

AVT™ EZ VALVE®

keeps multi-million-pound
Sellafield project on track

SUMMARY

- SIXEP Continuity Plant under construction - to clean contaminated water
- Pipes that fed fire hydrants next to SIXEP needed to be redirected - current decades old valves were inoperable
- replacement valve required without shutting off large area
- 12" AVT EZ Valve was the solution
- Installed by R2M Site Services

Sellafield Nuclear Site is Europe's largest nuclear site and houses a diverse range of facilities such as nuclear fuel reprocessing, nuclear waste storage and nuclear decommissioning. It is set on a two square mile site and employs around 10,000 people.

The site is currently undergoing a multi-million-pound project which will see a new SIXEP Continuity Plant (SCP) constructed to replace the existing facility. The SIXEP facility acts as the 'kidneys' of the site – cleaning up contaminated water so it can be released back into the sea.

As construction progressed, an existing section of the Sellafield Site Raw Water pipework feeding hydrants adjacent to SIXEP and the new SCP project, needed to be redirected to allow ground works for the SCP project to be completed. The in-situ valves on the pipes were either seized or were not able to close due to the tuberculation in the pipes and a new valve was required.

Traditionally, to fit a new valve, the water needs to be shut off but when the valves nearby will not shut, the only option is to keep trying valves further and further away from the source of the problem.

When a shut-off is finally achieved, it would affect a much greater area than it should do. The site relies on water to keep it safe – for everything from firefighting to keeping critical facilities cool. With this solution, a valve replacement would cause numerous shutdowns, stop work and cost thousands.

CASE STUDY:

Sellafield Nuclear Site,
Cumbria, UK



Pipe cleaned and taped, ready for install.
Gaskets set in place



Valve body mounted on pipe



EM (end milling) machine in place
making 120° slot across the pipe



www.avtfittings.com

Sales@AVTFittings.com

AVT EZ VALVE

keeps multi-million-pound
Sellafield project on track

But an efficient solution which did not require a water shut down was available. The AVT EZ Valve includes an integrated isolation gate, which when operated after a slot has been milled across the pipe, allows the cutting machine to be removed and the resilient wedge installed - all while the water continues to flow through the pipe being worked on.

Project engineer Nick Hone said: "We heard about a system which had been used on Victorian water pipes in London, which clamps onto the pipe and allows a valve to be inserted whilst keeping the pressure inside the pipe. We had a demonstration of these EZ Valves and were really impressed. We trialled them in late July and the result was amazing. The installation was started at 11am and finished by 4pm the same day, with no effect on any other part on the site.

"What's more we now feel this approach could be a genuine game changer for the rest of the site, as these valves could be used not just for water, but on pipes carrying chemicals, air and gas as well. I know we're already getting some interest from the utilities providers on site. And for us on SCP it has meant we've sped up the pipe work, meaning we can get on with the ground works needed for the project."

Project construction manager Steven Gilroy added: "We believe this is the first time this kind of technology has been used on a nuclear site. Because of this we've had a lot of interest in how the work went.

"It was important we got this work sorted on time to make sure it didn't impact on further planned work around the main concrete sub structure of the building. The installation went well and using this kind of valve meant there was no disruption elsewhere which would have happened if we'd needed to shut off water supplies to do it."

AVT's Regional Account Director Jason Taylor said: "We are delighted to have been able to assist the team at Sellafield and look forward to working with them again in the future."



EM (end milling) machine removed and bonnet ready to be mounted



bonnet mounted to valve



Completed AVT EZ Valve in place



www.avtfittings.com

Sales@AVTFittings.com