AUG Signals' **TRITON Intelligent Water Surveillance®** is a real-time continuous drinking water surveillance and security solution. Using the most advanced online water quality sensors and superior signal processing, TRITON empowers communities, private organizations and governments to preventively manage any water contamination event or threats to drinking water. Effectively protecting public health and safety, TRITON improves the overall security for these diverse users by allowing them to premptively detect and diagnose problems in their own water distribution networks.

## Why Is TRITON Needed?

TRITON offers real-time, continuous monitoring of the water distribution network, providing remotely accessible data that allows operators to quickly diagnose problems in the treatment process and effectively respond to contamination events as they happen.

Alternative online monitoring products suffer from a number of significant problems, including high false alarms, low accuracy and troublesome maintenance.

These systems often lack the specificity and sensitivity required to detect water contaminants at concentrations close to maximum acceptable concentrations defined by the WHO.

TRITON is the only product to provide effective identification and estimation of multiple contaminants with detection rates and identification accuracies 50 times greater than those of its closest competitors.

As a decision-making support tool, TRITON quickly and effectively detects contamination events, identifies their root causes and recommends courses of action. This leads to safer water, healthier communities and an enhanced trust in the distribution network.

## TRITON in the Field

TRITON has been successfully deployed in both Canada and China over the past five years in these communities:

- Deer Lake First Nation, Ontario
- Keewaywin First Nation, Ontario
- North Spirit Lake First Nation, Ontario
- Poplar Hill First Nation, Ontario
- Fort Severn First Nation, Ontario
- APEC 2014 Meeting Centre, Beijing
- Lanzhou, China
- London, Ontario
- Edmonton, Alberta

## TRITON's Key Features and Advantages

- **24/7 online testing every 10 seconds, real-time reporting every 2 minutes, alarms sent via email & text message**
- **Accurate, reliable and fast detection of water contamination and estimation of the level of threat to people**
- **Low operational cost and compact configuration, with low water and energy usage**
- **Minimal false alarm rate as a result of AUG's unique signal processing technology**
- **Flexible for use in existing infrastructure, with easy deployment, maintenance and operation**
- **Fully-customizable, remotely accessible and versatile solutions**
- **The most suitable system for water treatment optimization**

## Ensuring Water Safety for Remote First Nation Communities

Since 2012, AUG has been collaborating with Keewaytinook Okimakanak (KO), a tribal council serving six First Nations in Northern Ontario, to provide a drinking water monitoring solution customized for the unique challenges they face. Due to a shortage of trained personnel and complications resulting from harsh conditions, communities in this region are subject to frequent boil water advisories. Long delays involved in obtaining laboratory analyses for verification create a public health risk as communities may wait a week or more to learn that their water is contaminated.

In May of 2013, AUG began initial deployment of two TRITON units to the KO First Nation of Deer Lake: one at the drinking water treatment plant, and one at the school. Additional installations were completed at four more First Nations in 2014 and 2015: Keewaywin, Poplar Hill, North Spirit Lake, and Fort Severn. The objective for 2015-2016 is to have two TRITON units providing drinking water surveillance for each KO community.

In consultation with AUG, KO has set up a two-day training course for TRITON installation, operation and maintenance procedures, so that local operators can become comfortable managing onsite TRITON units. The course is held at the KO Centre of Excellence, located in Dryden, Ontario. The first course was completed in August 2014, with operators from five KO First Nations in attendance. The Centre of Excellence will also provide local technical support for TRITON operation throughout Northern Ontario.

TRITON addresses the challenges of water surveillance in remote communities by offering online, real-time monitoring of drinking water quality in a robust and easy maintenance hardware suite. Using TRITON, First Nation communities are empowered with up-to-the-minute information about the current water conditions, allowing them to make informed and timely decisions in the event of a contamination event.

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