

McLanahan Wash Plant Extends Life of Staker Parson's Reserves



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Brooks Hess
Staker Parson

Staker Parson Materials and Construction, A CRH Company, has been providing quality sand, rock, ready-mix concrete, asphalt, paving, construction and landscape products in the western United States since 1952. With more than 50 locations across Utah, Idaho, Oregon, Nevada and Arizona, Staker Parson delivers quality products for projects ranging from roadways to playgrounds.

Challenge

At Staker Parson's Brigham City, Utah, location, the company processes more than 1 million tons of aggregates per year for concrete and asphalt products. They operated a rinse plant and single 54" screw washer to clean the rock and mason sand byproduct used in their ready-mix plants and hot mix asphalt plants.

But as Staker Parson started mining farther into their bank, they noticed the material was getting dirtier and dirtier and required more than rinsing to meet the specifications needed to create their end products.

"We needed to start producing clean concrete sand, so we had to wash our concrete sand and produce a clean rock as well," said Brooks Hess, Superintendent for Staker Parson.

Solution

Staker Parson reached out to Kimball Equipment, McLanahan's dealer in Utah, as well as a few other vendors to see what options were available for washing their sand. They visited a site operating McLanahan equipment and submitted samples of their bank feed to McLanahan's applications and research laboratory in Hollidaysburg, Pa., for testing.

McLanahan's lab technicians performed an analysis of the material, including a sieve test to determine the particle size distribution of the feed, and McLanahan's process engineering team put together an equipment solution for the Brigham City site.



"We ended up liking the McLanahan system and everything they had to offer better, so that's the route we went," Hess shared.

To help clean their concrete sand, Staker Parson installed two McLanahan 54" Fine Material Double Screw Washers, followed by two McLanahan UltraDRY Dewatering Screens for reducing moisture content in the final sand product.

In addition, they installed a McLanahan UltraFINES Recovery System (UFR) to reduce pond waste, as well as a McLanahan High-Rate Thickener to recover water from the waste stream for reuse and to keep the excess water from filling up their pond too fast. Environmental stewardship is an important part of Staker Parson's business model, and the UFR and Thickener will help them to improve the sustainability of the Brigham City site.

Hess said the equipment installation was "labor-intensive" and there were some learning curves with the equipment, but the support received from McLanahan and Kimball throughout made everything go smoothly.

"The support has been amazing, honestly," Hess shared. "Kimball was here almost every day through the installation process, and the McLanahan team also came out for a few weeks as well. They've been great as far as phone calls and anything else we needed from the support side."

Results

Since startup, the McLanahan equipment has been performing well, and Foreman Chad Beimer said they haven't had any major issues with it.

"Startup and shutdown are fairly simple," Beimer shared. "It takes no time at all, really."

With their new McLanahan wash plant, Staker Parson is able to process 1,000 tons an hour of material, a large increase from the 400 tons an hour they were doing with their old setup. The McLanahan Fine Material Screw Washers and UltraDRY Dewatering Screens allow them to produce the clean, dry material they need for their ready-mix plants, and the UFR and Thickener allow them to recover fine material and reusable process water from their waste stream.

"The Thickener system works really great in recycling the water and pumping out the mud," said Beimer.

While the main goals of producing clean material and reducing pond waste have been achieved, Staker Parson soon realized another benefit of the McLanahan plant.

"With the McLanahan system, we'll be able to utilize more material," Hess explained. "We went from as short as eight to 12 years to now we should be able to get at least 15-30 years out of our reserves because we're going to be able to utilize all of the material with the McLanahan wash plant."

In that time, Staker Parson can count on the McLanahan plant to help them continue to meet their production goals.

"What I like best about the McLanahan equipment is the reliability and the quick assistance that you receive from them," Beimer said. "Any questions or problems that we've come across, they're quick to give us help and assistance."

Hess shared similar sentiments about McLanahan's equipment and assistance. He said, "Very quick service and overall, very happy and very pleased with it."

