First Stop – Mary D Overflow
Construction of this DEP site was completed in Spring 2010. Water here is net Alkaline with a pH of approximately 6. The goal at this site is to precipitate Iron in wetlands. Note gallionella (iron-oxidizing bacterial) coating the aquatic plants (bottom right).
First Stop – Mary D Overflow – At the top of the hill water passes through these pipes (top left) to exit in a lower pool (top left and bottom right) where it is aerated naturally before it passes into the wetlands through a stream channel (bottom right).
First stop – Mary D Overflow – Water discharges into the wetland (top) after passing through a weir (right) where flow can be measured.
Second Stop – Reevesedale South Dip Tunnel Project. Wayne Lehman gave some background information on passive remediation techniques for abandoned mine drainage. This location has an oxic Limestone Tunnel that discharges into wetlands where the iron accumulates. Orange coloration caused by flushing the system.
Second Stop – Reevesdale South Dip Tunnel Project. Notice the change of coloration of the discharge from the limestone tunnel flush after several minutes of water flow. This is caused by the flushing of different layers of iron coating the limestone inside the tunnel.
Third Stop – Silvercreek Treatment System. This system was installed in 2010 and cost $800,000. It consists of several levels of settling ponds which allow the iron to oxidize and precipitate out of solution. The original discharge (left) is connected to the series of settling pools (right).
Third Stop – Silvercreek Treatment System. Level spreaders distribute the water flow evenly across several series of elevation drops before final discharge (bottom right).
Third Stop – Silvercreek Treatment System. Leaving the site – notice the color changes which indicate the quantity and type of iron present in the settling ponds.
Fourth Stop – Wheeler Site – This stream channel has been lined with clay and rip rap to decrease the recharge that was occurring to the underground mine pool thus decreasing abandoned mine discharge. The old mine entrance can be seen at the bottom right.
Fourth Stop – The ventilation system still allows air from the mine at 54°F to exit at the surface (left).

Fifth Stop – Wadesville Strip Mine, Mammoth Coal Vein – Notice the size of the strip mining operation (below)