.010 | 0.012 | U< 0.010 |
| **N-Nitrate (mg-N/L)** | U< 0.010 | 4.27 | 1.76 | 0.280 | 3.18 | NA | 0.127 | NA | NA | 9.41 | 2.12 | 1.04 | 1.38 | U< 0.010 | NA |
| **N-Nitrite (mg-N/L)** | U< 0.010 | 0.030 | 0.016 | U< 0.010 | 0.039 | NA | U< 0.010 | NA | NA | 0.051 | 0.026 | 0.037 | 0.025 | U< 0.010 | U< 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | U< 0.010 | 4.30 | 1.78 | 0.280 | 3.22 | NA | 0.127 | NA | NA | 9.46 | 2.15 | 1.08 | 1.41 | U< 0.010 | U< 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.006 | 0.055 | 0.010 | 0.004 | 0.026 | NA | 0.034 | NA | NA | 0.182 | 0.044 | 0.810 | 0.960 | U< 0.004 | U< 0.004 |
| **Sulfate (mg/L)** | 112 | 116 | 35.3 | 69.5 | 35.4 | NA | 91.4 | NA | NA | 73.8 | 41.9 | 35.2 | 39.0 | U< 2.0 | U< 2.0 |
| **Sulfite (mg/L)** | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon (mg/L)** | 8.63 | 11.5 | 2.09 | 2.75 | U< 1.50 | NA | U< 1.50 | NA | NA | 2.34 | 2.88 | 3.44 | 2.12 | U< 1.50 | U< 1.50 |

Note: Bolded concentration indicates accidence of treatment level.
E - Estimated concentration calculated for an analyte response above the valid instrument calibration range.
S - Indicates and analyte response that has saurated the detector.
U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank,
D - Sample result taken from dilution.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September/October 2006
## IPC - Bozeman, Montana

| Sample ID: | 4-A | 5-A | 5-C | 7-A | 9-A | (9-D) # 9-A Dup | 9-C | 10-A | 11-A | 12-A |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 10/5/2006 | 10/6/2006 | 10/6/2006 | 10/9/2006 | 10/6/2006 | 10/6/2006 | 10/5/2006 | 10/5/2006 | 10/5/2006 | 10/6/2006 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | **1,200** | U< 0.25 | U< 0.25 | **59** | **62** | 0.36 | **11** | **26** | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | NA | 29 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Acenaphthylene | NA | Y 24 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Acenaphthene | NA | 230 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Fluorene | NA | 210 | NA | NA | 0.60 | 0.57 | NA | NA | NA | NA |
| Phenanthrene | NA | 320 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Anthracene | NA | 89 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Fluoranthene | NA | 260 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Pyrene | NA | 250 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(a)anthracene | NA | **66** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Chrysene | NA | **86** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(b)fluoranthene | NA | **42** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(k)fluoranthene | NA | **47** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(a)pyrene | NA | **40** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | NA | **7.3** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | NA | 17 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | **19** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 494 | NA | NA | 320 | NA | NA | 352 | 346 | 336 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | U< 1.0 | NA | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 494 | NA | NA | 320 | NA | NA | 352 | 346 | 336 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.090 | NA | NA | U< 0.010 | NA | NA | 0.010 | 0.020 | 0.027 | NA |
| **N-Nitrate -Calculated (mg-N/L)** | U< 0.010 | NA | NA | 3.75 | NA | NA | 2.56 | 4.36 | 2.59 | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | U< 0.010 | NA | NA | 0.026 | NA | NA | 0.014 | 0.023 | 0.021 | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | U< 0.010 | NA | NA | 3.78 | NA | NA | 2.57 | 4.38 | 2.61 | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | U< 0.004 | NA | NA | 0.140 | NA | NA | 0.029 | 0.070 | 0.314 | NA |
| **Sulfate -Method 375.2 (mg/L)** | 15.4 | NA | NA | 26.9 | NA | NA | 32.3 | 38.4 | 31.1 | NA |
| **Sulfite -Method 377.1 (mg/L)** | U< 1.5 | NA | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 4.23 | NA | NA | 2.20 | NA | NA | 1.65 | U< 1.50 | 2.06 | NA |

(a) Well 28-B was resampled on 11/7/06 second result of 0.69 ug/L is the result.
(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.
S - Indicates an analyte response that has saturated the detector.

U - Indicates that the target analyte was not detected at the reported concentration.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September/October 2006
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 15-A 10/6/2006 | 19-A 10/5/2006 | 22 10/5/2006 | 23-A 10/5/2006 | 24-A1 10/5/2006 | 25-A 10/5/2006 | 25-B 10/5/2006 | 26-A 10/5/2006 | 26-C 10/5/2006 | 27-A 10/6/2006 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **4.2** | U< 0.25 | **8.7** | U< 0.25 | **1.1** | **58** | **67** | 0.32 | **15** | **26** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | 1.8 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Acenaphthylene | Y 0.48 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Acenaphthene | 3.0 | U< 0.10 | 0.13 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Fluorene | 4.5 | U< 0.10 | 0.19 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Phenanthrene | 6.3 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Anthracene | 0.66 | U< 0.10 | 0.23 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Fluoranthene | 0.32 | U< 0.10 | 0.52 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Pyrene | 0.38 | U< 0.10 | 0.30 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(a)anthracene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Chrysene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(b)fluoranthene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(k)fluoranthene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(a)pyrene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Dibenzo(a,h)anthracene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(g,h,i)perylene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Indeno(1,2,3-cd)pyrene | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 468 | 368 | 414 | 419 | 383 | 369 | 366 | 349 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 468 | 368 | 414 | 419 | 383 | 369 | 366 | 349 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | U< 0.010 | 0.132 | 0.021 | 0.073 | 0.016 | 0.019 | 0.042 | 0.014 | NA |
| **N-Nitrate -Calculated (mg-N/L)** | NA | 2.35 | 11.8 | 1.70 | U< 0.010 | 0.850 | 1.15 | 0.368 | 2.68 | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | 0.014 | 0.048 | 0.034 | U< 0.010 | 0.015 | 0.011 | 0.012 | 0.027 | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | 2.36 | 11.8 | 1.73 | U< 0.010 | 0.865 | 1.16 | 0.380 | 2.71 | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.032 | 3.59 | 0.032 | 0.010 | 0.034 | 0.010 | 0.005 | 0.027 | NA |
| **Sulfate -Method 375.2 (mg/L)** | NA | 37.9 | 45.4 | 44.9 | 43.8 | 37.9 | 35.4 | 44.1 | 35.6 | NA |
| **Sulfite -Method 377.1 (mg/L)** | NA | U< 1.5 | U< 1.5 | U< 1.5 | 1.7 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | 1.68 | 7.66 | 3.48 | 5.71 | 2.62 | 2.08 | 4.71 | U< 1.50 | NA |

(a) Well 28-B was resampled on 11/7/06 second result
(#) - Indicates blind duplicate number assignment on chain of custo
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1
S - Indicates an analyte response that has saturated the detector.
U - Indicates that the target analyte was not detected at the reporte
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Barkfill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September/October 2006
## IPC - Bozeman, Montana

| Sample ID:<br>Sample Date: | 28-B<br>10/5/2006<br>11/7/2006 (a) | GM-4<br>10/6/2006 | GM-6<br>10/6/2006 | GM-7<br>9/26/2006 | GM-8<br>10/5/2006 | BFEG<br>9/26/2006 | PPEG<br>9/26/2006 | (4-F)<br>Field Blank<br>9/27/2005 | Method<br>Blank |
|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | | |
| Pentachlorophenol | **2.5 / 0.69** | U< 0.25 | S **45** | U< 0.25 | U< 0.25 | **1.6** | **7.3** | U< 0.25 | U< 0.05 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | |
| Naphthalene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | 2.6 | NA | U< 0.10 |
| Acenaphthylene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | M 0.15 | NA | U< 0.10 |
| Acenaphthene | NA | NA | NA | U< 0.10 | NA | 0.11 | 1.8 | NA | U< 0.10 |
| Fluorene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | 1.5 | NA | U< 0.10 |
| Phenanthrene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | 1.7 | NA | U< 0.10 |
| Anthracene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | 0.42 | NA | U< 0.10 |
| Fluoranthene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | 0.96 | NA | U< 0.10 |
| Pyrene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | 0.72 | NA | U< 0.10 |
| Benzo(a)anthracene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Chrysene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(b)fluoranthene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(k)fluoranthene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(a)pyrene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Dibenzo(a,h)anthracene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(g,h,i)perylene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 259 | NA | NA | 323 | 338 | 308 | 354 | U< 1.0 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 259 | NA | NA | 323 | 338 | 308 | 354 | U< 1.0 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.011 | NA | NA | U< 0.010 | 0.014 | 0.035 | 0.212 | 0.013 | U< 0.010 |
| **N-Nitrate -Calculated (mg-N/L)** | 0.088 | NA | NA | 5.02 | 2.62 | 3.78 | 17.4 | 0.016 | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | U< 0.010 | NA | NA | 0.035 | 0.028 | 0.031 | 0.087 | U< 0.010 | U< 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | 0.088 | NA | NA | 5.05 | 2.65 | 3.81 | 17.5 | 0.016 | U< 0.010 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | 0.370 | NA | NA | 0.115 | 0.050 | 0.095 | 2.49 | U< 0.004 | U< 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | 104 | NA | NA | 28.4 | 38.2 | 22.5 | 38.6 | U< 2.0 | U< 2.0 |
| **Sulfite -Method 377.1 (mg/L)** | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | U< 1.50 | NA | NA | U< 1.50 | U< 1.50 | U< 1.50 | 7.87 | U< 1.50 | U< 1.50 |

(a) Well 28-B was resampled on 11/7/06 second result
(#) - Indicates blind duplicate number assignment on chain of custo
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1
S - Indicates an analyte response that has saturated the detector.
U - Indicates that the target analyte was not detected at the reporte
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Barkfill Extraction Gallery

**Appendix A (continued)**
**Summary of Groundwater Analytical Data**
**April/May 2007**
**IPC - Bozeman, Montana**

| Sample ID: | 4-A | 5-A | 5-C | 7-A | 9-A | 9-C | 10-A | 11-A | 12-A | 15-A | 15-D (dup) | 19-A | 22 | 23-A | 24-A1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 4/26/2007 | | | | | | | | | | | 4/26/2007 | 4/26/2007 | | |
| Sample Date: | 5/1/2007 | 4/30/2007 | 4/30/2007 | 5/1/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 5/1/2007 | 5/1/2007 | 5/1/2007 | 5/1/2007 |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | D **400** | **4** | U< 0.25 | **4.1** | **17** | U< 0.25 | **1.1** | U< 0.25 | **4.0** | **3.4** | U< 0.25 | **52** | **5.2** | U< 0.25 |
| **Alkalinity (mg/L CaCO3)** | 484 | NA | NA | 401 | NA | 352 | 332 | 354 | NA | NA | NA | 394 | 247 | 390 | 426 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | U< 1.0 | NA | NA | U< 1.0 | NA | U< 1.0 | U< 1.0 | U< 1.0 | NA | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 484 | NA | NA | 401 | NA | 352 | 332 | 354 | NA | NA | NA | 394 | 247 | 390 | 426 |
| **N-Ammonia (mg-N/L)** | 0.433 | NA | NA | 0.113 | NA | 0.027 | 0.222 | 0.079 | NA | NA | NA | 0.039 | U< 0.010 | 0.488 | 0.072 |
| **N-Nitrate (mg-N/L)** | U< 0.010 | NA | NA | U< 0.010 | NA | 2.15 | 2.52 | 1.01 | NA | NA | NA | 3.2 | 0.156 | 0.741 | 0.011 |
| **N-Nitrite (mg-N/L)** | U< 0.010 | NA | NA | 0.019 | NA | 0.016 | 0.023 | 0.02 | NA | NA | NA | 0.019 | U< 0.010 | 0.028 | U< 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | U< 0.010 | NA | NA | 0.023 | NA | 2.17 | 2.54 | 1.03 | NA | NA | NA | 3.22 | 0.156 | 0.769 | 0.011 |
| **Ortho-Phosphorous (mg-P/L)** | 0.026 | NA | NA | 0.047 | NA | 0.032 | 0.061 | 0.273 | NA | NA | NA | 0.021 | 1.18 | 0.027 | 0.01 |
| **Sulfate (mg/L)** | 11.4 | NA | NA | 76.5 | NA | 33.9 | 34.1 | 58.9 | NA | NA | NA | 33.1 | 30.6 | 26.8 | 52.8 |
| **Sulfite (mg/L)** | U< 1.5 | NA | NA | U< 1.5 | NA | U< 1.5 | U< 1.5 | U< 1.5 | NA | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon (mg/L)** | 50 | NA | NA | 2.83 | NA | 1.64 | 1.58 | 5.24 | NA | NA | NA | 2.35 | 4.09 | 16.2 | 8.29 |

| Sample ID: | 25-A | 25-D (Dup) | 25-B | 26-A | 26-C | 27-A | 28-B | GM-4 | GM-6 | GM-7 | GM-8 | BFEG | PPEG | (22-F) Field Blank | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 4/26/2007 | | | 4/26/2007 | 4/26/2007 | 4/26/2007 | 4/26/2007 | 4/26/2007 | 4/26/2007 |
| Sample Date: | 4/30/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 4/30/2007 | 5/1/2007 | 4/30/2007 | 4/30/2007 | 5/1/2007 | 5/1/2007 | 5/1/2007 | 5/1/2007 | 5/1/2007 | |
| **PCP-Method 8040 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | **23** | **17** | **49** | **2.1** | **10** | U< 0.25 | 0.29 | **76** | **7.2** | U< 0.25 | U< 0.25 | **5.7** | **48** | U< 0.25 | U< 0.25 |
| **Alkalinity (mg/L CaCO3)** | 410 | NA | 364 | 370 | 342 | NA | 256 | NA | NA | 270 | 354 | 216 | 297 | U< 1.0 | NA |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | U< 1.0 | NA | U< 1.0 | U< 1.0 | U< 1.0 | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 410 | NA | 364 | 370 | 342 | NA | 256 | NA | NA | 270 | 354 | 216 | 297 | U< 1.0 | NA |
| **N-Ammonia (mg-N/L)** | 0.13 | NA | 0.086 | 0.201 | 0.208 | NA | 0.076 | NA | NA | 0.288 | 0.098 | 0.104 | U< 0.047 | U< 0.010 | U< 0.010 |
| **N-Nitrate (mg-N/L)** | 1.35 | NA | 1.68 | 0.487 | 2.57 | NA | 0.182 | NA | NA | 3.93 | 2.54 | 0.897 | 1.49 | 0.045 | NA |
| **N-Nitrite (mg-N/L)** | 0.014 | NA | 0.046 | 0.011 | 0.027 | NA | U< 0.010 | NA | NA | 0.034 | U< 0.023 | U< 0.010 | 0.01 | U< 0.010 | U< 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 1.36 | NA | 1.73 | 0.498 | 2.6 | NA | 0.182 | NA | NA | 3.96 | 2.56 | 0.897 | 1.5 | 0.045 | U< 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.04 | NA | U< 0.004 | U< 0.004 | 0.026 | NA | 0.026 | NA | NA | 0.155 | 0.047 | 0.207 | 0.76 | U< 0.004 | U< 0.004 |
| **Sulfate (mg/L)** | 106 | NA | 35.6 | 56.5 | 36.3 | NA | 82.9 | NA | NA | 51.2 | 46.5 | 25.8 | 35.6 | U< 2.0 | U< 2.0 |
| **Sulfite (mg/L)** | U< 1.5 | NA | U< 1.5 | U< 1.5 | U< 1.5 | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon (mg/L)** | 5.83 | NA | 2.27 | 7.93 | U< 1.50 | NA | U< 1.50 | NA | NA | 2.86 | 3.64 | 3.71 | 4 | U< 1.5 | U< 1.50 |

Note: Bolded concentration indicates accidence of treatment level.
U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank,
D - Sample result taken from dilution.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendxi A (continued)
## Summary of Groundwater Analytical Data
## September/October 2007
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 4-A 10/2/2007 | 5-A 10/4/2007 | 5-C 10/4/2007 | 7-A 9/27/2007 | 9-A 10/4/2007 | (9-D) # 9-A Dup 10/4/2007 | 9-C 9/27/2007 | 10-A 9/27/2007 | 11-A 9/27/2007 | 12-A 10/3/2007 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | 0.71 | **1,000** | **3.7** | 0.34 | **30** | **30** | **21** | 1 | 0.69 | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | NA | 14 | NA | NA | U< 0.10 | 0.10 | NA | NA | NA | NA |
| Acenaphthylene | NA | Y< 15 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Acenaphthene | NA | 160 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Fluorene | NA | 120 | NA | NA | 0.71 | 0.73 | NA | NA | NA | NA |
| Phenanthrene | NA | 200 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Anthracene | NA | 46 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Fluoranthene | NA | 190 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Pyrene | NA | 170 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(a)anthracene | NA | **50** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Chrysene | NA | **59** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(b)fluoranthene | NA | **47** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(k)fluoranthene | NA | **16** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(a)pyrene | NA | **26** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | NA | U< **5.0** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | NA | 10 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | **10** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 486 | NA | NA | 634 | NA | NA | 347 | 350 | 344 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | U< 1.0 | NA | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 486 | NA | NA | 634 | NA | NA | 347 | 350 | 344 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.123 | NA | NA | 0.047 | NA | NA | 0.029 | 0.053 | 0.012 | NA |
| **N-Nitrate -Calculated (mg-N/L)** | U< 0.010 | NA | NA | U< 0.010 | NA | NA | 2.54 | 6.69 | 3.18 | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | U< 0.010 | NA | NA | U< 0.010 | NA | NA | 0.017 | 0.041 | 0.048 | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | U< 0.010 | NA | NA | U< 0.010 | NA | NA | 2.56 | 6.73 | 3.23 | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | 0.019 | NA | NA | 0.045 | NA | NA | 0.037 | 0.068 | 0.328 | NA |
| **Sulfate -Method 375.2 (mg/L)** | 18 | NA | NA | 62 | NA | NA | 32.8 | 44.7 | 38.2 | NA |
| **Sulfite -Method 377.1 (mg/L)** | U< 1.5 | NA | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 6.69 | NA | NA | 3.38 | NA | NA | 1.91 | 2.24 | 3.94 | NA |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.

U - Indicates that the target analyte was not detected at the reported concentration.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September/October 2007
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 15-A 10/4/2007 | 19-A 10/2/2007 | 22 10/2/2007 | 23-A 9/27/2007 | 24-A1 9/27/2007 | 25-A 9/27/2007 | 25-B 9/27/2007 | 26-A 9/27/2007 | 26-C 9/27/2007 | 27-A 10/4/2007 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **3.5** | U< 0.25 | **17** | **5.9** | U< 0.25 | **36** | **46** | **2.9** | **7.2** | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | 1.3 | U< 0.10 | 0.28 | NA | NA | 0.42 | U< 0.10 | NA | U< 0.10 | NA |
| Acenaphthylene | Y< 0.72 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Acenaphthene | 5.7 | U< 0.10 | 0.64 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Fluorene | 9.7 | U< 0.10 | 0.58 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Phenanthrene | 23 | U< 0.10 | 0.27 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Anthracene | 3.2 | U< 0.10 | 1.9 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Fluoranthene | 5.1 | U< 0.10 | 8 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Pyrene | 6.4 | U< 0.10 | 4.7 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(a)anthracene | **1.3** | U< 0.10 | **0.27** | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Chrysene | **1.7** | U< 0.10 | 0.19 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(b)fluoranthene | **1** | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(k)fluoranthene | **0.42** | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(a)pyrene | **0.6** | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Dibenzo(a,h)anthracene | U< 0.3 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Benzo(g,h,i)perylene | U< 0.3 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| Indeno(1,2,3-cd)pyrene | U< 0.3 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 372 | 327 | 418 | 434 | 368 | 376 | 361 | 336 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 372 | 327 | 418 | 434 | 368 | 376 | 361 | 336 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | U< 0.1 | 0.407 | 0.084 | 0.08 | 0.047 | 0.032 | 0.033 | U< 0.01 | NA |
| **N-Nitrate -Calculated (mg-N/L)** | NA | 2.89 | 3.11 | 1.27 | U< 0.010 | 0.65 | 0.945 | 0.264 | 2.76 | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | 0.02 | 0.02 | 0.083 | U< 0.010 | 0.01 | 0.034 | 0.013 | 0.026 | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | 2.91 | 3.13 | 1.35 | U< 0.010 | 0.66 | 0.979 | 0.277 | 2.79 | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.033 | 1.59 | 0.042 | 0.011 | 0.033 | 0.006 | 0.006 | 0.03 | NA |
| **Sulfate -Method 375.2 (mg/L)** | NA | 35.6 | 39.9 | 38.4 | 38.8 | 38.5 | 34.9 | 48.9 | 36.2 | NA |
| **Sulfite -Method 377.1 (mg/L)** | NA | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | 1.62 | 1.99 | 19.1 | 8.13 | 4.26 | 2.8 | 7.82 | 1.56 | NA |

(#) - Indicates blind duplicate number assignment on chain of custo
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1

U - Indicates that the target analyte was not detected at the reporte

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September/October 2007
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | (27-D) # 27-A Dup 10/4/2007 | 28-B 10/4/2007 | GM-4 10/3/2007 | GM-6 10/3/2007 | GM-7 10/1/2007 | GM-8 9/27/2007 | BFEG 10/1/2007 | PPEG 10/1/2007 | (GM-7F) Field Blank 10/1/2007 |
|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | 0.4 | **170** | **4.1** | < 0.25 | U< 0.25 | **120** | **5** | 2.9 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | |
| Naphthalene | NA | NA | NA | NA | U< 0.10 | NA | 0.43 | U< 0.10 | NA |
| Acenaphthylene | NA | NA | NA | NA | U< 0.10 | NA | 0.12 | U< 0.10 | NA |
| Acenaphthene | NA | NA | NA | NA | U< 0.10 | NA | 2 | U< 0.10 | NA |
| Fluorene | NA | NA | NA | NA | U< 0.10 | NA | 0.23 | U< 0.10 | NA |
| Phenanthrene | NA | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA |
| Anthracene | NA | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA |
| Fluoranthene | NA | NA | NA | NA | U< 0.10 | NA | 3.8 | U< 0.10 | NA |
| Pyrene | NA | NA | NA | NA | U< 0.10 | NA | 3.1 | 0.23 | NA |
| Benzo(a)anthracene | NA | NA | NA | NA | U< 0.10 | NA | **0.33** | U< 0.10 | NA |
| Chrysene | NA | NA | NA | NA | U< 0.10 | NA | **0.25** | U< 0.10 | NA |
| Benzo(b)fluoranthene | NA | NA | NA | NA | U< 0.10 | NA | **0.61** | U< 0.10 | NA |
| Benzo(k)fluoranthene | NA | NA | NA | NA | U< 0.10 | NA | **0.26** | U< 0.10 | NA |
| Benzo(a)pyrene | NA | NA | NA | NA | U< 0.10 | NA | **0.4** | U< 0.10 | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | U< 0.10 | NA | U< 0.10 | U< 0.10 | NA |
| Benzo(g,h,i)perylene | NA | NA | NA | NA | U< 0.10 | NA | 0.17 | U< 0.10 | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | U< 0.10 | NA | 0.17 | U< 0.10 | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 259 | NA | NA | 351 | 338 | 314 | 358 | 1.2 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 259 | NA | NA | 351 | 338 | 314 | 358 | 1.2 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | 0.011 | NA | NA | 0.026 | 0.071 | 0.029 | 0.016 | 0.016 |
| **N-Nitrate -Calculated (mg-N/L)** | NA | 0.088 | NA | NA | 6.36 | 2.7 | 2.09 | 5.83 | U< 0.010 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | U< 0.010 | NA | NA | U< 0.01 | 0.019 | 0.09 | 0.022 | U< 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | 0.088 | NA | NA | 6.36 | 2.72 | 2.18 | 5.85 | U< 0.010 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.370 | NA | NA | 0.123 | 0.053 | 0.92 | 0.25 | U< 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | NA | 104 | NA | NA | 34.6 | 38.7 | 28.4 | 56 | U< 2.0 |
| **Sulfite -Method 377.1 (mg/L)** | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | U< 1.50 | NA | NA | 2.20 | 1.94 | 2.62 | 20.9 | U< 1.50 |

(#) - Indicates blind duplicate number assignment on chain of custo
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1

U - Indicates that the target analyte was not detected at the reporte

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

**Appendix A (Continued)**
**Summary of Groundwater Analytical Data**
**April 2008**
**IPC - Bozeman, Montana**

| Sample ID: | 4-A | 5-A | 5-C | 7-A | 9-A | 9-C | 10-A | 11-A | 12-A | 12-D (dup) | 15-A | 15-D (dup) | 19-A | 22 | 23-A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 4/2/2008 | 4/4/2008 | 4/4/2008 | 4/3/2008 | 4/4/2008 | 4/3/2008 | 4/3/2008 | 4/3/2008 | 4/4/2008 | 4/4/2008 | 4/4/2008 | 4/4/2008 | 4/2/2008 | 4/2/2008 | 4/3/2008 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | D1 **430** | U< 0.25 | U< 0.25 | **1.9** | D1 **19** | U< 0.25 | U< 0.25 | U< 0.25 | U< 0.25 | **5.0** | **5.5** | U< 0.25 | **6.4** | **2.8** |
| **Alkalinity (mg/L CaCO3)** | 582 | NA | NA | 617 | NA | 330 | 326 | 370 | NA | NA | NA | NA | 428 | 316 | 426 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | U< 1.0 | NA | NA | U< 1.0 | NA | U< 1.0 | U< 1.0 | U< 1.0 | NA | NA | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 582 | NA | NA | 617 | NA | 330 | 326 | 370 | NA | NA | NA | NA | 428 | 316 | 426 |
| **N-Ammonia (mg-N/L)** | 0.226 | NA | NA | 0.02 | NA | 0.016 | 0.023 | 0.027 | NA | NA | NA | NA | U< 0.010 | 0.266 | 0.259 |
| **N-Nitrate (mg-N/L)** | 0.017 | NA | NA | U< 0.010 | NA | 1.77 | 4.47 | 1.48 | NA | NA | NA | NA | 1.01 | 1.79 | 2.85 |
| **N-Nitrite (mg-N/L)** | U< 0.010 | NA | NA | 0.021 | NA | 0.019 | 0.04 | 0.031 | NA | NA | NA | NA | 0.024 | 0.016 | 0.071 |
| **Nitrate + Nitrite (mg-N/L)** | 0.017 | NA | NA | 0.027 | NA | 1.79 | 4.51 | 1.51 | NA | NA | NA | NA | 1.03 | 1.81 | 2.92 |
| **Ortho-Phosphorous (mg-P/L)** | 0.004 | NA | NA | 0.058 | NA | 0.038 | 0.067 | 0.294 | NA | NA | NA | NA | 0.027 | 1.42 | 0.04 |
| **Sulfate (mg/L)** | 36.1 | NA | NA | 59.9 | NA | 32.1 | 35.4 | 70.1 | NA | NA | NA | NA | 38.8 | 36.2 | 43.9 |
| **Sulfite (mg/L)** | U< 1.5 | NA | NA | U< 1.5 | NA | U< 1.5 | U< 1.5 | U< 1.5 | NA | NA | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon (mg/L)** | 30 | NA | NA | 5.88 | NA | 2.61 | 1.9 | 7.37 | NA | NA | NA | NA | 4.08 | 3.44 | 13.8 |

| Sample ID: | 24-A1 | 25-A | 25-B | 26-A | 26-C | 27-A | 28-B | GM-4 | GM-6 | GM-7 | GM-8 | BFEG | PPEG | Field Blank (4-F) | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 4/3/2008 | 4/3/2008 | 4/3/2008 | 4/3/2008 | 4/3/2008 | 4/4/2008 | 4/3/2008 | 4/4/2008 | 4/4/2008 | 4/2/2008 | 4/3/2002 | 4/2/2008 | 4/2/2008 | 4/2/2008 | 4/2/2008 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | D1 **15** | D1 **45** | 0.78 | D1 **13** | U< 0.25 | 0.35 | D1 **250** | **2** | U< 0.25 | U< 0.25 | D1 **18** | **1.7** | U< 0.25 | U< 0.25 |
| **Alkalinity (mg/L CaCO3)** | 397 | 387 | 356 | 353 | 326 | NA | 257 | NA | NA | 302 | 353 | 278 | 359 | U< 1.0 | NA |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 397 | 387 | 356 | 353 | 326 | NA | 257 | NA | NA | 302 | 353 | 278 | 359 | U< 1.0 | NA |
| **N-Ammonia (mg-N/L)** | 0.073 | 0.016 | 0.016 | 0.03 | 0.022 | NA | 0.015 | NA | NA | U< 0.010 | 0.042 | 0.026 | 0.025 | U< 0.010 | U< 0.010 |
| **N-Nitrate (mg-N/L)** | 0.016 | 1.08 | 1.36 | 0.372 | 2.47 | NA | 0.176 | NA | NA | 5.25 | 3.16 | 1.12 | 2.81 | U< 0.010 | NA |
| **N-Nitrite (mg-N/L)** | U< 0.010 | 0.019 | 0.112 | 0.018 | 0.03 | NA | U< 0.010 | NA | NA | 0.039 | 0.044 | 0.036 | 0.039 | U< 0.010 | U< 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 0.016 | 1.1 | 1.47 | 0.39 | 2.5 | NA | 0.176 | NA | NA | 5.29 | 3.2 | 1.16 | 2.85 | U< 0.010 | U< 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.01 | 0.04 | U< 0.005 | U< 0.004 | 0.027 | NA | 0.034 | NA | NA | 0.117 | 0.048 | 0.56 | 0.251 | U< 0.004 | U< 0.004 |
| **Sulfate (mg/L)** | 58.9 | 80.4 | 33.3 | 69.7 | 35 | NA | 93.4 | NA | NA | 32.1 | 51.4 | 27.6 | 39.5 | U< 2.0 | U< 2.0 |
| **Sulfite (mg/L)** | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 | U< 1.5 |
| **Total Organic Carbon (mg/L)** | 10.2 | 6 | 4.56 | 11.6 | 2.15 | NA | U< 1.50 | NA | NA | 2.51 | 2.61 | 2.51 | 2.82 | U< 1.5 | U< 1.50 |

Note: Bolded concentration indicates exceedance of treatment level.
U - Indicates analyte as undetected at the reported concentration due to a comparable concentration detected in the associated field blank,
D1 - Sample result taken from lowest dilution within instrument calibration range. Hydrometrics data validation code.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2008
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 4-A 9/24/2008 | 5-A 9/24/2008 | 5-C 9/24/2008 | 7-A 9/25/2008 | 9-A 9/25/2008 | (9-D) # 9-A Dup 9/25/2008 | 9-C 9/25/2008 | 10-A 9/25/2008 | 11-A 9/25/2008 | 12-A 9/25/2008 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | 0.54 | **D1 1,200** | **8.7** | U< 0.25 | **D1 14** | **D1 19** | **D1 27** | U< 0.25 | 0.47 | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | NA | D1 16 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Acenaphthylene | NA | Y< 10 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Acenaphthene | NA | D1 100 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Fluorene | NA | D1 99 | NA | NA | 0.78 | 0.78 | NA | NA | NA | NA |
| Phenanthrene | NA | D1 150 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Anthracene | NA | D1 36 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Fluoranthene | NA | D1 110 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Pyrene | NA | D1 130 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(a)anthracene | NA | **D1 34** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Chrysene | NA | **D1 39** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(b)fluoranthene | NA | **D1 21** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(k)fluoranthene | NA | **D1 20** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(a)pyrene | NA | **D1 19** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | NA | **D1 3.7** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | NA | D1 6.6 | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | NA | **D1 7.1** | NA | NA | U< 0.10 | U< 0.10 | NA | NA | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | 444 | NA | NA | 424 | NA | NA | 328 | 348 | 352 | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | U< 1.0 | NA | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | 444 | NA | NA | 424 | NA | NA | 328 | 348 | 352 | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | 0.120 | NA | NA | NA | NA | NA | U< 0.050 | U< 0.050 | U< 0.050 | NA |
| **N-Nitrate -Calculated (mg-N/L)** | U< 0.010 | NA | NA | U< 0.010 | NA | NA | 2.56 | 7.32 | 4.10 | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | U< 0.010 | NA | NA | 0.020 | NA | NA | 0.020 | 0.040 | 0.060 | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | U< 0.010 | NA | NA | 0.014 | NA | NA | 2.58 | 7.36 | 4.16 | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | U< 0.004 | NA | NA | 0.051 | NA | NA | 0.031 | 0.066 | 0.325 | NA |
| **Sulfate -Method 375.2 (mg/L)** | 24.3 | NA | NA | 78.9 | NA | NA | 33.7 | 57.3 | 39.7 | NA |
| **Sulfite -Method 377.1 (mg/L)** | U< 1.1 | NA | NA | U< 1.5 | NA | NA | U< 1.5 | U< 1.5 | U< 1.5 | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | 6.30 | NA | NA | NA | NA | NA | 2.11 | 2.56 | 4.01 | NA |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.
Note: Due to a broken bottle during shipment, there was insufficient water from well 7-A to analyze for TOC and ammonia.
D1 -Sample result taken from the lowest dillution within instrument calibration range. Hydrometrics data validation code.

U - Indicates that the target analyte was not detected at the reported concentration.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2008
## IPC - Bozeman, Montana

| Sample ID: | (12-D)# 12-A Dup | 15-A | 19-A | 22 | 23-A | 24-A1 | 25-A | 25-B | 26-A | 26-C |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/25/2008 | 9/24/2008 | 9/24/2008 | 9/24/2008 | 9/25/2008 | 9/25/2008 | 9/24/2008 | 9/24/2008 | 9/24/2008 | 9/24/2008 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | **2.5** | U< 0.25 | **D1 22** | **6.5** | U< 0.25 | **D1 64** | **D1 49** | **1.1** | **D1 16** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | NA | 1.2 | U< 0.10 | 0.32 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Acenaphthylene | NA | Y< 0.70 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Acenaphthene | NA | 3.0 | U< 0.10 | 0.53 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Fluorene | NA | 6.7 | U< 0.10 | 0.33 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Phenanthrene | NA | D1 15 | U< 0.10 | 0.21 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Anthracene | NA | 2.1 | U< 0.10 | 1.8 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Fluoranthene | NA | 2.1 | U< 0.10 | 8.6 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Pyrene | NA | 3.1 | U< 0.10 | 6.4 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(a)anthracene | NA | **0.66** | U< 0.10 | **0.22** | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Chrysene | NA | **0.81** | U< 0.10 | 0.14 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(b)fluoranthene | NA | **0.42** | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(k)fluoranthene | NA | **0.39** | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(a)pyrene | NA | **0.34** | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Dibenzo(a,h)anthracene | NA | U< 0.10 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(g,h,i)perylene | NA | 0.13 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Indeno(1,2,3-cd)pyrene | NA | 0.14 | U< 0.10 | U< 0.10 | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | NA | 382 | 337 | 419 | 424 | 354 | 354 | 361 | 327 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | NA | 382 | 337 | 419 | 424 | 354 | 354 | 361 | 327 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | NA | U< 0.020 | 0.178 | 0.044 | 0.030 | U< 0.010 | U< 0.010 | 0.051 | U< 0.050 |
| **N-Nitrate -Calculated (mg-N/L)** | NA | NA | 4.81 | 3.99 | 2.15 | U< 0.010 | 1.39 | 1.08 | 0.390 | 2.75 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | NA | 0.028 | 0.023 | 0.072 | U< 0.010 | 0.048 | 0.016 | 0.013 | 0.022 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | NA | 4.84 | 4.01 | 2.22 | U< 0.010 | 1.44 | 1.10 | 0.403 | 2.77 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | NA | 0.023 | 1.15 | 0.022 | 0.008 | U< 0.004 | 0.027 | U< 0.004 | 0.026 |
| **Sulfate -Method 375.2 (mg/L)** | NA | NA | 49.1 | 46.0 | 42.3 | 41.1 | 37.6 | 44.1 | 53.4 | 37.2 |
| **Sulfite -Method 377.1 (mg/L)** | NA | NA | U< 1.1 | U< 1.1 | U< 1.5 | U< 1.5 | U< 1.1 | U< 1.1 | U< 1.1 | U< 1.1 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | NA | 2.01 | 2.80 | 7.72 | 7.24 | 3.56 | 4.24 | 10.0 | 2.25 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.
Note: Due to a broken bottle during shipment, there was insufficient water from well 7-A to analyze for TOC and ammonia.
D1 -Sample result taken from the lowest dillution within instrument calibration range. Hydrometrics data validation code.

U - Indicates that the target analyte was not detected at the reported concentration.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2008
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 27-A 9/25/2008 | (27-D) # 27-A Dup 9/25/2008 | 28-B 9/25/2008 | GM-4 9/25/2008 | GM-6 9/25/2008 | GM-7 9/24/2008 | GM-8 9/24/2008 | BFEG 9/24/2008 | PPEG 9/24/2008 | (4-F) Field Blank 9/24/2008 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | U< 0.25 | U< 0.25 | U< 0.25 | **D1 250** | **5.5** | U< 0.25 | U< 0.25 | **D1 57** | **3.9** | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | NA | NA | NA | NA | NA | NA | NA | 0.54 | U< 0.10 | NA |
| Acenaphthylene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Acenaphthene | NA | NA | NA | NA | NA | NA | NA | 1.5 | U< 0.10 | NA |
| Fluorene | NA | NA | NA | NA | NA | NA | NA | 1.4 | U< 0.10 | NA |
| Phenanthrene | NA | NA | NA | NA | NA | NA | NA | 0.15 | U< 0.10 | NA |
| Anthracene | NA | NA | NA | NA | NA | NA | NA | 0.68 | U< 0.10 | NA |
| Fluoranthene | NA | NA | NA | NA | NA | NA | NA | 2.8 | U< 0.10 | NA |
| Pyrene | NA | NA | NA | NA | NA | NA | NA | 2.2 | 0.13 | NA |
| Benzo(a)anthracene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Chrysene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Benzo(b)fluoranthene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Benzo(k)fluoranthene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Benzo(a)pyrene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Benzo(g,h,i)perylene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | NA | 254 | NA | NA | 329 | 339 | 346 | 308 | U< 1.0 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | NA | U< 1.0 | NA | NA | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 | U< 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | NA | 254 | NA | NA | 329 | 339 | 346 | 308 | U< 1.0 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | NA | U< 0.010 | NA | NA | U< 0.010 | U< 0.010 | 0.027 | 0.027 | 0.024 |
| **N-Nitrate -Calculated (mg-N/L)** | NA | NA | 0.510 | NA | NA | 7.48 | 3.06 | 3.29 | 6.22 | U< 0.010 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | NA | U< 0.010 | NA | NA | 0.038 | 0.032 | 0.082 | 0.095 | U< 0.010 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | NA | 0.510 | NA | NA | 7.52 | 3.09 | 3.37 | 6.32 | U< 0.010 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | NA | 0.028 | NA | NA | 0.130 | 0.048 | 0.470 | 0.230 | U< 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | NA | NA | 77.6 | NA | NA | 36.5 | 47.0 | 32.1 | 65.9 | U< 2.0 |
| **Sulfite -Method 377.1 (mg/L)** | NA | NA | U< 0.2 | NA | NA | U< 1.1 | U< 1.1 | U< 1.1 | U< 1.1 | U< 1.1 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | NA | 1.72 | NA | NA | 2.02 | 2.40 | 2.45 | 2.41 | U< 1.50 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
Note: Well 19-A was sampled for background data to replace well 1-A that did not have enough water for sample collection.
Note: Due to a broken bottle during shipment, there was insufficient water from well 7-A to analyze for TOC and ammonia.
D1 -Sample result taken from the lowest dillution within instrument calibration range. Hydrometrics data validation code.

U - Indicates that the target analyte was not detected at the reported concentration.

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

**Appendxi A (Continued)**
**Summary of Groundwater Analytical Data**
**April 2009**
**IPC - Bozeman, Montana**

| Sample ID: | 4-A | 5-A | 5-C | 7-A | 9-A | 9-C | 10-A | 11-A | 12-A | 12-D (dup) | 15-A | 15-D (dup) | 19-A | 22 | 23-A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/9/2009 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **D1 980** | < 0.25 | < 0.25 | 0.39 | **D1 15** | < 0.25 | < 0.25 | < 0.25 | < 0.25 | **2.4** | **2.3** | < 0.25 | **1.9** | **2.3** |
| **Alkalinity (mg/L CaCO3)** | 537 | NA | NA | 479 | NA | 327 | 421 | 418 | NA | NA | NA | NA | 388 | 360 | 439 |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | NA | NA | < 1.0 | NA | < 1.0 | < 1.0 | < 1.0 | NA | NA | NA | NA | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 537 | NA | NA | 479 | NA | 327 | 421 | 418 | NA | NA | NA | NA | 388 | 360 | 439 |
| **N-Ammonia (mg-N/L)** | 0.254 | NA | NA | 0.031 | NA | < 0.010 | < 0.050 | < 0.010 | NA | NA | NA | NA | < 0.020 | 0.130 | 0.370 |
| **N-Nitrate (mg-N/L)** | < 0.010 | NA | NA | 0.015 | NA | 2.38 | 5.56 | 2.24 | NA | NA | NA | NA | 2.39 | 3.11 | 0.804 |
| **N-Nitrite (mg-N/L)** | < 0.010 | NA | NA | < 0.010 | NA | < 0.010 | < 0.010 | 0.022 | NA | NA | NA | NA | < 0.010 | 0.011 | 0.047 |
| **Nitrate + Nitrite (mg-N/L)** | < 0.010 | NA | NA | 0.015 | NA | 2.38 | 5.56 | 2.26 | NA | NA | NA | NA | 2.39 | 3.12 | 0.851 |
| **Ortho-Phosphorous (mg-P/L)** | 0.046 | NA | NA | 0.005 | NA | 0.035 | 0.057 | 0.273 | NA | NA | NA | NA | 0.036 | 0.910 | 0.015 |
| **Sulfate (mg/L)** | 14.2 | NA | NA | 60.7 | NA | 34.8 | 30.7 | 47.5 | NA | NA | NA | NA | 38.7 | 40.3 | 37.7 |
| **Sulfite (mg/L)** | < 3.0 | NA | NA | < 2.0 | NA | < 2.0 | < 2.0 | < 2.0 | NA | NA | NA | NA | < 3.0 | < 3.0 | < 2.0 |
| **Total Organic Carbon (mg/L)** | 31.8 | NA | NA | 3.06 | NA | 1.99 | 1.96 | 5.58 | NA | NA | NA | NA | 2.69 | 3.65 | 11.2 |
| **Dissolved Oxygen (mg/L)** | 0.89 | 2.11 | 1.12 | 0.48 | 0.69 | 0.89 | 2.33 | 1.12 | 2.12 | | 0.64 | | 2.18 | 1.03 | 0.89 |

| Sample ID: | 24-A1 | 25-A | 25-B | 26-A | 26-C | 27-A | 28-B | GM-4 | GM-6 | GM-7 | GM-8 | BFEG | PPEG | Field Blank (4-F) | Method Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/9/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | 4/8/2009 | |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | **1.1** | **D1 47** | **1.50** | **D1 12** | < 0.25 | 0.26 | **D1 20** | **3.0** | < 0.25 | < 0.25 | **D1 20** | **4.6** | < 0.25 | < 0.25 |
| **Alkalinity (mg/L CaCO3)** | 397 | 459 | 346 | 361 | 326 | NA | 269 | NA | NA | 329 | 342 | 352 | 367 | < 1.0 | |
| **Carbonate (Alkalinity) (mg/L CaCO3)** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | |
| **Bicarbonate (Alkalinity) (mg/L CaCO3)** | 397 | 459 | 346 | 361 | 326 | NA | 269 | NA | NA | 329 | 342 | 352 | 367 | < 1.0 | |
| **N-Ammonia (mg-N/L)** | 0.047 | < 0.100 | < 0.050 | < 0.020 | < 0.010 | NA | < 0.020 | NA | NA | 0.012 | < 0.010 | 0.034 | < 0.05 | < 0.010 | < 0.010 |
| **N-Nitrate (mg-N/L)** | 0.016 | 1.19 | 1.80 | 0.954 | 3.06 | NA | 0.327 | NA | NA | 5.63 | 3.75 | 2.62 | 2.67 | < 0.010 | |
| **N-Nitrite (mg-N/L)** | < 0.010 | < 0.010 | 0.031 | 0.020 | 0.012 | NA | < 0.010 | NA | NA | 0.020 | 0.022 | 0.029 | 0.02 | < 0.010 | < 0.010 |
| **Nitrate + Nitrite (mg-N/L)** | 0.016 | 1.19 | 1.83 | 0.974 | 3.07 | NA | 0.327 | NA | NA | 5.65 | 3.77 | 2.65 | 2.69 | < 0.010 | < 0.010 |
| **Ortho-Phosphorous (mg-P/L)** | 0.006 | 0.049 | < 0.004 | 0.004 | 0.028 | NA | 0.033 | NA | NA | 0.216 | 0.042 | 0.080 | 0.255 | < 0.004 | < 0.004 |
| **Sulfate (mg/L)** | 32.8 | 116 | 38.2 | 38.6 | 37.2 | NA | 97.1 | NA | NA | 36.8 | 47.1 | 34.8 | 35.4 | 2.2 | < 2.0 |
| **Sulfite (mg/L)** | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 | NA | < 3.0 | NA | NA | < 3.0 | < 3.0 | < 3.0 | < 3.0 | < 3.0 | < 3.0 |
| **Total Organic Carbon (mg/L)** | 5.67 | 10.8 | 3.65 | 11.3 | 2.15 | NA | 2.25 | NA | NA | 2.73 | 3.11 | 3.99 | 3.73 | < 1.50 | < 1.50 |
| **Dissolved Oxygen (mg/L)** | 1.01 | 1.16 | 0.79 | 0.48 | 0.71 | 2.11 | 0.43 | 0.18 | 0.31 | 3.39 | 0.63 | 1.86 | 2.49 | | |

Note: Bolded concentration indicates exceedance of treatment level, and/or qualified result.
PPEG -Pressure Plant Extraction Gallery
BFEG -Bark Fill Extraction Gallery
D1 - Sample Dillution

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2009
## IPC - Bozeman, Montana

| Sample ID: | 3-B | 4-A | 4-B | 5-A | 5-B | 5-C | 6-A | 7-A | 7-B | 8-A | 8-B | 9-A | (9-D) # 9-A Dup |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/23/2009 | 9/21/2009 | 9/23/2009 | 9/24/2009 | 9/24/2009 | 9/24/2009 | 9/24/2009 | 9/23/2009 | 9/23/2009 | 9/25/2009 | 9/25/2009 | 9/22/2009 | 9/22/2009 |
| **PCP-Method 8041 (µg/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | < 0.25 | < 0.25 | < 0.25 | **D1 950** | 0.41 | **4.0** | < 0.25 | < 0.25 | < 0.25 | < 0.25 | **5.0** | **D1 20** | **D1 15** |
| **PAH-Method (µg/L)** | | | | | | | | | | | | | |
| Acenaphthylene | NA | NA | NA | D1,Y < 73 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Acenaphthene | NA | NA | NA | D1 480 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| **D PAH-Method 8310 (µg/L)** | | | | | | | | | | | | | |
| Naphthalene | NA | NA | NA | D1 44 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Fluorene | NA | NA | NA | D1 420 | NA | NA | NA | NA | NA | NA | NA | 0.92 | NA |
| Phenanthrene | NA | NA | NA | D1 980 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Anthracene | NA | NA | NA | D1 220 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Fluoranthene | NA | NA | NA | D1 670 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Pyrene | NA | NA | NA | D1 740 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Benzo(g,h,i)perylene | NA | NA | NA | D1 44 | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| **Total D PAH** | NA | NA | NA | **D1 3118** | NA | NA | NA | NA | NA | NA | NA | 0.92 | NA |
| **B2 PAH-Method 8310 (µg/L)** | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | **D1 210** | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Chrysene | NA | NA | NA | **D1 210** | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Benzo(b)fluoranthene | NA | NA | NA | **D1 100** | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Benzo(k)fluoranthene | NA | NA | NA | **D1 120** | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Benzo(a)pyrene | NA | NA | NA | **D1 110** | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | **D1 19** | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | **D1 44** | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 450 | NA | NA | NA | NA | NA | 417 | NA | NA | NA | NA | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | < 1.0 | NA | NA | NA | NA | NA | < 1.0 | NA | NA | NA | NA | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 450 | NA | NA | NA | NA | NA | 417 | NA | NA | NA | NA | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | 0.122 | NA | NA | NA | NA | NA | 0.020 | NA | NA | NA | NA | NA |
| **N-Nitrate -Calculated (mg-N/L)** | NA | < 0.050 | NA | NA | NA | NA | NA | < 0.010 | NA | NA | NA | NA | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | < 0.050 | NA | NA | NA | NA | NA | < 0.010 | NA | NA | NA | NA | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | < 0.050 | NA | NA | NA | NA | NA | < 0.010 | NA | NA | NA | NA | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.015 | NA | NA | NA | NA | NA | 0.069 | NA | NA | NA | NA | NA |
| **Sulfate -Method 375.2 (mg/L)** | NA | 29.5 | NA | NA | NA | NA | NA | 77.2 | NA | NA | NA | NA | NA |
| **Sulfite -Method 377.1 (mg/L)** | NA | **UJ3 < 1.5** | NA | NA | NA | NA | NA | < 2.4 | NA | NA | NA | NA | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | 7.09 | NA | NA | NA | NA | NA | 6.49 | NA | NA | NA | NA | NA |
| **Dissolved Oxygen - Field (mg/L)** | 1.10 | 0.41 | 0.57 | NR | 1.65 | 1.37 | 3.79 | 0.39 | 0.44 | 0.39 | 0.58 | 0.37 | |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
D1 - Sample Dillution
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Barkfill Extraction Gallery
UJ1 - Analyte detected in associated field blank at a concentration at or above the detection limit.
UJ3 - Holding time exceeded.
NR = No reading due to free phase.

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2009
## IPC - Bozeman, Montana

| Sample ID: | 9-B | 9-C | 10-A | 10-B | 11-A | 12-A | 13-A | 15-A | 16-A | 16-B | 19-A | 19-B | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/24/2009 | 9/22/2009 | 9/22/2009 | 9/24/2009 | 9/23/2009 | 9/23/2009 | 9/25/2009 | 9/24/2009 | 9/24/2009 | 9/24/2009 | 9/21/2009 | 9/13/2009 | 9/21/2009 |
| **PCP-Method 8041 (µg/L)** | | | | | | | | | | | | | |
| Pentachlorophenol | D1 **26** | D1 **17** | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | **2.0** | 0.41 | D1 **46** | < 0.25 | < 0.25 | 0.97 |
| **PAH-Method (µg/L)** | | | | | | | | | | | | | |
| Acenaphthylene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA | NA | < 0.10 | NA | < 0.10 |
| Acenaphthene | NA | NA | NA | NA | NA | NA | NA | 1.7 | NA | NA | < 0.10 | NA | 0.13 |
| **D PAH-Method 8310 (µg/L)** | | | | | | | | | | | | | |
| Naphthalene | NA | NA | NA | NA | NA | NA | NA | 0.34 | NA | NA | < 0.10 | NA | < 0.10 |
| Fluorene | NA | NA | NA | NA | NA | NA | NA | 3.6 | NA | NA | < 0.10 | NA | < 0.10 |
| Phenanthrene | NA | NA | NA | NA | NA | NA | NA | 7.7 | NA | NA | < 0.10 | NA | < 0.10 |
| Anthracene | NA | NA | NA | NA | NA | NA | NA | 1.2 | NA | NA | < 0.10 | NA | 1.2 |
| Fluoranthene | NA | NA | NA | NA | NA | NA | NA | 0.90 | NA | NA | < 0.10 | NA | 7.8 |
| Pyrene | NA | NA | NA | NA | NA | NA | NA | 1.3 | NA | NA | < 0.10 | NA | 5.5 |
| Benzo(g,h,i)perylene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA | NA | < 0.10 | NA | < 0.10 |
| **Total D PAH** | NA | NA | NA | NA | NA | NA | NA | 15.04 | NA | NA | 0.00 | NA | 14.50 |
| **B2 PAH-Method 8310 (µg/L)** | | | | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | NA | NA | NA | NA | **0.19** | NA | NA | < 0.10 | NA | **0.23** |
| Chrysene | NA | NA | NA | NA | NA | NA | NA | **0.22** | NA | NA | < 0.10 | NA | 0.15 |
| Benzo(b)fluoranthene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA | NA | < 0.10 | NA | < 0.10 |
| Benzo(k)fluoranthene | NA | NA | NA | NA | NA | NA | NA | 0.11 | NA | NA | < 0.10 | NA | < 0.10 |
| Benzo(a)pyrene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA | NA | < 0.10 | NA | < 0.10 |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA | NA | < 0.10 | NA | < 0.10 |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | NA | NA | < 0.10 | NA | < 0.10 |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 324 | 332 | NA | 344 | NA | NA | NA | NA | NA | 373 | NA | 332 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | < 1.0 | < 1.0 | NA | < 1.0 | NA | NA | NA | NA | NA | < 1.0 | NA | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 324 | 332 | NA | 344 | NA | NA | NA | NA | NA | 373 | NA | 332 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | 0.010 | 0.040 | NA | 0.031 | NA | NA | NA | NA | NA | < 0.050 | NA | UJ1 **0.049** |
| **N-Nitrate -Calculated (mg-N/L)** | NA | 3.12 | 4.74 | NA | 4.08 | NA | NA | NA | NA | NA | 3.70 | NA | 5.65 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | 0.020 | 0.027 | NA | 0.032 | NA | NA | NA | NA | NA | 0.022 | NA | 0.066 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | 3.14 | 4.77 | NA | 4.11 | NA | NA | NA | NA | NA | 3.72 | NA | 5.72 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.049 | 0.090 | NA | 0.322 | NA | NA | NA | NA | NA | 0.035 | NA | 0.708 |
| **Sulfate -Method 375.2 (mg/L)** | NA | 37.3 | 48.3 | NA | 41.4 | NA | NA | NA | NA | NA | 52.0 | NA | 50.0 |
| **Sulfite -Method 377.1 (mg/L)** | NA | < 1.5 | < 1.5 | NA | < 2.4 | NA | NA | NA | NA | NA | UJ3 < **1.5** | NA | UJ3 < **1.5** |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | 1.90 | 2.86 | NA | 3.24 | NA | NA | NA | NA | NA | 2.56 | NA | 2.15 |
| **Dissolved Oxygen - Field (mg/L)** | 0.44 | 0.56 | 2.21 | 3.55 | 0.8 | 1.86 | 0.32 | 0.58 | 1.32 | 0.36 | 1.98 | 1.65 | 0.89 |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
D - Sample Dillution

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

UJ1 - Analyte detected in associated field blank at a concentration at or above the detection limit.

UJ3 - Holding time exceeded.

NR = No reading due to free phase.

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2009
## IPC - Bozeman, Montana

| Sample ID: | (22-D)# 22 Dup | 23-A | 23-B | 23-C | 24-A1 | 24-A2 | 24-B | 25-A | 25-B | 26-A | 26-B | 26-C | 27-A | (27-D) # 27-A Dup |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/21/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 | 9/22/2009 | 9/22/2009 | 9/22/2009 | 9/24/2009 | 9/22/2009 | 9/22/2009 | 9/22/2009 |
| **PCP-Method 8041 (µg/L)** | | | | | | | | | | | | | | |
| Pentachlorophenol | 0.88 | **3.9** | **2.8** | **9.9** | < 0.25 | < 0.25 | **9.7** | D1 **37** | D1 **42** | **1.2** | **7.6** | **6.6** | < 0.25 | < 0.25 |
| **PAH-Method (µg/L)** | | | | | | | | | | | | | | |
| Acenaphthylene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Acenaphthene | 0.12 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| **D PAH-Method 8310 (µg/L)** | | | | | | | | | | | | | | |
| Naphthalene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Fluorene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Phenanthrene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Anthracene | 0.91 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Fluoranthene | 6.9 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Pyrene | 4.8 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Benzo(g,h,i)perylene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| **Total D PAH** | 12.61 | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | NA | NA | 0.00 | NA | NA |
| **B2 PAH-Method 8310 (µg/L)** | | | | | | | | | | | | | | |
| Benzo(a)anthracene | **0.20** | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Chrysene | 0.14 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Benzo(b)fluoranthene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Benzo(k)fluoranthene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Benzo(a)pyrene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Dibenzo(a,h)anthracene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| Indeno(1,2,3-cd)pyrene | < 0.10 | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA | NA | < 0.10 | NA | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 395 | NA | NA | 428 | NA | NA | 370 | 358 | 368 | NA | 325 | NA | NA |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | < 1.0 | NA | NA | < 1.0 | NA | NA | < 1.0 | < 1.0 | < 1.0 | NA | < 1.0 | NA | NA |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 395 | NA | NA | 428 | NA | NA | 370 | 358 | 368 | NA | 325 | NA | NA |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | 0.058 | NA | NA | 0.055 | NA | NA | < 0.050 | 0.055 | < 0.010 | NA | < 0.050 | NA | NA |
| **N-Nitrate -Calculated (mg-N/L)** | NA | 2.23 | NA | NA | < 0.010 | NA | NA | 1.49 | 1.96 | 0.935 | NA | 3.45 | NA | NA |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | 0.102 | NA | NA | < 0.010 | NA | NA | 0.019 | 0.084 | 0.013 | NA | 0.027 | NA | NA |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | 2.33 | NA | NA | < 0.010 | NA | NA | 1.51 | 2.04 | 0.948 | NA | 3.48 | NA | NA |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.033 | NA | NA | 0.013 | NA | NA | 0.050 | 0.020 | 0.018 | NA | 0.047 | NA | NA |
| **Sulfate -Method 375.2 (mg/L)** | NA | 58.8 | NA | NA | 47.5 | NA | NA | 46.7 | 42.0 | 55.0 | NA | 38.8 | NA | NA |
| **Sulfite -Method 377.1 (mg/L)** | NA | < 2.4 | NA | NA | < 2.4 | NA | NA | < 1.5 | 3.0 | < 1.5 | NA | < 1.5 | NA | NA |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | 22.2 | NA | NA | 31.0 | NA | NA | 5.40 | 2.75 | 13.2 | NA | 1.78 | NA | NA |
| **Dissolved Oxygen - Field (mg/L)** | | 0.3 | 0.33 | 0.77 | 0.97 | 0.43 | 1.72 | 1.02 | 0.82 | 0.36 | 0.39 | 0.53 | 1.98 | |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
D - Sample Dillution

Y - Indicates a raised reporting limit due to matrix interferences.

PPEG -Pressure Plant Extraction Gallery

BFEG -Barkfill Extraction Gallery

UJ1 - Analyte detected in associated field blank at a concentration at or above the detection limit.

UJ3 - Holding time exceeded.

NR = No reading due to free phase.

## Appendix A (Continued)
## Summary of Groundwater Analytical Data
## September 2009
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | 27-B 9/24/2009 | 28-B 9/22/2009 | 29-D 9/24/2009 | GM-4 9/24/2009 | GM-6 9/24/2009 | GM-7 9/21/2009 | GM-8 9/22/2009 | BFEG 9/21/2009 | PPEG 9/21/2009 | (4-F) Field Blank 9/21/2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCP-Method 8041 (µg/L)** | | | | | | | | | | |
| Pentachlorophenol | D1 **43** | < 0.25 | < 0.25 | D1 **93** | **7.2** | < 0.25 | < 0.25 | D1 **16** | **1.8** | < 0.25 |
| **PAH-Method (µg/L)** | | | | | | | | | | |
| Acenaphthylene | NA | NA | NA | NA | NA | NA | NA | Y < 0.11 | Y < 0.12 | NA |
| Acenaphthene | NA | NA | NA | NA | NA | NA | NA | 1.2 | 0.75 | NA |
| **D PAH-Method 8310 (µg/L)** | | | | | | | | | | |
| Naphthalene | NA | NA | NA | NA | NA | NA | NA | 0.22 | 0.28 | NA |
| Fluorene | NA | NA | NA | NA | NA | NA | NA | 1.0 | 0.82 | NA |
| Phenanthrene | NA | NA | NA | NA | NA | NA | NA | 0.72 | 0.99 | NA |
| Anthracene | NA | NA | NA | NA | NA | NA | NA | 0.85 | 0.19 | NA |
| Fluoranthene | NA | NA | NA | NA | NA | NA | NA | 2.7 | 0.17 | NA |
| Pyrene | NA | NA | NA | NA | NA | NA | NA | 2.2 | 0.25 | NA |
| Benzo(g,h,i)perylene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA |
| **Total D PAH** | NA | NA | NA | NA | NA | NA | NA | 7.69 | 2.70 | NA |
| **B2 PAH-Method 8310 (µg/L)** | | | | | | | | | | |
| Benzo(a)anthracene | NA | NA | NA | NA | NA | NA | NA | 0.10 | < 0.10 | NA |
| Chrysene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA |
| Benzo(b)fluoranthene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA |
| Benzo(k)fluoranthene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA |
| Benzo(a)pyrene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA |
| Dibenzo(a,h)anthracene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA |
| Indeno(1,2,3-cd)pyrene | NA | NA | NA | NA | NA | NA | NA | < 0.10 | < 0.10 | NA |
| **Alkalinity -Method SM2320 (mg/L CaCO3)** | NA | 271 | NA | NA | NA | 306 | 334 | 346 | 348 | < 1.0 |
| **Carbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | < 1.0 | NA | NA | NA | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| **Bicarbonate (Alkalinity) -SM2320 (mg/L CaCO3)** | NA | 271 | NA | NA | NA | 306 | 334 | 346 | 348 | < 1.0 |
| **N-Ammonia -Method 350.1M (mg-N/L)** | NA | < 0.050 | NA | NA | NA | UJ1 **0.021** | < 0.050 | UJ1 **0.04** | UJ1 **0.04** | 0.015 |
| **N-Nitrate -Calculated (mg-N/L)** | NA | 0.464 | NA | NA | NA | 5.64 | 4.14 | 3.90 | 4.70 | 0.062 |
| **N-Nitrite -Method 353.2 (mg-N/L)** | NA | < 0.010 | NA | NA | NA | 0.03 | 0.028 | 0.08 | 0.05 | < 0.050 |
| **Nitrate + Nitrite -Method 353.2 (mg-N/L)** | NA | 0.464 | NA | NA | NA | 5.67 | 4.17 | 3.98 | 4.74 | 0.062 |
| **Ortho-Phosphorous -Method 365.2 (mg-P/L)** | NA | 0.051 | NA | NA | NA | 0.111 | 0.058 | 0.396 | 0.254 | < 0.004 |
| **Sulfate -Method 375.2 (mg/L)** | NA | 78.3 | NA | NA | NA | 35.8 | 51.7 | 39.0 | 56.5 | < 2.000 |
| **Sulfite -Method 377.1 (mg/L)** | NA | < 1.5 | NA | NA | NA | UJ3 < **1.5** | < 1.5 | UJ3 < **1.5** | UJ3 < **1.5** | < 1.5 |
| **Total Organic Carbon -Method 415.1 (mg/L)** | NA | < 1.50 | NA | NA | NA | 1.88 | 1.94 | 2.57 | 2.62 | < 1.50 |
| **Dissolved Oxygen - Field (mg/L)** | 0.41 | 0.56 | 0.84 | 0.26 | 0.22 | 4.31 | 0.7 | 1.92 | 3.67 | |

(#) - Indicates blind duplicate number assignment on chain of custody.
Note: Well 1-A did not have enough water to collect sample.
D - Sample Dillution
Y - Indicates a raised reporting limit due to matrix interferences.
PPEG -Pressure Plant Extraction Gallery
BFEG -Barkfill Extraction Gallery
UJ1 - Analyte detected in associated field blank at a concentration at or above the detection limit.
UJ3 - Holding time exceeded.
NR = No reading due to free phase.

# Appendix A (continued)
# Groundwater Analytical Data
# April 2010
# IPC - Bozeman, Montana

| Well No. | Sample Date | Pentachlorophenol (EPA Method 8041) (ug/L) |
|---|---|---|
| 5-A | 4/12/2010 | **560 D** |
| 5-C | 4/12/2010 | 0.34 |
| 9-A | 4/13/2010 | 0.27 |
| 9-B | 4/13/2010 | **25 D** |
| 9-C | 4/13/2010 | **14 D** |
| 11-A | 4/14/2010 | <0.25 |
| 15-A | 4/12/2010 | **2.0** |
| 16-B | 4/12/2010 | **16 D** |
| 22 | 4/12/2010 | **4.8** |
| 22-D (Duplicate for Well 22) | 4/12/2010 | **4.9** |
| 23-A | 4/14/2010 | **2.0** |
| 23-B | 4/14/2010 | **2.4** |
| 24-B | 4/14/2010 | **10** |
| 24-F (Field Blank at 24-B) | 4/14/2010 | <0.25 |
| 25-A | 4/13/2010 | **9.8** |
| 25-B | 4/13/2010 | **41 D** |
| 26-A | 4/13/2010 | <0.25 |
| 26-B | 4/13/2010 | **1.9** |
| 26-C | 4/13/2010 | **7.6** |
| 27-B | 4/14/2010 | **42 D** |
| 28-B (28) | 4/14/2010 | <0.25 |
| GM-4 | 4/21/2010 | **19 D** |
| GM-5 | 4/21/2010 | **54 D** |
| GM-6 | 4/14/2010 | **3.7** |
| GM-8 | 4/14/2010 | <0.25 |
| BFEG | 4/21/2010 | **4.9** |

Note: Bolded concentrations are above cleanup levels.

D - Dilluted Sample

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September 2010
## IPC - Bozeman, Montana

| Sample ID: | 5-A | 5-C | 9-A | 9-B | 9-C | 11-A | 15-A | (15-D)# 15-A Dup | 16-B | 22 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/28/2010 | 9/28/2010 | 9/30/2010 | 9/30/2010 | 9/30/2010 | 9/29/2010 | 9/28/2010 | 9/28/2010 | 9/29/2010 | 9/28/2010 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **D 6,800** | U< 0.25 | **1.3** | **D 30** | **D 15** | U< 0.25 | **UJ1 1.1** | **UJ1 1.0** | **D 44** | **1.8** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | D 10 | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Acenaphthylene | DM 20 | NA | NA | NA | NA | NA | M 0.16 | U< 0.10 | NA | U< 0.10 |
| Acenaphthene | D 180 | NA | NA | NA | NA | NA | 0.72 | 0.88 | NA | 0.25 |
| Fluorene | D 150 | NA | NA | NA | NA | NA | 1.4 | 1.7 | NA | 0.10 |
| Phenanthrene | D 210 | NA | NA | NA | NA | NA | 4.0 | 5.0 | NA | U< 0.10 |
| Anthracene | D 83 | NA | NA | NA | NA | NA | 1.1 | 1.4 | NA | 0.19 |
| Fluoranthene | D 330 | NA | NA | NA | NA | NA | 0.97 | 1.4 | NA | 1.8 |
| Pyrene | D 300 | NA | NA | NA | NA | NA | 1.2 | 1.8 | NA | 1.2 |
| Benzo(a)anthracene | **D 94** | NA | NA | NA | NA | NA | **0.19** | **0.29** | NA | **0.31** |
| Chrysene | **D 94** | NA | NA | NA | NA | NA | **0.23** | **0.36** | NA | **0.24** |
| Benzo(b)fluoranthene | **D 60** | NA | NA | NA | NA | NA | 0.11 | 0.16 | NA | **0.72** |
| Benzo(k)fluoranthene | **D 60** | NA | NA | NA | NA | NA | 0.11 | 0.16 | NA | **0.72** |
| Benzo(a)pyrene | **D 64** | NA | NA | NA | NA | NA | U< 0.10 | 0.15 | NA | **1.00** |
| Dibenzo(a,h)anthracene | **D 10** | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | 0.23 |
| Benzo(g,h,i)perylene | **D 22** | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | 0.57 |
| Indeno(1,2,3-cd)pyrene | **D 24** | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | **0.53** |
| Total D PAH | **D 1,105** | NA | NA | NA | NA | NA | 8.7 | 11.3 | NA | 3.9 |

(#) - Indicates blind duplicate number assignment on chain of custody.
D - Indicates that the sample extraction was diluted.
M - Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters.

U - Indicates that the target analyte was not detected at the reported concentration.

UJ1 - Analyte detected in associated field blank at a concentration at or above the detection limit

BFEG -Barkfill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September 2010
## IPC - Bozeman, Montana

| Sample ID: | 23-A | 23-B | 24-B | 25-A | 25-B | 26-A | 26-B | 26-C | 27-B | 28-B |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/29/2010 | 9/29/2010 | 9/29/2010 | 9/29/2010 | 9/29/2010 | 9/29/2010 | 9/29/2010 | 9/29/2010 | 9/29/2010 | 9/30/2010 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **2.8** | **2.9** | **D 14** | **D 31** | **D 45** | 0.70 | **2.0** | **3.6** | **D 42** | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Total D PAH | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |

(#) - Indicates blind duplicate number assignment on chain of custody.
D - Indicates that the sample extraction was diluted.
M - Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters.

U - Indicates that the target analyte was not detected at the reported concentration.

UJ1 - Analyte detected in associated field blank at a concentration at or above the detection limit

BFEG -Barkfill Extraction Gallery

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September 2010
## IPC - Bozeman, Montana

| Sample ID: | GM-4 | | (GM-4D) # GM-4 Dup | | GM-5 | | GM-6 | | GM-8 | | BFEG | | (GM-6F) Field Blank | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/28/2010 | | 9/28/2010 | | 9/28/2010 | | 9/28/2010 | | 9/29/2010 | | 9/28/2010 | | 9/28/2010 | |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | | | | | |
| Pentachlorophenol | **D** | **100** | **D** | **110** | **D** | **13** | **UJ** | 0.97 | U< | 0.25 | **D** | **19** | UJ | 0.34 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | | | | | |
| Naphthalene | | 0.12 | U< | 0.10 | | 0.41 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Acenaphthylene | U< | 0.10 | U< | 0.10 | M | 0.67 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Acenaphthene | U< | 0.10 | U< | 0.10 | | 3.1 | U< | 0.10 | | NA | | 0.76 | U< | 0.10 |
| Fluorene | | 0.53 | | 0.53 | | 3.3 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Phenanthrene | U< | 0.10 | U< | 0.10 | | 4.1 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Anthracene | | 0.10 | U< | 0.10 | | 0.57 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Fluoranthene | | 0.12 | | 0.13 | | 0.46 | U< | 0.10 | | NA | | 0.86 | U< | 0.10 |
| Pyrene | | 0.12 | | 0.13 | | 0.50 | U< | 0.10 | | NA | | 0.67 | U< | 0.10 |
| Benzo(a)anthracene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Chrysene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Benzo(b)fluoranthene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Benzo(k)fluoranthene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Benzo(a)pyrene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Dibenzo(a,h)anthracene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Benzo(g,h,i)perylene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Indeno(1,2,3-cd)pyrene | U< | 0.10 | U< | 0.10 | U< | 0.10 | U< | 0.10 | | NA | U< | 0.10 | U< | 0.10 |
| Total D PAH | | 0.9 | | 0.8 | | 9.3 | U< | 0.10 | | NA | | 1.5 | U< | 0.10 |

(#) - Indicates blind duplicate number assignment on chain of custody.
D - Indicates that the sample extraction was diluted.
M - Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters.

U - Indicates that the target analyte was not detected at the reported concentration.

UJ1 - Analyte detected in associated field blank at a concentration at or above the detection limit

BFEG -Barkfill Extraction Gallery

# Appendix A (continued)
# Groundwater Analytical Data
# April 2011
# IPC - Bozeman, Montana

| Well No. | Sample Date | Pentachlorophenol (EPA Method 8041) (ug/L) |
|---|---|---|
| 5-A | 4/16/2011 | **310 D** |
| 5-C | 4/16/2011 | <0.25 |
| 9-A | 4/16/2011 | <0.25 |
| 9-B | 4/16/2011 | **9.4** |
| 9-C | 4/16/2011 | **8.4** |
| 11-A | 4/16/2011 | <0.25 |
| 15-A | 4/16/2011 | **1.6** |
| 16-B / Duplicate | 4/16/2011 | **24 D / 23 D** |
| 22 | 4/16/2011 | **8.3 D** |
| 23-A | 4/16/2011 | **1.6** |
| 23-B | 4/16/2011 | **2.4** |
| 24-B | 4/16/2011 | **12 D** |
| 25-A | 4/16/2011 | **1.7** |
| 25-B | 4/16/2011 | **35 D** |
| 26-A | 4/16/2011 | 0.48 |
| 26-B | 4/16/2011 | <0.25 |
| 26-C | 4/16/2011 | **3.1** |
| 27-B / Duplicate | 4/16/2011 | **37 D / 39 D** |
| 28-B (28) | 4/16/2011 | <0.25 |
| 28-F (Field Blank) | 4/16/2011 | <0.25 |
| GM-4 | 4/16/2011 | Under Water - No Access |
| GM-4 | 6/22/2011 | **90 D** |
| GM-5 | 4/16/2011 | **44 D** |
| GM-6 | 4/16/2011 | 0.94 |
| GM-8 | 4/16/2011 | <0.25 |
| BFEG | 4/16/2011 | **5.6** |

Note: Bolded concentrations are above cleanup levels.

D - Dilluted Sample

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September 2011
## IPC - Bozeman, Montana

| Sample ID: | 5-A | 5-C | 9-A | 9-B | 9-C | 11-A | 15-A | 15-D (15-A Dup) | 16-B | 22 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/27/2011 | 9/27/2011 | 9/27/2011 | 9/27/2011 | 9/27/2011 | 9/28/2011 | 9/27/2011 | 9/27/2011 | 9/27/2011 | 9/27/2011 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **D 980** | U< 0.25 | **D 16** | **D 13** | **7.8** | U< 0.25 | **2.6** | **2.4** | **D 33** | **1.9** |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | D 72 | NA | NA | NA | NA | NA | 0.20 | 0.16 | NA | U< 0.10 |
| Acenaphthylene | D 480 | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Acenaphthene | D 720 | NA | NA | NA | NA | NA | 1.2 | 0.87 | NA | 0.33 |
| Fluorene | D 810 | NA | NA | NA | NA | NA | 1.7 | 1.2 | NA | 0.20 |
| Phenanthrene | D 1700 | NA | NA | NA | NA | NA | 3.6 | 2.4 | NA | 0.16 |
| Anthracene | D 380 | NA | NA | NA | NA | NA | 0.84 | 0.59 | NA | 0.36 |
| Fluoranthene | D 1100 | NA | NA | NA | NA | NA | 0.76 | 0.51 | NA | 2.0 |
| Pyrene | D 980 | NA | NA | NA | NA | NA | J4 0.89 | J4 0.53 | NA | 1.3 |
| Benzo(a)anthracene | **D 300** | NA | NA | NA | NA | NA | **0.14** | U< 0.10 | NA | **0.11** |
| Chrysene | **D 350** | NA | NA | NA | NA | NA | 0.17 | 0.12 | NA | 0.11 |
| Benzo(b)fluoranthene | **D 170** | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(k)fluoranthene | **D 93** | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(a)pyrene | **D 160** | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Dibenzo(a,h)anthracene | U< 50 | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Benzo(g,h,i)perylene | D 53 | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Indeno(1,2,3-cd)pyrene | **D 55** | NA | NA | NA | NA | NA | U< 0.10 | U< 0.10 | NA | U< 0.10 |
| Total D PAH | **5,095** | | | | | | 8.0 | 5.4 | | 4.0 |

NA - Not Analyzed
(#) - Indicates blind duplicate number assignment on chain of custody.
D - Indicates that the sample extraction was diluted.
U - Indicates that the target analyte was not detected at the reported concentration.
J4 - Indicates that the duplicate RPD was not in control limits (0-30%)

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September 2011
## IPC - Bozeman, Montana

| Sample ID: | 23-A | 23-B | 24-B | 25-A | 25-B | 26-A | 26-B | 26-C | 27-B | 28-B |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 9/28/2011 | 9/28/2011 | 9/28/2011 | 9/27/2011 | 9/27/2011 | 9/27/2011 | 9/27/2011 | 9/27/2011 | 9/28/2011 | 9/28/2011 |
| **PCP-Method 8041 (ug/L)** | | | | | | | | | | |
| Pentachlorophenol | **3.4** | **3.2** | **3.0** | **D 21** | **D 33** | 0.39 | **3.6** | **1.3** | **D 38** | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | | | | | |
| Naphthalene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | U< 0.10 | U< 0.10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Total D PAH | U< 0.10 | U< 0.10 | | | | | | | | |

NA - Not Analyzed
(#) - Indicates blind duplicate number assignment on chain of custody.
D - Indicates that the sample extraction was diluted.
U - Indicates that the target analyte was not detected at the reported concentration.

## Appendix A (continued)
## Summary of Groundwater Analytical Data
## September 2011
## IPC - Bozeman, Montana

| Sample ID: / Sample Date: | GM-4 9/28/2011 | GM-4D (GM-4 Dup) 12/14/2011 | GM-5 9/28/2011 | GM-6 9/28/2011 | GM-8 9/28/2011 | (24-F) Field Blank 9/28/2011 |
|---|---|---|---|---|---|---|
| **PCP-Method 8041 (ug/L)** | | | | | | |
| Pentachlorophenol | **D 96** | **D 49** | **4.2** | 4.4 | U< 0.25 | U< 0.25 |
| **PAH-Method 8310 (ug/L)** | | | | | | |
| Naphthalene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Acenaphthylene | 0.11 | NA | U< 0.10 | NA | NA | NA |
| Acenaphthene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Fluorene | 1.1 | NA | U< 0.10 | NA | NA | NA |
| Phenanthrene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Anthracene | 0.36 | NA | U< 0.10 | NA | NA | NA |
| Fluoranthene | 0.22 | NA | U< 0.10 | NA | NA | NA |
| Pyrene | 0.14 | NA | U< 0.10 | NA | NA | NA |
| Benzo(a)anthracene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Chrysene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Benzo(b)fluoranthene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Benzo(k)fluoranthene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Benzo(a)pyrene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Dibenzo(a,h)anthracene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Benzo(g,h,i)perylene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | U< 0.10 | NA | U< 0.10 | NA | NA | NA |
| Total D PAH | 1.8 | | U< 0.10 | | | |

(#) - Indicates blind duplicate number assignment on chain of custody.
D - Indicates that the sample extraction was diluted.
U - Indicates that the target analyte was not detected at the reported concentration.