

WORKER PROTECTION IN THE WASTEWATER TREATMENT INDUSTRY

DUPONT™ TYVEK® 800 COVERALLS MEET THE NEED FOR DURABLE, COST-EFFECTIVE WORKPLACE GARMENTS



Worker protective wear is a growing focus in the wastewater treatment industry



Exposure risks include pathogens and parasites such as bacteria, viruses, fungi, protozoa and helminths



DuPont™ Tyvek® 800 coveralls offer durable, economical protection against biological hazards and water-based inorganic chemicals

Summary

The wastewater treatment industry is no stranger to occupational safety regulations. But a recent push for personal protective equipment compliance has wastewater treatment facilities grappling with finding the right protective clothing for their workers. As one industry insider puts it, “Thirty years ago, people didn’t wear coveralls as consistently. Now, safety is of utmost importance—keeping the dirt and the crap off of you.”

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An expert in supply chain management spent part of his career working with safety and environmental officers at a large multinational infrastructure group. He describes the push for PPE compliance in the wastewater treatment industry this way: “A few years ago, you went down there maybe with some hip boots, waders and maybe some other protective clothing. That’s no longer acceptable.”



The reason is clear, or in the case of wastewater, murky: the early stages of wastewater treatment present a significant risk of exposure to pathogens and parasites, including bacteria, viruses, fungi, protozoa and helminths. Intermediate treatment areas also pose this risk. Maintenance workers tend to have the greatest amount of exposure, and there is no shortage of maintenance work to be done. The American Society of Civil Engineers reports a \$105 billion investment gap in funding necessary to meet the U.S. population’s demands for water and wastewater treatment from now until 2025. Reliance on aging plants and equipment means constant maintenance to keep them running.

It raises the question: how best to protect wastewater treatment workers? A liquid-tight coverall is key, but which one? While working with the infrastructure group, the supply chain expert partnered with his safety distributor to find the answer. After analyzing the hazards, the distributor recommended the DuPont™ Tyvek® 800 coverall, a disposable garment that combines protection against biological hazards with resistance to pressurized jets of low-concentration, water-based inorganic chemicals. The Tyvek® 800 coverall provides durable barrier protection, but is lightweight, soft and breathable.

Performance on trial

The supply chain expert knew the true test of the Tyvek® 800 coverall would be an on-the-job trial. “We picked a site that

has some of the most trying conditions,” he says. “As I recall, it was a site [in the] Southeast where there was heat, humidity and exposure to both organic and inorganic hazards.”

The distributor gave coveralls to the employees and foremen, and they went to work. Depending on the job, they wore the coveralls for as little as 20 minutes and as long as an hour or two. Their feedback was encouraging. Even though conditions were extremely hot and humid, the workers “didn’t feel like they were in some sweat suit,” the supply chain expert says. They also mentioned ease of movement. Tyvek® 800 delivers a protective fit, but still allows plenty of freedom of movement.

Tear-resistance was another feature the workers liked. The supply chain expert explains, “In a lot of these areas there could be sharp, protruding metal or things of that nature ... we want to make sure it has some reasonable resistance to tears.” Workers also appreciated the ease of donning and doffing.

Controlling costs

Safety, durability and comfort are all important considerations, but so is price. Wastewater treatment facilities can go through large quantities of disposable coveralls. Another industry insider estimates that at a typical facility, maintenance performed by five or six workers who change coveralls at every break could mean up to five sets per person per shift. In hot weather, workers “will be switching coveralls more often,” he says.

When it comes to price, the Tyvek® 800 coverall was also a win. “Safety always trumps cost, but you still have some degree of cost consciousness,” says the supply chain expert. “We felt like the Tyvek® 800 fell right in the sweet spot. It gave the protection we were looking for. It gave the comfort. The employees liked it, and the cost was reasonable.”

Searching for the right protective coverall can be daunting. Working with a hands-on safety distributor, the supply chain expert was able to find a garment that met regulatory standards and his employees’ needs without breaking the bank: the Tyvek® 800 coverall.

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