

**Black Hills Plateau Production  
Whittaker Flats D-17 Cuttings Remediation  
Analytical Results**

|                                    |                             |          | Cuttings Stockpile | Lift 1 Monitoring<br>(5/24/16) |
|------------------------------------|-----------------------------|----------|--------------------|--------------------------------|
| COGCC Table 910-1 Analytical Suite | Table 910-1 Standard        | Units    |                    |                                |
| Sample Date                        |                             |          |                    | 5/24/2016                      |
| Organics                           |                             |          |                    |                                |
| TEPH (DRO)                         | 500                         | mg/kg    | 3680.00            | 216.00                         |
| TVPH (GRO)                         | 500                         | mg/kg    | ND                 | 2.33                           |
| TPH                                | 500                         | mg/kg    | 3680.00            | 218.33                         |
| BENZENE                            | 0.17                        | mg/kg    | ND                 | NA                             |
| TOLUENE                            | 85                          | mg/kg    | ND                 | NA                             |
| ETHYLBENZENE                       | 100                         | mg/kg    | ND                 | NA                             |
| XYLENE TOTAL                       | 175                         | mg/kg    | ND                 | NA                             |
| ACENAPHTHENE                       | 1,000                       | mg/kg    | 0.03               | NA                             |
| ANTHRACENE                         | 1,000                       | mg/kg    | 0.13               | NA                             |
| BENZO(A)ANTHRACENE                 | 0.22                        | mg/kg    | 0.34               | 0.311                          |
| BENZO(A)PYRENE                     | 0.022                       | mg/kg    | 0.10               | 0.0895                         |
| BENZO(B)FLUORANTHENE               | 0.22                        | mg/kg    | 0.48               | 0.37                           |
| BENZO(K)FLUORANTHENE               | 2.2                         | mg/kg    | 0.06               | NA                             |
| CHRYSENE                           | 22                          | mg/kg    | 0.71               | NA                             |
| DIBENZO(A,H)ANTHRACENE             | 0.022                       | mg/kg    | 0.07               | ND                             |
| FLUORANTHENE                       | 1,000                       | mg/kg    | 0.53               | NA                             |
| FLUORENE                           | 1,000                       | mg/kg    | 0.42               | NA                             |
| INDENO(1,2,3-CD)PYRENE             | 0.22                        | mg/kg    | 0.07               | NA                             |
| NAPHTHALENE                        | 23                          | mg/kg    | 0.84               | NA                             |
| PYRENE                             | 1,000                       | mg/kg    | 0.54               | NA                             |
| Metals                             |                             |          |                    |                                |
| MERCURY                            | 23                          | mg/kg    | 0.08               | NA                             |
| ARSENIC                            | 0.39                        | mg/kg    | ND                 | NA                             |
| BARIUM                             | 15,000                      | mg/kg    | 9060.00            | NA                             |
| CADMIUM                            | 70                          | mg/kg    | ND                 | NA                             |
| CHROMIUM (III)                     | 120,000                     | mg/kg    | 13.90              | NA                             |
| CHROMIUM (VI)                      | 23                          | mg/kg    | 3.96               | NA                             |
| COPPER                             | 3,100                       | mg/kg    | 82.40              | NA                             |
| LEAD                               | 400                         | mg/kg    | 11.00              | NA                             |
| NICKEL                             | 1,600                       | mg/kg    | 20.20              | NA                             |
| SELENIUM                           | 390                         | mg/kg    | ND                 | NA                             |
| SILVER                             | 390                         | mg/kg    | ND                 | NA                             |
| ZINC                               | 23,000                      | mg/kg    | 58.10              | NA                             |
| Inorganics                         |                             |          |                    |                                |
| Sodium Absorption Ratio            | <12                         | unitless | 29.40              | 24.6                           |
| Electric Conductivity              | <4mmhos/cm or 2x background | mmhos/cm | 5.12               | 4.18                           |
| pH                                 | 6 to 9                      | SU       | 7.55               | 8.73                           |

Notes:

highlight indicates reading above COGCC Table 910-1 standards

ND - non detect

NA - not analyzed

SU - standard unit

mg/kg - milligram per kilogram

mmhos/cm - millimhos per ceNAimeter

TEPH - total petroleum hydrocarbons - Diesel range organics

TVPH - total petroleum hydrocarbons - gasoline range organics

TPH - total petroleum hydrocarbons (TEPH and TVPH combined)

COGCC - Colorado Oil and Gas Conservation Commission