

Prior to exposure to the weathering conditions in the draft method, sample aliquots were selected randomly for analysis of neutralization potential. Results of these analyses are presented in Table 4.1.

**Table 4.1: Sample Characterization**

| Sample                                 | Neutralization Potential        |                           |                           |
|--|---------------------------------|---------------------------|---------------------------|
|  | Total Sulfur (%)                | 1978 <sup>(1)</sup> (ppt) | 1997 <sup>(2)</sup> (ppt) |
|  | Brush Creek Shale (BCS3-PA) - 1 | 0.59                      | 96.97                     |
| Brush Creek Shale (BCS3-PA) - 2        | 0.59                            | 96.96                     | 49.31                     |
| Brush Creek Shale (BCS3-PA) - 3        | 0.56                            | 96.98                     | 47.61                     |
| Brush Creek Shale (BCS3-PA) - 4        | 0.59                            | 96.97                     | 47.07                     |
| Kanawha Black Flint Shale (KBF-WV) - 1 | 0.35                            | 15.17                     | 13.17                     |
| Kanawha Black Flint Shale (KBF-WV) - 2 | 0.30                            | 16.76                     | 13.34                     |
| Kanawha Black Flint Shale (KBF-WV) - 3 | 0.21                            | 17.17                     | 13.65                     |
| Kanawha Black Flint Shale (KBF-WV) - 4 | 0.32                            | 18.69                     | 14.26                     |
| Lower Kittanning Shale (LKFC-PA) - 1   | 0.93                            | 12.71                     | 15.63                     |
| Lower Kittanning Shale (LKFC-PA) - 2   | 0.90                            | 16.47                     | 16.36                     |
| Lower Kittanning Shale (LKFC-PA) - 3   | 0.89                            | 12.57                     | 15.65                     |
| Lower Kittanning Shale (LKFC-PA) - 4   | 0.92                            | 12.41                     | 16.06                     |
| Houchin Creek Shale (HCS-IN) - 1       | 5.27                            | 41.85                     | 41.05                     |
| Houchin Creek Shale (HCS-IN) - 1       | 5.21                            | 41.29                     | 45.27                     |
| Houchin Creek Shale (HCS-IN) - 1       | 4.73                            | 45.87                     | 47.55                     |
| Houchin Creek Shale (HCS-IN) - 1       | 5.10                            | 47.53                     | 48.27                     |
| Middle Kittanning Sandstone (MKSS) - 1 | 0.08                            | 20.9                      | -                         |
| Middle Kittanning Sandstone (MKSS) - 2 | 0.04                            | 17.7                      | -                         |
| Middle Kittanning Sandstone (MKSS) - 3 | 0.03                            | 14.3                      | -                         |

<sup>(1)</sup> Results obtained using 1978 NP method (Sobek, et al., 1978).

<sup>(2)</sup> Modified neutralization potential method (Skousen, et al., 1997).

### **Laboratory Tasks**

To evaluate method performance in multiple laboratories, and to ensure the generation of at least six useable datasets <sup>1</sup> the 2006 study involved seven participating laboratories implementing method procedures in 9 columns over a 15-week period and analyzing weekly column leachate samples for conductivity, pH, alkalinity, and net acidity. Each laboratory also shipped a filtered sample aliquot from each of its 9 weekly leachate samples (one from each column) to a metals laboratory for measurement of dissolved metals and sulfate. An eighth participating laboratory joined the study during the third week of the 15-week study period.