REVISED INVESTIGATIVE APPROACH FOR ADDITIONAL REMEDIAL INVESTIGATION WORK AT FIRST PIEDMONT ROCK QUARRY/ROUTE 719 SITE, Pittsylvania County, Virginia

February 16, 2005

Carbon Black Pile Area Soil Sampling

- Frequency – one time.

- Generally, samples will be collected around the perimeter and down gradient of the carbon black pile excavation. The approximate boundaries of the carbon black pile will be identified and staked in the field by evaluating soil characteristics using a hand auger. The perimeter of the excavation is approximately 500'. Specific sampling locations may be adjusted based on field observations.

- Soil profiles (0–6", 6–24", 2–4’, 4–6’, 6’-bedrock) will be collected from 16 locations around the perimeter and down gradient of the carbon black pile excavation (see figure titled Proposed Carbon Black Pile Area Soil Sampling). The profile sampling will include locations SL-3 and SL-4 from the Zinc Source Investigation. Two reference/background locations will be sampled: one in the vicinity of monitoring wells FP-005A and B, and one near the eastern rim of the quarry. Historical background data will also be used. Total locations = 18, total samples = 90 (assuming bedrock is greater than 6’).

- Additional surface soil samples (0–6") will be collected from 13 locations around the carbon black pile (see figure). This sampling will include four locations in a 10' grid around SL-3. Two surface reference/background samples will be collected from appropriate locations. Total locations = 15, total samples = 15.

- Soil profiles (0-6", 6-24" or bedrock) will be collected from SL-5, 6, 7, 8, and 9. Assumes hand core/auger sampling. Total locations = 5, total samples = 10.

- Total sampling locations = 38, total number of samples = 115 (plus appropriate number of duplicates and equipment blanks).

- Soil analyses - total zinc only. All soil samples will be visually inspected for the presence of carbon black.
Surface Water and Groundwater Seep Sampling

- Frequency – three times, one time each under the following conditions: (1) base flow without visible groundwater seeps discharging to Southern Drainage, (2) base flow with visible groundwater seeps discharging to Southern Drainage, and (3) storm event with surface runoff discharging from site drainage to Southern Drainage. The timing of these sampling events will depend upon the presence of groundwater seeps and rainfall events. Therefore, data submittal will be phased.

- Southern Drainage – two upstream reference locations (AI-01 and AI-03) and six down stream potentially influenced stations (confluence of site drainage and Southern Drainage, AI-04, AI-05, AI-06, AI-07, and AI-08). Total sampling locations = 8, total samples per event = 8, total samples for three events = 24.

- Site Drainage – two locations during storm event (culvert inlet and culvert discharge). Assume that water will be present only during major storm event. Total sampling locations = 2, total samples 2.

- Groundwater Seeps – upstream reference seep and seep at confluence of site drainage and Southern Drainage, assuming they are present. Total sampling locations = 2, total samples per event = 2, total samples for two events = 4.

- Total sampling locations = 12, total number of samples = 30 (plus appropriate number of duplicates and equipment blanks).

- Surface water/seep analyses – flow estimate, total zinc, dissolved zinc, and total suspended solids, on all samples; pH, alkalinity, and hardness on approximately 20% of samples.

Southern Drainage Sediment Sampling

- Frequency – three times, in conjunction with surface water sampling.

- Surface sediment (0-6") – same locations as surface water sampling (AI-01, AI-03 confluence of site drainage and Southern Drainage, AI-04, AI-05, AI-06, AI-07, and AI-08).

- Total locations = 8, total samples = 24.

- Sediment analyses – total zinc only.
Floodplain Sediment/Soil Sampling

- Frequency – one time.

- Soil profiles (0-6", 6-12", 12-24") collected from 53 locations including historical sediment locations AI-06, 07, 08, 09, 10, 11, 12, 13, and 14 (see figure titled Proposed Floodplain Sediment/Soil Sampling). Sample locations may be adjusted based on field observations and findings of the wetland delineation described below. The wetland delineation will be conducted prior to the floodplain sampling. Total sampling locations = 53, total samples = 159.

Floodplain Wetland Delineation

- Identify and map wetlands, aquatic, and terrestrial habitat within the floodplain. This work will be completed prior to the floodplain sediment/soil sampling.
### SAMPLING AND ANALYSIS SUMMARY

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<th>Sampling Description</th>
<th>Sample Locations</th>
<th>Number of Samples</th>
<th>Number of Sampling Events</th>
<th>Total Samples</th>
<th>Total Zinc</th>
<th>Dissolved Zinc</th>
<th>Total Suspended Solids</th>
<th>Alkalinity</th>
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