

Champion Coal Washer (Bob Ciminel ©2012)

Although it was not a coal mine, the Champion coal washing plant nestled in the valley between U.S. Route 22 and PA Route 980 was the heart of the Montour Railroad between 1928 and 1983. For during that 55-year period, Champion cleaned and shipped 13,000 tons of coal a day and provided the Montour Railroad with the best freight-hauling scenario a railroad could ask for: fully-loaded cars moving both to and from the customer.

Begun in mid-1928, and fully operational by late November of that year, the Pittsburgh Coal Company coal washing facility at Champion, which was named for the company's trademark, Champion Coal, employed a state-of-the-art process for removing impurities from smaller sizes (less than 4 inches) of coal.

Raw, or run-of-mine, coal contained many impurities, but ash and sulfur were the primary culprits. Depending on its size, coal could have anywhere from 10 to 16% ash in it, a major cause of clinker formation in power boilers. Sulfur, when combined with moisture, produced sulfuric acid (people were not aware of acid rain in those days), which corroded flues and stacks. As customers demanded cleaner coal, the investment in the \$1.7 million plant at Champion was a good business decision. In addition, it eliminated the need for coal processing facilities at the mines.

Raw coal entered the plant at the car dumper on the hill above the facility. The rotary dumper could handle 20 cars an hour or about one car every three to five minutes. From the dumper, the coal rode a 60-inch belt past a magnet that removed metal objects, such as coal shovels, spikes, tools, etc., and then entered a shaker screen. The screens separate out coal that was larger than 4 inches and sent it on to the picking tables where it was handpicked into 4- and 6-inch sizes and sent on to the loading booms and directly into the hopper cars on the eight loading tracks beneath the tippie. A fan removed the coal dust from the shaker tables and sent it to the 300 horsepower boiler that provided power and steam for the plant. Coal less than 4 inches in size went from the shaker tables to three concrete hoppers where it was fed onto a raw coal conveyor that served the wash plant.

The wash plant used a 48-inch Rheolaveur washer that separated the coal from impurities based on density and specific gravity. (The Rheolaveur Process was invented by Belgian engineer Antoine France for use at the St. Nicholas mine near Liège, Belgium in 1912 and quickly became the preferred process for removing refuse material from coal sizes smaller than 2.5 inches.) After exiting the washer, the coal fell onto two 50-foot shaker screens for sizing. Coal sizes smaller than 3/8-inch was rewashed and then entered centrifugal dryers. Sludge from the dryers went into an 85-foot wide Dorr thickener and then to a filter that removed 60% of the moisture.

Water for the wash plant was supplied from the McDonald Reservoir and stored in a 200,000 gallon tank. Most of the water used at the plant was recycled and the tank was only used for makeup from leaks and other losses.

The Champion plant produced clean coal in six sizes:

Run-of-Mine: > 6"
Lump: 4" to 6"
Egg: 2.5" to 4"
Nut: 1" to 2.5"
Stoker: 3/8" to 1"
Slack: < 3/8"

Waste went into side-dump cars that originally were hauled out to the waste dumps on each side of Potato Garden Run Road. In 1950, the plant began using a waste dump on the west side of Route 980 and dumped its waste there until the plant closed. The result was the largest coal waste dump in the eastern U.S. containing an estimated 37.5 million tons of waste. When you add in the two original waste dumps and their 17 million tons, you can get a feel for how much coal had to go through the Champion coal washer to produce 55 million tons of refuse.

The other facility at Champion was the DISCO plant that produced briquettes of smokeless coal to meet Pittsburgh's smoke ordinances that were enacted just prior to World War II. The plant was built in 1940 and enlarged after the war. The DISCO plant will not be discussed in this series of articles. The history of the Champion coal washer is illustrated in the photos below:

The former site of the Champion washer is shown in this Google Earth image from 2010.



This 1939 aerial photo shows the Champion plant before the DISCO facility was constructed. Route 22 is at the top and Route 980 is on the left. It appears that waste was dumped on the east side of the plant before the waste dumps along Potato Garden Run were used.



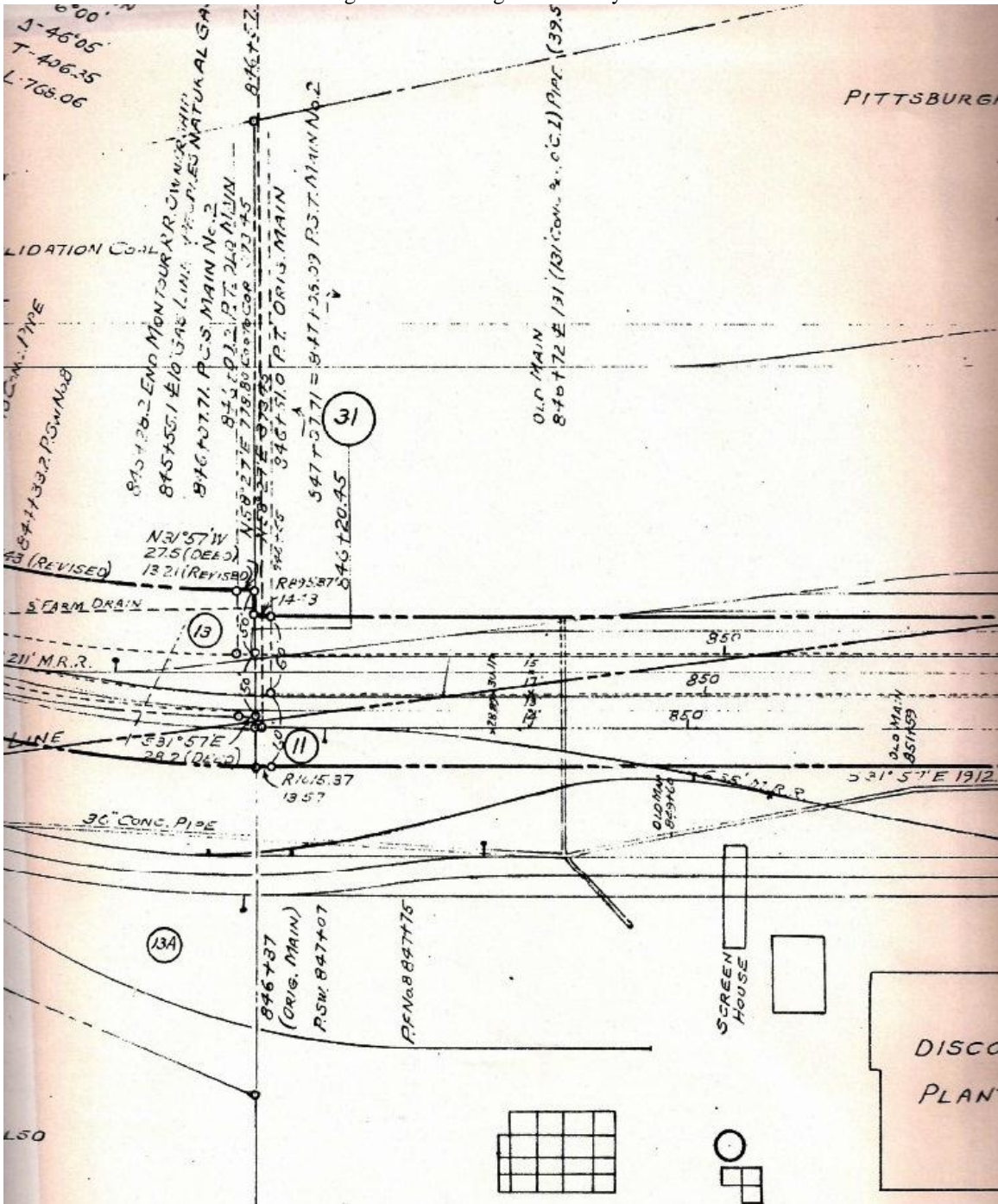
By 1958, the coal washer was dumping waste in the valley to the west of Route 980. The DISCO plant is to the southeast of the washer and may have been shut down by this date.



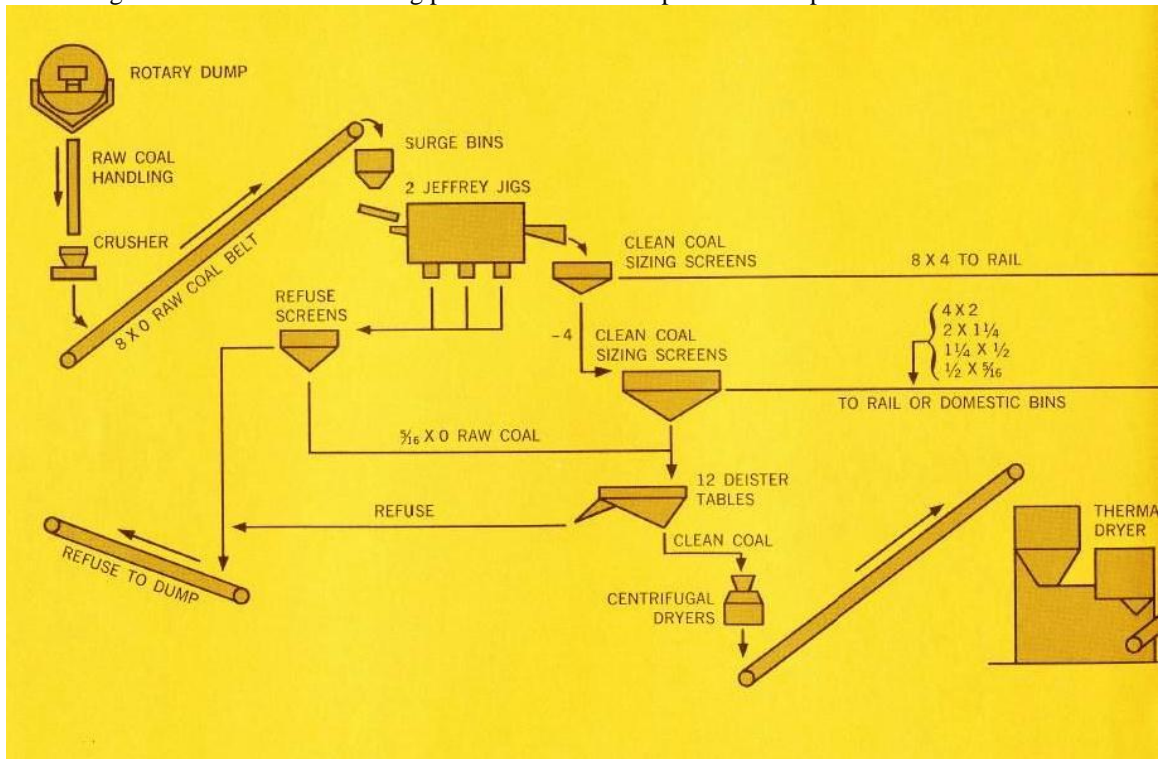
The DISCO plant is gone in this 1967 photo and Route 22 has been improved.



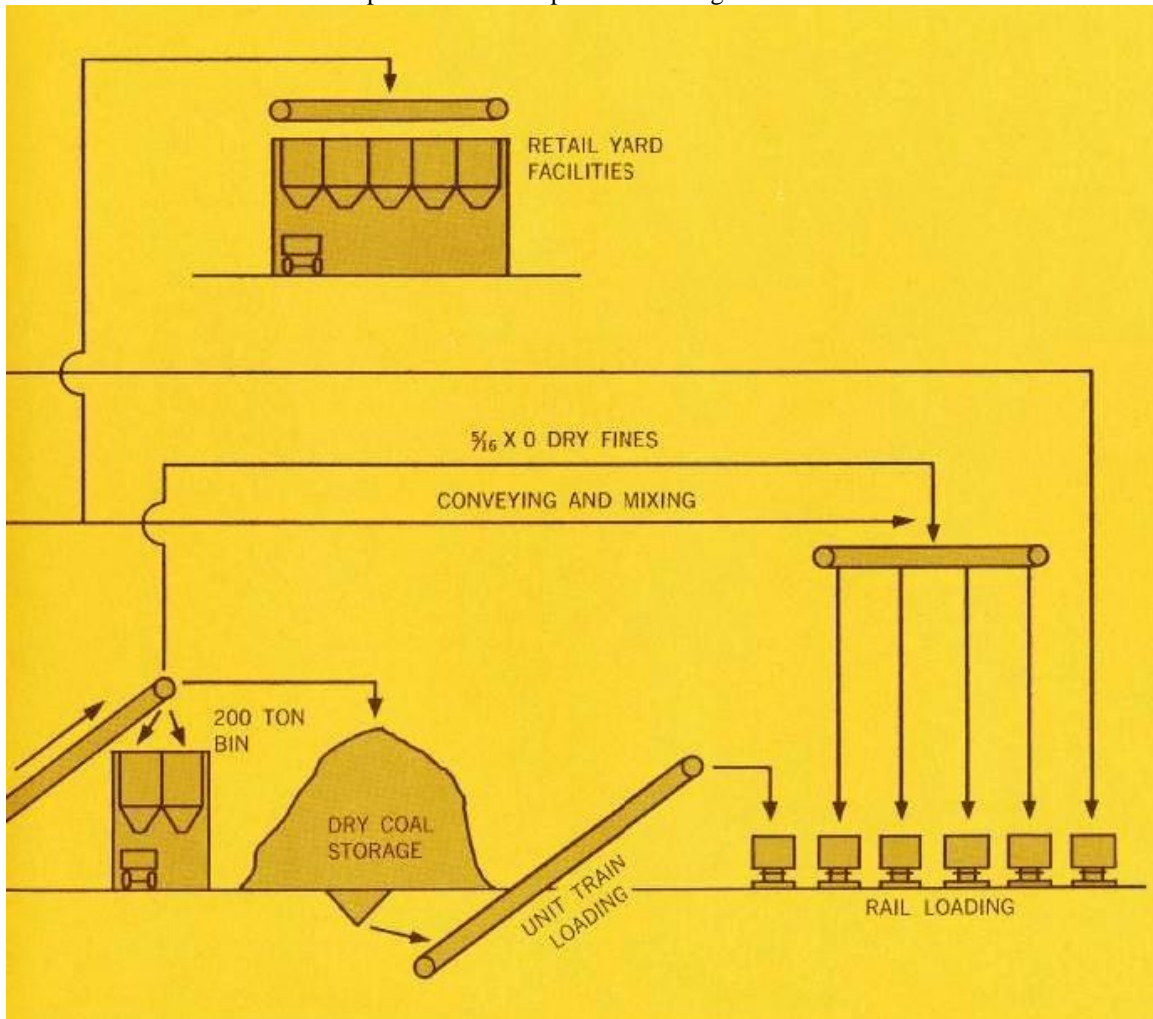
More track arrangements showing the loaded yard for cleaned coal.



This diagram shows the coal washing process used at Champion after the plant modernized in the 1960s.



The plant was now capable of loading unit trains.



This aerial photo was taken for the Pittsburgh & Lake Erie Railroad in 1945 after the Pittsburgh Coal Company merged with the Consolidation Coal Company of Maryland to form the Pittsburgh Consolidation Coal Company and sold the Montour Railroad to the P&LE and Pennsylvania Railroad. This view is looking southeast. The DISCO plant is operating. The Dorr thickeners are on the left side of the plant. The waste hopper and side-dump car are show, as well as the rotary car dumper.



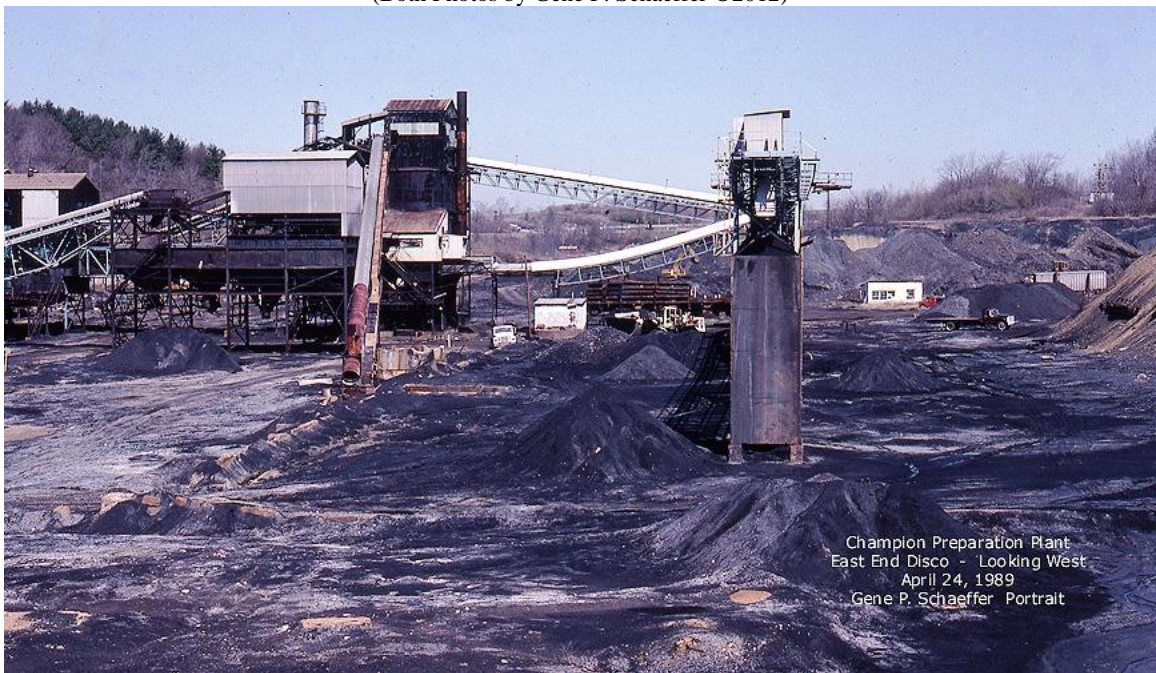
This is a photo of the Champion waste dump on the east side of Potato Garden Run taken around 1972. The shovel was used to dig up “red dog” from a waste pile that had undergone spontaneous combustion.



Gene Schaeffer provided these excellent photos of the Champion Preparation Plant shortly following its abandonment. These were taken on April 24, 1989.



(Both Photos by Gene P. Schaeffer ©2012)





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