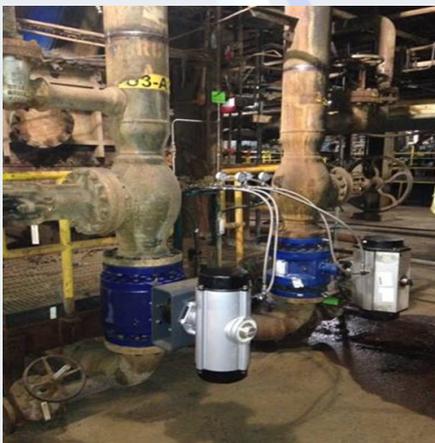
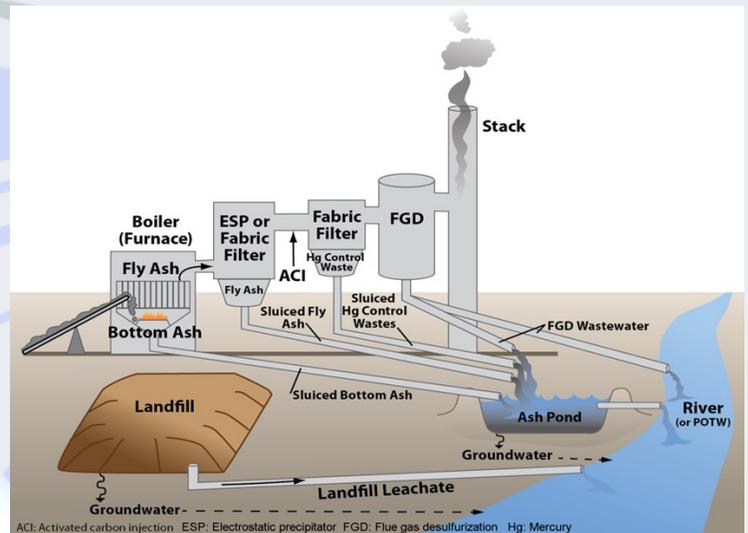


Power Generation Industry — Fly Ash Disposal

Fly ash is produced from burning pulverized coal in a coal-fired boiler to generate electric power. Fly ash is a fine-grained, powdery particulate material that is carried off in the flue gas and usually collected by means of electrostatic precipitators or other particle filtration equipment before the flue gases reach the chimney stack, and together with bottom ash removed from the bottom of the furnace are jointly known as coal ash. Water is drawn by pumps from the ash pond and is mixed with the bottom ash and fly ash which becomes toxic, abrasive slurry that has to be sluiced back to the ash pond.

THE PROBLEM:

Fly ash contains concentrated amounts of heavy metals such as lead, mercury, arsenic, chromium, and selenium. The water that is pulled from the ash pond has traces of the toxic and abrasive fly ash and when mixed with dry fly ash collected from the precipitator creates a slurry that returns to the ash pond. This cycle repeats every 15 minutes. This abrasive nature of the fly ash return water and the slurry caused premature failure of ball valves requiring them to be taken out of service after only 7 to 18 months due to leakage.



THE SOLUTION:

The customer installed Quadrosphere® ball valves in 6" and 8" sizes, 300# class, carbon steel bodies and 316 stainless steel ball with standard trim material. The original valves have been in service for 8 years and still do not leak. The longer life is due to the Quadrosphere® unique ball geometry that allows passage of the fly ash slurry in and out of the valve without allowing it to build up in the valve cavity and scratch the ball during opening and closing. The edges of the Quadrosphere ball also scrape any build-up off of the seats each time the valve cycles every 15 minutes.

THE RESULT:

With the original valves still in service after 8 years, the power plant is finished converting all valves to Quadrosphere® Ball Valves.

Note: According to The U.S Energy Information Administration there were 317 coal-fired power plants operating in the U.S as of March, 2015