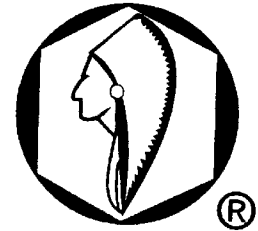


# Piston Pumping Solutions - Closed Site

*Difficult Pumping Applications from  
Blackhawk Environmental Company*



## BP ACHIEVING BROWNFIELD SITE REMEDIATION

*The Oil Super Giant Will Return Site of*

*Refinery Closed Two Decades Ago to Tax Rolls With the Help of*

*Anchor Piston Pumps for Groundwater Recovery and Containment*

BP, a leading energy provider and world-class oil company, is cleaning up the site of a former Amoco oil refinery located in Sugar Creek, Mo. Working with the City of Sugar Creek, plans are being made to turn major portions of the 500-acre former refinery into a bustling industrial/commercial business park with three miles of new roads and utilities. The name Sugar Creek evokes images of sugar maples, verdant landscape and, as it implies, the city offers a sweet way of life. Located eight miles east of Kansas City, Mo., the site of the former refinery, which operated from 1904 to 1982, is located on the Missouri River where Lewis and Clark camped during their historic journey, and down the road from the Harry and Bess Truman home in Independence, MO.

BP and the City of Sugar Creek are committed to reusing the site of the former refinery. Three hundred acres will be leased to the City for a business park. Remediation and redevelopment of the site is aimed at attracting new businesses to the area, generating more jobs for the local populace, and re-

turning the property to tax rolls. This all sounds pretty and nice, yet the truth of the matter is that the very nature of petroleum products and groundwater can make remediation of former oil refinery sites tricky business.

BP (formerly known as Amoco) has been monitoring and investigating groundwater conditions at the refinery for quite some time. Sampling revealed the existence of hydrocarbon contaminants, some of which mix with groundwater and others that are lighter than water and float on top of it. Some of the hydrocarbons were discharging into surface water. "BP's goal is to keep hydrocarbons from migrating into the (Sugar) creek," said Lloyd E. Dunlap, who manages BP's remediation program at the site.



One of Blackhawk's 102 Electric Anchor Piston Pumps controlling and containing groundwater from migrating into Sugar Creek.

Initial efforts used a trench-type recovery system to control migration of hydrocarbons and groundwater into the creek. The system consists of a trench filled with rocks and drain tiles to carry water containing hydrocarbons to an API separator and then to a public operated treatment works (a POTW or sanitary sewer). For the northern area of the site with different geologic conditions, a decision was made to install Blackhawk 102 Electric Anchor Piston Pumps because they were effective in the clayey soils and less intrusive than the trench-type system.



Control box for one of the four Blackhawk Electric 102 Anchor Piston Pumps working 24/7 at BP Sugar Creek site.

“Blackhawk Anchor Pumps proved to be better for us in the northern area near the creek. They effectively control and contain the groundwater from migrating toward the creek. We’re using four Anchor Pumps right now, all of them electric 102Es, to pump groundwater mixed with hydrocarbons to the API separator and then to the POTW. Our Blackhawk pumps have worked steadily around the clock for 9 to 12 months now and they have been very effective. Installing them was easy, too. They’re low maintenance, and with the controls on top, easy to inspect, trouble shoot, and maintain”, Dunlap explained.

Blackhawk Environmental’s Anchor Piston Pumps are well known for their ability to handle dirty, oily, and sticky liquids. The pumps feature the pump inlet at the bottom of the pump, so that each pump works like a syringe, extracting liquid from the bottom to the top with every stroke for highly reliable pumping. The pumps operate consistently whether the pumping action is clean or dirty. Even in the most sticky or oily situations, the pump’s positive displacement action resists lowdown or stoppage. The pump operator can always see if the pump is working or not, because the pump drive mechanism and controls are positioned at the top.

“Ours was a joint decision among BP and our consultants to purchase Blackhawk Anchor Piston Pumps. Since we have used them, we have been very satisfied with their performance,” said Dunlap.

Blackhawk Environmental Co. specializes in manufacturing quality pumps and controls for demanding pumping applications. Blackhawk pumps can be powered pneumatically or electrically and can work in hazardous or potentially hazardous environments. For more than a decade, Blackhawk pumps have been successfully operating in a wide range of pumping applications across the United States. Blackhawk’s pumps are custom manufactured in a variety of sizes and designs depending on the application.



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