

Problem to Solve:

- Sumner County Sheriff Animal Control facility suffered a viral outbreak resulting the shutdown of the facility to the public for 2 months.
- Several canine animals had to be put down during this period and the surviving canines were put on an intensive antibiotics regime.
- Veterinarians were sourced to administer antibiotics intravenously daily during the acute phase of the virus.
- The felines that were also in the facility were suffering a mysterious respiratory problem for several months, described as a cough.
- During the facility lockdown the challenge for the Sheriff was where to take animal rescued as they could not be introduced into the facility adding operational complexity and additional cost.
- The facility also had a volatile organic problem manifesting in a very strong ammonia smell, created by animal urine which was affecting the staff and the trustees who were working in the facility.
- The smell of the ammonia was so impactful that when you entered the facility you covered your nose mouth and nose and think about walking out.
- Exacerbating this problem during summer was the design of the facilities air handling system.
- It was required to place the system on recycle as the temperature differential created by hotter outside air resulted in moisture drop out and ultimately mold became a problem.
- The impacts of the these problems were:
 - Occupational safety,
 - Duty of care to the animals in the facility,
 - Public safety,
 - Quality and delivery of service,
 - Increased operational costs.

Solution Deployed:

- The customer had a budget of \$30,000 to address their whole facility. The solution was deployed at \$1.50 per square foot.
- A walk through of the facility identified that we could use a combination of devices installed in the ductwork of the facility as well as the portable devices to supplement the facility.
- Installation was completed in half a day (installation and electrical).

Results:

- Within 24 hours the ammonia smell was reduced. This improved over a two week period and continued to improve.
- There is a residual smell of ammonia but as this is continually being introduced by the animals.
- The Sheriff staff reports a 95% improvement in the smell.
- The viral infections that were afflicting the canine animals stopped immediately and there have been no further outbreaks since the installation of the solution.
- The mysterious respiratory problem afflicting the feline animals has stopped as well.
- The Sumner County Sherif also deployed an Induct solution in his incarceration facility and has experienced no viral outbreaks of COVID-19, seasonal flu's and colds, Has enjoyed reduced operating costs and reduced absenteeism of staff. Overall a decrease in operational burden and reduction of loss.