

Preventing Toxic Gas Releases with Gas Scrubber Temperature Monitoring

A WellAware Case Study

Introduction

Read how Purafil – masters of industrial filtration systems – partnered with WellAware to monitor emergency gas scrubbers at urban water treatment plants for the City of Houston, preventing the release of toxic chlorine gases into nearby communities.

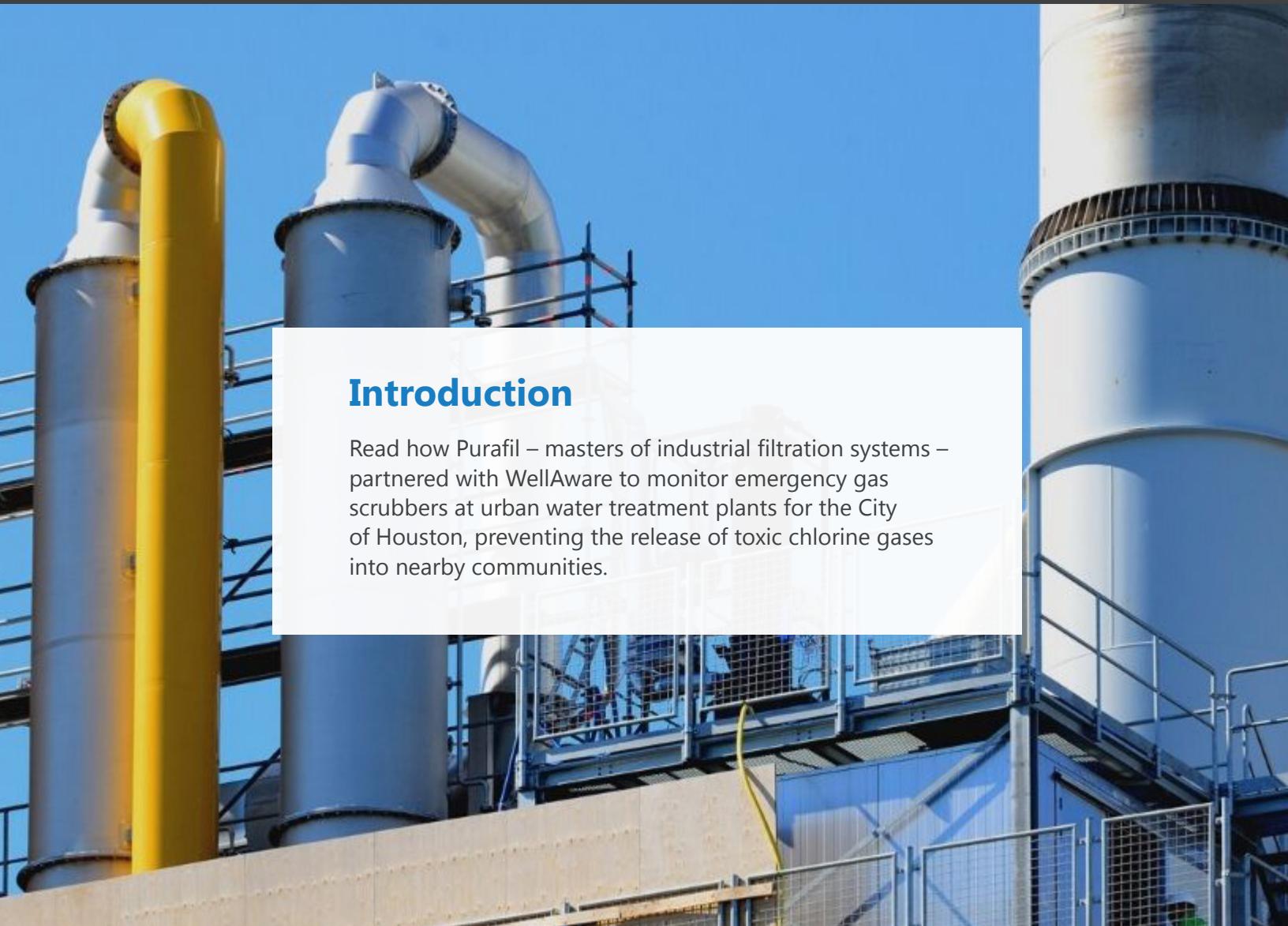
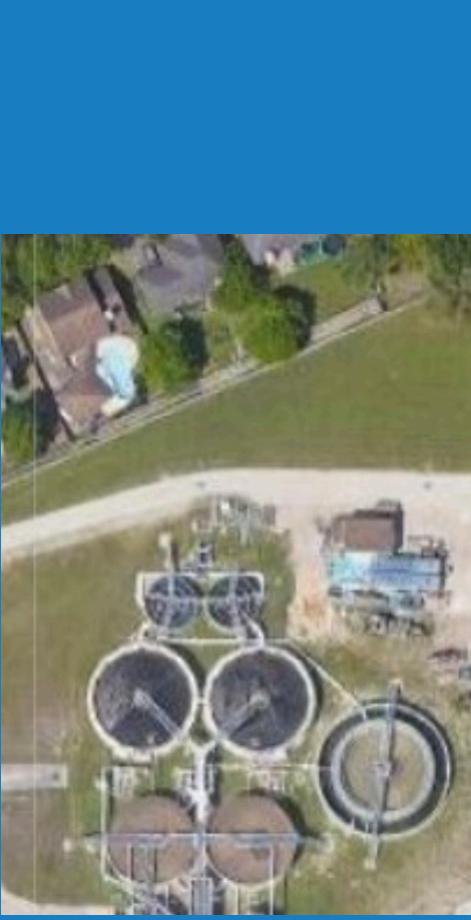


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About the Operator:

Purafil is a leading global provider of molecular air filtration solutions. Founded in 1969, Purafil has grown rapidly and now distributes a large portfolio of products in 70 countries. Companies across numerous industries, from healthcare to agriculture, use Purafil products today to control corrosion, maintain indoor air quality, minimize odor, filter microbials, and neutralize toxic gases.



The Challenge: EPA mandate compliance requirement

According to the EPA Risk Management Program for Chemical Accident Release Prevention, industrial facilities must “minimize the frequency and severity of chemical plant accidents,” which includes preventing highly toxic gases, like chlorine, from escaping into the atmosphere.

Purafil helps industrial facilities comply with this mandate by installing emergency gas scrubbers onsite that remove deadly gases from accidental leaks. Without these systems, industrial plants would struggle to ensure the safety of nearby biological ecosystems and people.

Potential for devastating chlorine gas release

The City of Houston hired Purafil to install emergency toxic gas scrubbers at several water treatment plants throughout the metro area. These plants were located near residential neighborhoods, which is why containing any chemical releases was paramount. An accidental chlorine leak would be devastating.

Given the severe consequences of a potential chlorine-related accident, Purafil had to make sure its scrubbers were working efficiently at all times, and one key determinant of scrubber performance is internal media bed temperature. Rising temperatures indicate that the filtration process is working, but extreme temperatures cause inefficient toxic gas processing and increase the risk of atmospheric releases.

As a result, Purafil wanted to find a way to remotely monitor temperatures in the media beds of its gas scrubbers. That way, the company would have better visibility into scrubber performance and could address issues if necessary.

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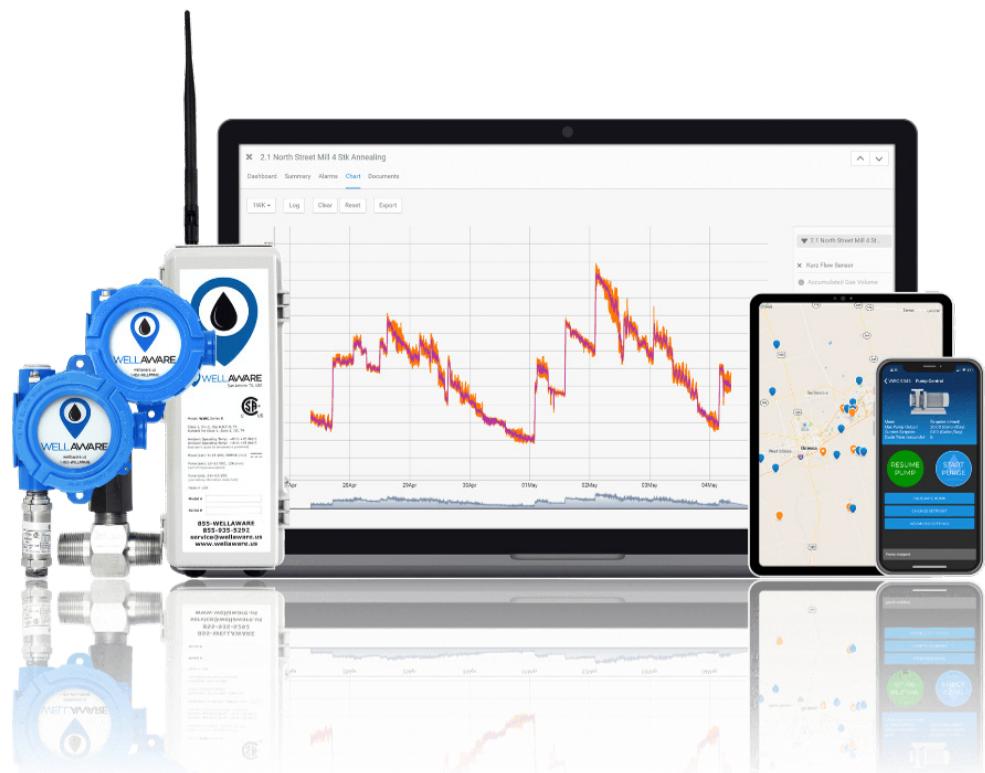
The Solution: Real-time emergency gas scrubber monitoring

Purafil decided to implement the WellAware Connect remote monitoring platform, along with embedded RTD sensors, to track media bed temperatures within onsite gas scrubbers.

The WellAware team configured the solution to take temperature readings every 10 minutes, giving Purafil and City of Houston operators near-real-time insight into scrubber performance. WellAware also set up text-based alarms that notify both Purafil and water treatment staff if internal scrubber temperatures rise about 160°F.

Simple and secure setup

The overall setup process was tremendously easy. Purafil was able to install and stream calibrated temperature data to phones and computers in under 15 minutes. In addition, WellAware's solution was highly secure, giving Purafil peace of mind that its new monitoring platform was safe from cybersecurity threats and would remain online for the City of Houston.



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The Results: Better service for critical customers

With WellAware Connect, Purafil is able to serve the City of Houston more effectively by implementing remote monitoring infrastructure that can automatically alert operators of gas scrubber performance concerns.

Purafil can now track media bed temperatures closely and observe when chlorine gas is being scrubbed. Should temperatures rise rapidly, Purafil and plant staff can also take precautionary steps to ensure no chlorine gas escapes from the City of Houston's water treatment facilities.



Proven ROI that saves lives and environments

While simple, WellAware's remote monitoring solution has empowered Purafil and its client to better protect human lives and local ecosystems. In fact, WellAware Connect proved its worth in the fall of 2020 when the solution alerted Purafil and City of Houston staff members of high temperatures within one emergency gas scrubber. Operators were able to jump into action and prevent a major chemical accident from occurring.

Considering the potential downsides of missing an accidental chlorine leak, Purafil's decision to use WellAware Connect has been more than worth the investment.

10min
MONITORING

6X
FASTER RESPONSE TIME



WellAware Connect proved its worth in the fall of 2020 when the solution alerted Purafil and City of Houston staff members of high temperatures within one emergency gas scrubber.

Want to achieve the same result?

Check out our remote equipment monitoring platform for chemical operations.

[Explore the Solution](#)



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