On September 24, Patagonia resident Gooch Goodwin discovered a stream of bright orange water running into Flux Canyon. The next day he found a similar situation at Alum Gulch. Goodwin notified U.S. Geologic Survey (USGS) officials of the situation, and they, in turn, notified the Arizona Department of Environmental Quality (ADEQ) and the Coronado National Forest. On September 26, USGS and ADEQ sent people to Patagonia to assess the streams.

They determined that the polluted water was coming from two old mines—the Lead Queen and the Trench. Apparently, heavy rains had pushed water through the old tunnels, washing tailing materials out and into Patagonia’s watershed and the environment.

The Trench Mine was one of the largest underground lead, zinc and copper mines in the Patagonia Mountains. It was owned by the American Smelting and Refining Company (Asarco) and closed in 1945. The Lead Queen mine was an underground mine for lead and silver that closed in 1940. The canyon where it is located drains into Harshaw Creek, approximately four miles from Patagonia.

Floyd Gray of USGS is familiar with Patagonia’s old mines—where they are and how they drain. Preliminary tests he made on September 24 measured the water’s levels of Ph, conductivity, and total dissolved solids. The numbers are very high, making it clear that the water leaking from the mines and flowing into Harshaw and Sonoita Creeks is extremely toxic to humans and animals. Gray is doing further testing of water samples at his lab.

Seepage from Asarco’s old mines in Patagonia shows up frequently in springs that bubble to the surface in various places in the mountains. It is deeply colored and has an oily sheen. Once it surfaces, rainwater carries it into our watershed. Wildlife and range animals drink this water, which eventually makes its way to Patagonia Lake. Most people know this, but no one recalls seeing this high an amount of runoff.

The same mining company that created the Trench Mine—Asarco—has been associated with a recent spill in Mexico, at the Buenavista mine in Sonora. The mine is run by Grupo Mexico, which acquired Asarco as a subsidiary in 1999. On August 7, overflow from a defective holding pond dumped what is reported to have been 10 million gallons of sulfuric acid into local waterways. [Reported in PRT’s September issue.] The spill was not reported to authorities for several days.

Although the company has allocated $151 million for a trust to pay to clean up the mess, the Mexican newspaper El Financiero quoted a report from Mexico’s Congress, saying “Grupo Mexico is far from being a socially responsible enterprise that respects the environment,” and Mexico’s lower legislative branch has asked President Peña Nieto to cancel Grupo Mexico’s concession and suspend its operations.

Who is responsible for cleaning up the pollution from Asarco’s old mines that now threatens Patagonia? That question may well go unanswered for some time to come. Arizona may have gotten mitigation money from Asarco nearly seventy years ago when it closed its mines here, but where did that go? The State of Arizona now owns that land. Does that make the state responsible for cleaning up this mess?

Some scientists in the United States are trying to determine how much the Mexican spill will pollute the San Pedro River, which flows in to Arizona. Heavy rains have hampered this investigation, and the recent hurricanes caused further spills from the mine’s holding pond.

Someone on the Sonora side of the border told a reporter that having the pollution reach the United States might be a good thing for Mexico because the United States would put pressure on the Mexican Government to be stricter. It will be interesting to see how strict our own government is about mining and its collateral damage in our own back yard.