



Connected Solutions

**Plant Projects 75% Less Dust
Collector Inspection Time
with iCue™ Service**



The Problem

Although preventive maintenance (PM) can improve equipment uptime, the necessary inspections can be time- and labor-intensive. A large industrial minerals plant in the mid-South region of the U.S. has 23 dust collectors to maintain near final processing and load-out points. The equipment is critical to controlling emissions and recovering the dust for another product. The plant's maintenance manager has historically scheduled quarterly inspections of each collector, racking up 40 hours per year in PM time per collector, along with questions about the benefits.

"Our preventive maintenance method has been sending two mechanics to do a visual filter inspection to look for any holes and check the solenoids," says the manager. "But chances are, with a PM schedule, you're not going to be there when the thing goes into upset condition. We're doing preventive maintenance work that's not identifying the problem."



The Solution

As part of larger efforts to move the plant from preventive to condition-based maintenance, the manager decided to try Donaldson's iCue™ connected filtration service in one collector where dust back-up was a frequent problem. The IoT-based iCue service automatically monitors a collector's "vital signs" and send alerts and condition reports to maintenance teams. Using differential pressure (dP) reports from the iCue service, the manager identified the issue and adjusted the collector's fan cycle to release excess dust from the filter bags. With continuous monitoring, crews can watch dP to confirm that it remains low and stable.



We're getting valuable data from the Donaldson system," says the manager. "From what we're seeing, it's providing data that indicates when we have a problem so we can then target maintenance to eliminate those issues. It's helping keep costs down by reducing overtime, but also in this aging facility, it's the most efficient use I can get with my maintenance team.



With the six-month trial a success, the manager is planning to scale up the iCue service to monitor all 23 of the plant's "nuisance-dust" collectors. By replacing quarterly PM inspections on the collectors with annual tune-ups and continuous monitoring in between, **he projects a 75% reduction in preventive maintenance time, and estimates the one-time device installation and first-year subscription costs will achieve a return-on-investment within nine months.**

"We want to reduce the amount of non-value-added preventive maintenance we're doing and instead use the iCue sensor package to tell us when we should go out and do an inspection and repair," says the maintenance manager. "The less I have to send people inside of the collector trying to dye-check bags and see if we can find a leak – if I can instead use a particulate monitor connected to Donaldson with a differential pressure meter to maintain good operating parameters – it's less wasted time that we can direct to other places in the facility."

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