A bighorn sheep (*Ovis Canadensis*) pneumonia outbreak began in the East Fork of the Bitterroot River drainage in late November 2009. The decision to cull apparently sick animals provided the unique opportunity to collect fresh, high quality biological samples for diagnostic testing. It is our hope that information gained from this outbreak will contribute to an understanding of bighorn sheep pneumonia outbreaks in western states. The Montana Fish, Wildlife, and Parks wildlife laboratory performed full necropsies on many of the bighorn sheep that died or were culled during this outbreak. Body condition score and severity of lung lesions was noted. A fresh blood sample and fecal sample was collected, and the pharynx and ear canal were swabbed. Lung, tracheobronchial lymph node, and liver samples were also collected. Field personnel collected fresh tissue samples from culled sheep that could not be removed from the field for necropsy. Tissues and swabs were submitted to Washington Animal Disease Diagnostic Laboratory (WADDL) for aerobic and Mycoplasma culture. Serum and fecal samples were submitted to the Montana Department of Livestock laboratory in Bozeman. In this presentation we will describe the gross pathology of the pneumonia outbreak, summarize all laboratory findings, and describe similarities and differences when compared to other bighorn sheep pneumonia outbreaks within Montana and in other western states.