Garratt CALLAHAN

INDUSTRIAL

A Better Water Treatment Product, Applied More Effectively, Reduces Costs in More Ways Than One

Problem

Crushing 1000's of tons of rock every day, a sand and gravel plant in the Pacific Northwest uses 1200 gallons per minute of wash water to clean the resulting aggregate, a raw material used in concrete. Formerly treated with another supplier's polymers, the silt and clay laden wash water settles out in a series of three ponds. The treatment objective was to reduce the turbidity from Pond 3 so that it was suitable for washing. An operational problem showed up that ultimately resulted in a call to Garratt-Callahan. Wash water treatment with the formerly used program was still enabling a reduction in turbidity from an average of 28,000 to 2800 FAUs (Formazin Attenuation Units) in Pond 1 and to 140 in Pond 2. However, the turbidity of the wash water was routinely spiking to as much as 490 FAUs in Pond 3. To meet cleanliness specifications with wash water this high in turbidity, the plant often had to re-wash its aggregate at a cost of $2 - $5 per hour in lost crushing and production time.

Solution

Garratt-Callahan filed representatives identified a more effective combination of polymers. They also optimized and relocated the polymer feed systems to facilitate more complete polymer consumption and reaction. Within days, the wash water turbidity from Pond 1 was reduced to just 130 FAUs and continued to reduce somewhat in Ponds 2 and 3.

Results

After more than one year, the plant's wash water clarification system continues to produce low wash water turbidity and performs reliably. Iron levels – very undesirable in sand and gravel production – are down from about 25 ppm to about 2 ppm. Rewashing is seldom necessary. And the plant operator is actually spending *20 percent less* on water treatment chemicals, at a savings of more than $7,600 a year.

Conclusion

Garratt-Callahan combines product knowledge and applications expertise to deliver water treatment solutions that work better, often at less cost.

Garratt-Callahan: Water treatment knowledge *and know-how* add up to save you money.

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