# **Event-Driven Sampling**



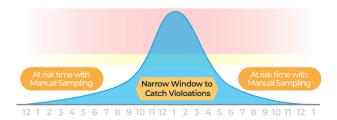
Application Note W-AN19

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### **Problem**

Most municipal and industrial wastewater treatment plants collect composite or sequential wastewater samples based on predetermined time and/or flow intervals. Based on sample analysis, the treatment process and/or chemical dosing are adjusted. This is sufficient in most cases. However, if the pollutant load in wastewater has a wide variation, then this procedure may not be timely or cost-effective. Detecting such events in a timely manner improves plant efficiency and reduces operating costs.



#### Solution

Some customers have successfully used SENTRY<sup>TM</sup> biological activity sensors for real-time information, interfaced with Teledyne ISCO's 6712 autosampler. Gaining real-time information on toxicity and gathering samples concurrently will make the process most efficient and save on operational costs. The SENTRY sends a real-time event notification to the 6712 when the SENTRY detects either organic loading thresholds or wastewater toxicity thresholds.





#### Water Application Note 19

With the two-part programing feature of the 6712, the operator can assign specific bottles to collect samples during such an event. In the existing sampler, the user can continue taking routine, time-based samples and additional event-based samples in a specific bottle. With an alert from the SENTRY analyzer, the user can make any necessary change in operation; at the same time, with this additional event-based sample, the operator can get great insight on the source of an issue. Such timely action saves operational cost, and knowledge of that source will help the operator to develop a plan to tackle such issues in the future.

#### **Value**

#### Measure What Matters:

Collect and test samples based on flags of organic overloading or wastewater toxicity to run treatments efficiently, yet cost-effectively.

#### Reduce Risk:

Treatment plant operators have full knowledge that at any moment if a problem wastewater slug arrives, they will be alerted and that the autosampler can catch the event as it is happening.

## Save time, money and resources:

After taking samples, save money by eliminating routine analysis for toxicity on every sample.

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Samplers



#### Teledyne ISCO

P.O. Box 82531, Lincoln, Nebraska, 68501 USA

Toll-free: (800) 228-4373 • Phone: (402) 464-0231 • Fax: (402) 465-3022

Email: isco.orders@teledyne.com