

MSA XCell Sensor Testing Update

We have now reached **1200** days of testing of the XCell H2S and CO sensor!

These sensors have been installed on the roof of MSA's manufacturing facility in Western Pennsylvania and exposed to the all of the elements – hot, cold, rain, snow, sun, wind, humid, and dry!

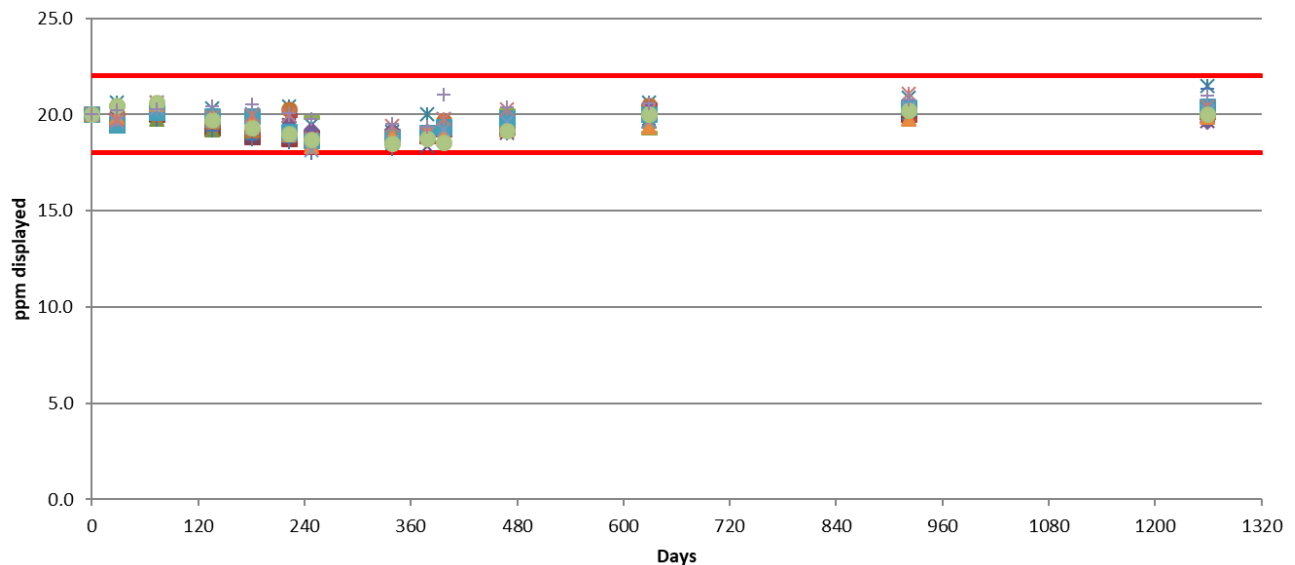
Each of these sensors, sixteen H2S sensors and fourteen CO sensors, were calibrated prior to installation and have been intermittently gas tested to verify response and the results have been recorded. No calibrations have been conducted on any of these sensors for over **3 Years** and Adaptive Environmental Compensation (AEC) has been testing the sensor every six hours and making adjustments to sensor response to account for changes in sensor response due to environmental conditions and sensor degradation.

Even after three years of exposure to the elements and no calibrations, each and every one of these thirty sensors are still performing accurately, even meeting the stringent ISA performance requirements for toxic gas detection.

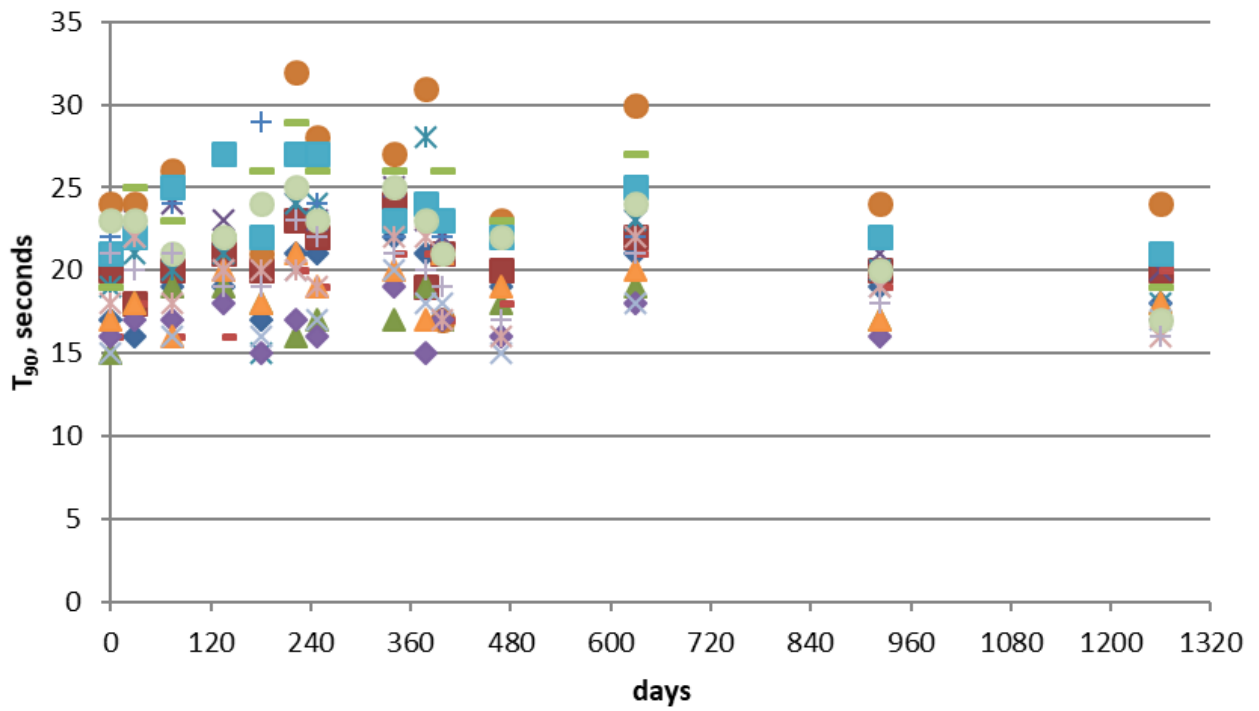
In addition to the accuracy testing, MSA has also measured the T90 response time of each sensor. The T90 time is the time taken for each sensor to reach 90% of the gas concentration applied. Even after three years without any calibration or maintenance, the H2S sensors T90 time is still less than 30 seconds and the CO sensors T90 times are less than 10 seconds.

H2S Test Sensors – 16 Sensors

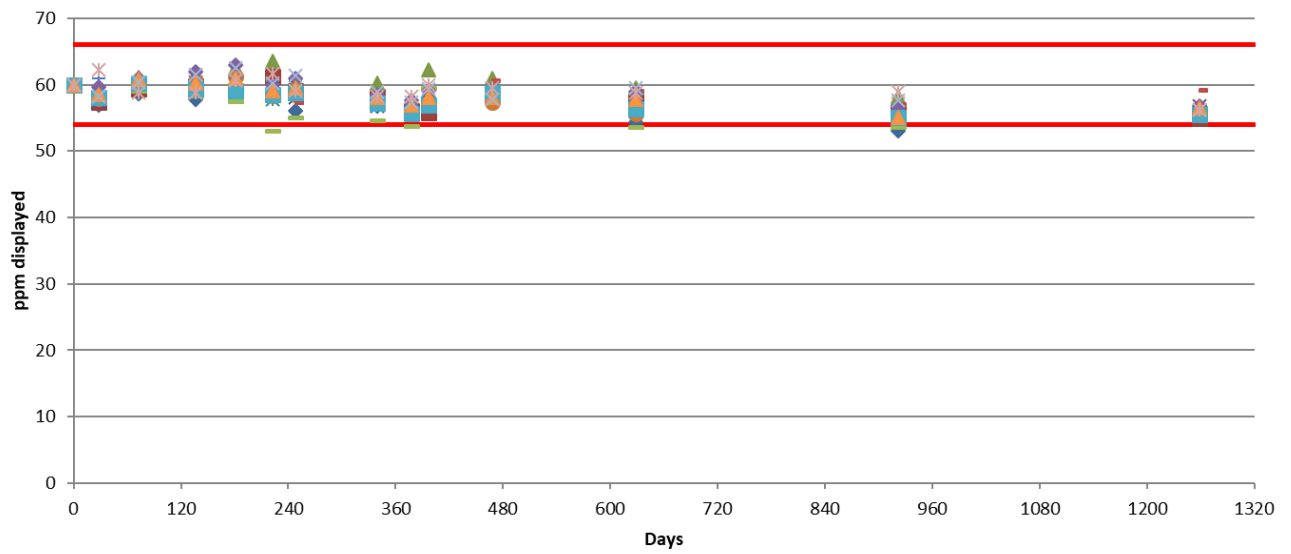
Tested with 20 PPM Calibration Gas



H2S Response Time Test – 16 Sensors



CO Test Sensors – 14 Sensors Tested with 60 PPM Calibration Gas



H2S Response Time Test – 16 Sensors

