

**ICG TYGART PERMIT #U200406**  
**ARCH COAL LEER MINE**  
**REVISION #21**

This permit revision makes major changes to the previously permitted operation. Our organization is very concerned that if the proposed changes are implemented, major adverse impacts to water quality in Three Fork Creek and Little Sandy Creek will occur. As a result, major adverse impacts could occur to the Tygart River and Tygart Lake. Adverse impacts will include:

- There will be an artesian flow of 3,465 gallons per minute (gpm) of water from the deep mine works at the mine site. This water, according to the proposed revision, will require treatment for 38 years after mining completion (predicted to be March 2033) before effluent limits can be met without treatment.
- The revision projects that the water will contain 8.44 mg/l of iron. The company will treat this water in two large ponds, supposedly reducing the amount of iron to 1.5 mg/l before discharge.
- Even at a level of 1.5 mg/l iron, with the huge flow rate of 3,465 gpm, substantial iron staining and detrimental effects are possible in Three Fork Creek. A discharge of 3,465 gpm is 7.7 cubic feet per second (cfs). During low flow periods in September 2019, the total flow in Three Fork Creek at its junction with the Tygart River was only 3.74 cfs. The proposed discharge from the Leer Mine would be over twice the total flow of the Creek during periods of low flow and would simply overwhelm it.
- The discharge will also have a specific conductance of 3120  $\mu$ mhos/cm. A West Virginia Department of Environmental Protection (WVDEP) guidance document indicates that a specific conductance level of 1533  $\mu$ mhos/cm or greater is a “definite stressor”.

- The mine discharge will contain a sulfates level of 902 mg/l. The WVDEP guidance indicates that a sulfate level above 417 mg/l is a “definite stressor”.
- An earlier approved permit modification (Revision #13) included protections for Little Sandy Creek. Revision #13 limited mining under the Creek and major tributaries to “first mining only”, meaning the coal extraction would be limited to a level which should preclude subsidence of the Creek and its tributaries. In proposed Revision #21, these protections have been eliminated. The exact language states: “Under Revision No. 13 there were areas identified as room and pillar development (first mining only) in the northern and southern part of the Guffey tract reserve area. These areas are being removed within Revision No. 21.” If this is approved, all protections would be removed, and the company could subside Little Sandy Creek and its tributaries, resulting in tremendous damage to the hydrologic balance.

We have serious concerns about the assumptions made in Revision #21 regarding the flow of water in the underground works to the proposed boreholes. The assumption is that flows would be unrestricted throughout the mine. In the course of time, roof failures and blockages can occur, which may result in pooling of water and potential seepage along the longwall panels above Three Fork Creek which could far exceed what the company projects. Also, certain sections of the mine are never going to drain to the boreholes.

Also, to our knowledge, Arch Coal has not submitted an application for a National Pollutant Discharge Elimination System (NPDES) permit, where actual effluent limit standards would be set. This permit should go hand in hand with Revision #21.

We have made the entire narrative for Revision #21 available on our web site, and we encourage everyone to review it. We have also posted the proposed mine maps.