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CASE STUDY

EDDY : THE WATER TREATMENT SYSTEM FOR CORE SHACKS

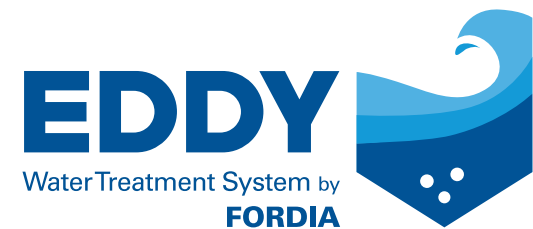
EDDY WATER TREATMENT SYSTEM

Over the last few years, the mineral exploration and drilling industry has been faced with the need to operate while complying with new environmental restrictions and municipal regulations that protect the environment and limit consumption of scarce resources. Many drilling companies have had great success with Eddy, the water treatment system from Fordia, but new uses for water treatment are arising. Core shacks, the place where core samples are stored and cut also need water treatment systems. Fordia's core shack customer reached out to learn more and was pleased with the outcome.



THE CUSTOMER

Osisko Mining Inc. is a mineral exploration company focused on the acquisition, exploration, and development of precious metal resource properties in Canada. The company had a gold exploration project in northwestern Quebec, and had a core shack in Lebel-sur-Quevillon, a town near James Bay. The core shack was where core samples from mining were stored and cut.



THE CHALLENGE

The core samples stored in the core shack need to be cut using a saw and water. The used water contains very fine particles of rock cuttings that remain in the water as residue. The water cannot be reused in the sawing of other core samples and this residue is at risk of clogging water evacuation drains. What's more, the water can be considered contaminated because it contains these rock cuttings. Osisko had tried various different methods to treat the used water but the results were not conclusive. Furthermore, the team felt that a lot of time was being spent on trying to manage the used water problem instead of other activities.



THE SOLUTION

One of the technicians at Osisko had heard talk of a water treatment system from Fordia, the Eddy and reached out to the local Fordia office for more information. He requested a visit to a drilling site where Eddy was installed and in operation. Following the onsite visit, he agreed to test the Eddy at their core shack where they would be able to see how effective the system was during actual operations at the core shack.

Unlike earlier water treatment systems which had been very expensive, very large machines with limited efficiency and functionality, Fordia's Eddy water treatment system was easy to transport and easy to operate. The primary function of the Eddy WTS is to separate drill cuttings from water. Once the water is treated and cleaned, it can be re-used so that a minimal amount of additional water is required. Once the drill cuttings are isolated, they can be disposed of in environmentally approved ways.

There are four core cutting saws at the Osisko core shack that operate simultaneously. The Eddy does not take a lot of space so they were able to install the system in the core shack. The Osisko team wanted to be able to treat the water and reuse it and find an easy way to manage the isolated cuttings. The Fordia team suggested using 4' by 4' geotubes so that they would be able to recycle as much water as possible. Geotubes are very large tubes made of a geotextile material that serves as a filtration membrane. The geotube is particularly good at filtering out water so the cuttings that remain are very dry.

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JOËL GOUDREAU, GEOLOGY TECHNICIAN AT OSISKO MINING

THE RESULTS

The onsite test at the core shack was a success. With the Eddy, the treated water was clean enough to be reused, and there was no threat of clogging the water drains or contaminated water making its way into the environment. The team at Osisko was so pleased with the results that they decided to purchase a system and have it installed permanently onsite.

“In our operations, the Eddy water treatment system was a key element for achieving success at our project in Quevillon”, said Joël Goudreau, Geology Technician at Osisko Mining. “The residual water from cutting core samples

was reused in a closed circuit for several months without having to add fresh water to the circuit. In this way, we were able to greatly reduce our fresh water consumption and to get rid of residual waste in a responsible manner. The amount of time wasted in managing this residual waste was limited to less than one hour per week, compared to the several hours per day we spent previously. I believe that Fordia’s water treatment system is a solution that brings benefits to all the parties involved, he added.



THE CONCLUSION

Although the Eddy was first used successfully on drilling sites, the system has proven to be effective in other applications, such as core shacks. Fordia, is a provider of drilling solutions that include diamond tools, equipment and accessories. The company has been serving customers in the mineral exploration, geotechnical and environmental industries since 1977. Their goal is to improve drilling performance and make drillers' lives easier. Visit www.fordia.com for more information about their Eddy Water Treatment System and to learn about other drilling solutions.

