

South Eastern Washington State, daily life at the Richland School District has always been intertwined with using science to resolve issues. The district was established in 1944 to educate children of workers at the then new plutonium enrichment plant on the Hanford Nuclear Reservation site. Through the 1960s and beyond, the plant and its surrounding population expanded as the need for nuclear materials to support the Unites States military and energy programs continued to grow. A concentration of highly educated and well-trained people coupled with the rich natural resources attracted many industries and people to the area. To keep up with the population growth, Richland School District expanded from a few modest facilities to its current size of over 20 sites serving nearly fifteen thousand students and staff.

Today, the district is turning to Hygiena's EnSURE™ and EnSURE™ Touch ATP monitoring systems to verify that their cleaning efforts in 18 schools are working. While the district, like the rest of Washington, is on lockdown, it is preparing for possible re-opening in the fall. To speed up the process of performing tests and gathering data, the district upgraded its existing EnSURE to an EnSURE Touch earlier this year.

The district purchased its EnSURE unit and established its ATP testing program more than two years ago to address concerns with an unusually severe influenza outbreak.



"We make sure schools are clean and ready to go the next operating day," said Miguel Palencia, Assistant Manager of the Custodial Services team. "Classroom desks, lunchroom areas, restrooms, wiping down surfaces that get touched; we're making sure areas are clean and disinfected."

Using two EnSURE Touch monitors, the Custodial department is conducting more testing to verify custodial cleaning efforts in the schools. Surfaces include critical touch points such as light switches, handrails, crash bars and handles. "If we're killing organisms from surfaces, any small window of exposure to a virus or bacteria is reduced," Palencia said.

When COVID-19 began to spread in Washington and around the world, the district realized it was already in a good position to ensure its cleaning program was producing the desired results. ATP monitoring doesn't detect viruses directly since ATP is found in living cells and viruses aren't cells (they survive by taking over other cells). But several cleaning agents can chemically disable the virus and the district is following CDC and WHO guidelines on surface cleaning to reduce the risk of SARS-CoV2 on surfaces.

"We know it doesn't work on detecting viruses," Palencia said. "But if there are no living organisms on the surface it's clean, and following the application of our disinfecting agents, virus free. That is better than a surface, that just looks like it's clean."

The EnSURE Touch monitors fit neatly into existing custodial schedules, Palencia said. "We were able to implement this program without reconstructing the custodian's entire workload."

All schools are disinfected nightly and Palencia will often test two to three runs a night.

Tracking results using SureTrend™ Cloud software has been a distinct advantage to the district. Custodians will discuss numbers, looking at what worked and what did not. Eight out of 10 times, a custodian will be able to recall what went wrong behind a high relative light unit (RLU) reading. For management, logging into SureTrend Cloud can generate just the reports they want.





"People want to see the information, people want to see the data, want to see the graphics, management wants trend analysis, are we getting better, staying the same, or losing ground?"

Some of the biggest problem areas that initially arose with high RLUs were soap dispensers and paper towel dispensers and handles. "That's what we've encountered-things with dimples were harder to clean. Also, door handles and partition handles in restrooms have been the largest number of fails. But having this data has allowed us to create better systems to get these areas truly clean."

Palencia is relatively new to the district and was familiar with EnSURE when he arrived. "We looked at some other systems but found that the Ensure system was a good fit with our program." he said. "Plus, we discovered that the University of Washington had been using the same machine. After meeting with their staff, we were convinced this system would work well for us."

Now, the district has completed its summer cleaning schedule and is preparing for the eventual influx of

students, teachers and administrators. Once a surface is cleaned, custodians use Oxivir®, a hydrogen peroxide-based disinfecting agent which kills all germs within one minute of being applied. The surface is then wiped with a microfiber cloth to fully remove the disinfectant along with the dead germs. "We are aiming for RLUs of 10 to 15s in the classrooms."

"We have started culture testing," Palencia added. "We are using ATP and culture testing to determine if fogging classrooms and other application systems are effective. We're trying to use science as best we can to direct our actions. We know what we're doing: trying to prevent the transmission of disease. ATP data gives us the tool we need to determine what works and what doesn't. I'd rather have that than a guessing game."