Supplemental Environmental Project Description
Central Plains Cement Company
Sugar Creek, Missouri

Overview

The Central Plains Cement Company LLC (CPC) has developed a Supplemental Environmental Project (SEP) to offset a portion of the proposed fine resulting from the findings of the November 2013 storm water inspection conducted by the U.S. EPA. The project replaces City water used to slurry fly ash (for subsequent use in a mine stabilization project) with water pumped from our underground mine. That mine water is currently pumped and discharged to the Missouri River.

Background

The deep mine pumps roughly 18 million gallons of mine water each year. Nearly all of this water gravity flows to the crusher area, the lowest point in the mine. From there it is pumped through four different settling basins before it is discharged to the Missouri River. The water discharges through Outfall 014 regulated under Missouri State Operating Permit MO-0002666.

As the mine increases in size it opens more areas for water influx. With the increased water flow the mine has seen an increase in the suspended solids level in the discharge water. These levels are monitored quarterly we are required to remain below permitted discharge limits. In the past year our suspended solids have come close to, or exceeded our limit on a number of occasions. This has directly resulted in a Notice of Violation and the associated fine from the EPA.

This project will create a large holding pond adjacent to Courtney Ridge surface mine. The stored water be used by our sister company, Kansas City Fly Ash LLC (KCFA) to supplement their water required to slurry fly ash for their mine stabilization project. KCFA has the capability of using all the mine discharge water, making the mine a zero discharge site. Not only will this eliminate the possibility of discharge limit exceedances (and further fines) it will also reduce the water bill for KCFA.

The actual annual amount of water conserved depends on the amount of time the generating station is operating (and therefore, making fly ash that KCFA must slurry). In years past, the generating station is down for maintenance 2-4 weeks per year. Assuming 4 weeks of generating station downtime per year and a mine water generation rate of approximately 72,000 gallons per day yields an annual conservation of 24,192,000 gallons of water. This will reduce suspended solids and chlorides discharge to the Missouri River by approximately 4 and 700 tons per year, respectively.

Scope of Work

The new holding pond will be located just inside of the Courtney Ridge surface mine. The sump will be approximately 150 ft x 30 ft x 7 ft and made of poured concrete. The current mine water discharge pipe will be split near this pond and redirected to fill it. There will also be a pump

installed at the pond to pump water out and back into the current mine water discharge system, although this will only be used in emergency situations or times when KCFA cannot use the mine water for extended periods of time.

All work, except for pouring the concrete, will be performed in house. Some initial excavation and piping work has commenced. Following final capital expense approval, the project could be completed within one month.

Cost Estimate

Courtney Ridge Water Retention Basin Costs

Activity	Quantity	Units	Cost/Unit	Total Cost
Fill / Discharge Pipe	1400	feet	$ 5.48	$ 7,672.00
Pipe Fusing Machine Rental	1	week	$ 540.00	$ 540.00
Trackhoe Breaker Rental	2	weeks	$ 600.00	$ 1,200.00
Concrete Forming and Pouring	1	ea	$39,540.00	$39,540.00
Concrete Purchase	237	yds	$ 82.00	$19,434.00
Discharge Pump	1	ea	$ 4,000.00	$ 4,000.00
Pipe Fittings	10	ea	$ 100.00	$ 1,000.00
Power Lines	900	ft	$ 2.25	$ 2,025.00
Power Box / Breaker	1	ea	$ 2,500.00	$ 2,500.00
			Total	$77,911.00