



Natural Gas Odorization

GPL Odorizers and Horner's XL4 and XL7 Controllers



Odorant Injection Systems Project, Lakewood, Colorado



Current cells with XL4 and XL7 encased



GPL 10000 (inside view)

OPPORTUNITY

GPL Odorizers LLC acquired the assets of Sentry Equipment's (formerly Zeck Systems) Odorant Injection Systems product line in 2015. The odorization line that was purchased used PLC controllers to control the amount of odorant that is introduced to an unodorized fluid. At the time of purchase, some of the PLC's installed did not have a user-friendly touchscreen that provided information and feedback to the end user. Working with TMMI, the local automation distributor, the PLCs were transitioned to use Horner controllers for the added functionality. Since then, every odorizer manufactured at GPL Odorizers has been operated by a Horner PLC.

CHALLENGE

Natural gas is normally odorless and colorless. Without odorization, there is no way to detect natural gas leaks. Undetected leaks are a safety hazard that can result in explosions. To solve this problem, GPL develops odorizers that are installed on natural gas pipelines.

Reliability and accuracy are the most important factors when it comes to odorization. Under-odorization is dangerous because undetected leaks can lead to explosions, while over-odorization renders the gas unusable and must be burned, which wastes time and resources.

SOLUTION

GPL chose the Horner XL4 and XL7 controllers, models 3 and 6. They offer three system options: GPL 750 (models 3s), GPL 5000 and GPL 10000 (model 6s), (*explosion-proof enclosures are optional for GPL750 and GPL5000*). Unlike their competition, they are committed to zero emissions on all of their systems. This is where Horner helps them. In order to odorize effectively without venting activation gas to the atmosphere, they need a reliable PLC that can take inputs from a variety of sensors and accurately control injection devices.



GPL 750 and XL7 Training Unit

System	Alarm	Sol 1	Sol 2	SD	Help
OFF	ON	ON	ON	ON	mm/dd/yyyy 00:00
Gas Rate	Inj Rate (#/MMCF)				
0.000 MMCFH	0.00				
Volume Until Batch	Since Last Ticks				
0.000 MCF	0 sec				
Target CCPM	Efficiency				
0.000 cm ³ /min	0.00				
Alarms	Menu	Usage			



GPL 5000 Home Screen
Horner Micro XL4 and XL7 controllers

SOLUTION continued...

The Horner controller is easy to learn and operate, which is important for their customers. The intuitive color touchscreen provides feedback and ease of control as well. The data storage that the PLC writes to the MicroSD provides a real-time accessible audit trail for regulations or company reports. The communications are a huge benefit as well. The Modbus functionality allows the odorizer to communicate real-time critical alarms and generate maintenance reminders.

Programming engineer, Harrison Baer states, "As a programmer, I have found Horner's extensive video library to be helpful for getting the most out of our controllers and by providing the latest features to our customers."

TESTIMONIAL

"The (Horner PLC) touchscreen makes our odorizers more user-friendly than our competition. As a programmer, their Cscape software gives me the tools I need to make an intuitive graphical user interface.

At GPL, we pride ourselves on our unrivaled customer service. Our customers are encouraged to call our 24/7 service line, where they can expect to talk to a knowledgeable technician. Horner makes it easy to offer software support to our customers, including timely fixes for their problems and speedy development of new features."

~ Harrison Baer, GPL Odorizers, Lakewood, CO

