Table 9.4 Lower Kittanning Shale Summary ABA Data

Sample Treatment		N	%S			NP		
			Min	Mean	Max	Min	Mean	Max
LKFC-PA	Initial Standard NP	4	0.89	0.91	0.93	12.41	13.54	16.47
LKFC-PA	Initial Modified NP	4	0.89	0.91	0.93	15.63	15.93	16.36
LKFC-PA	Splits Before Leaching	6	0.88	0.98	1.13	9.58	12.84	17.20
LKFC-PA	Splits After Leaching	25	0.63	0.84	1.17	4.83	12.94	17.18

This Lower Kittanning shale sample was collected from an active surface mine highwall in the Redbank Creek Watershed in Jefferson County, Pennsylvania. ABA data are available in the DEP public files for this site and adjacent sites in the watershed. Fortunately (through the assistance of Joe Tarantino and Tim Gillen from the DEP Knox Office), the overburden analysis data was compiled and some field water quality data were available to compare to the ABA and leaching test data from this project. In one overburden drill hole for the Falls Creek mine site the total sulfur of the shale overlying the coal as 0.93% with an NP of 9.70 which is very similar to the data in Tables 9.4 and 9.11. In another drill hole from this mine site the overlying shale had sulfur contents of 4.32, 1.84 and 1.10% with NP values of 1.0, 3.75 and 4.75 respectively. In overburden drill holes from adjacent mine sites the Lower Kittanning shale had total sulfur of 1.70% (NP = 17.15) and 0.95% (NP = 12.64), as shown in Table 9.5.

Table 9.5
Sulfur and NP Content of Lower Kittanning Shale Field Site

Location	%S	NP
Falls Creek Mine	0.93	9.7
Falls Creek Mine	4.32	1.0
Falls Creek Mine	1.84	3.75
Falls Creek Mine	1.10	4.75
Adjacent Mining	1.70	17.15
Adjacent Mining	0.95	12.64

Some field water quality data was also available in the public file and is summarized in Table 9.6. The mine site named the “Roy Mine” is the Falls Creek Energy Co., Inc. permit where our LKFC-PA shale sample was collected. An Original Fuels, Inc. site located 3,000 feet north of the Roy Mine has a post-mining discharge from the toe of spoil. The discharge monitoring data from 19 water samples collected from December 1999 to May 2006 are summarized in Table 9.6. Alkalinity exceeded acidity in all 19 samples and the median alkalinity is 108 mg/l while