



**Monoclor® RCS
Second Month Operation &
Performance Review**

Deer Park (TX)



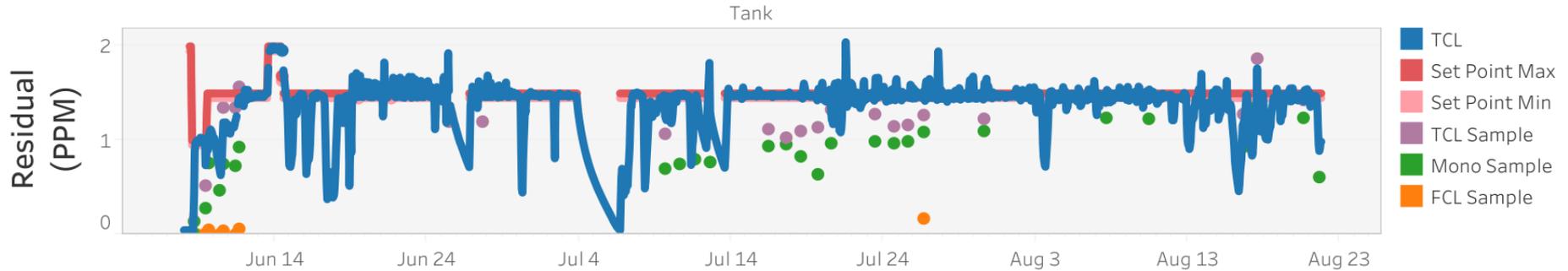
Monoclor® RCS at Deer Park (TX) was started up in June 2018

- Monoclor® RCS system at Deer Park consists of:
 - Smart Control Center
 - Water Quality Station
 - Ammonia Feed System
 - PAX PWM400 Mixer
- Monoclor® RCS integrates with the existing gas feed system at the site for the chlorine feed system.

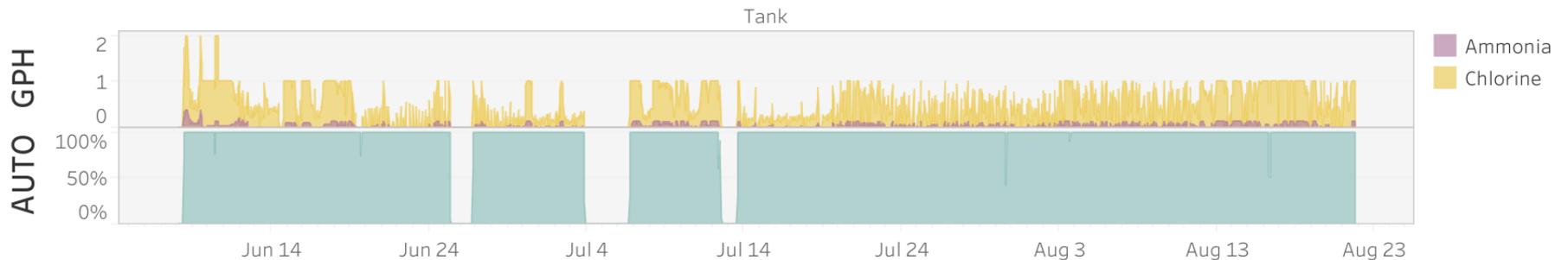


Residual data at Coy Tank since startup: two months of Monoclor® RCS operation

Residual

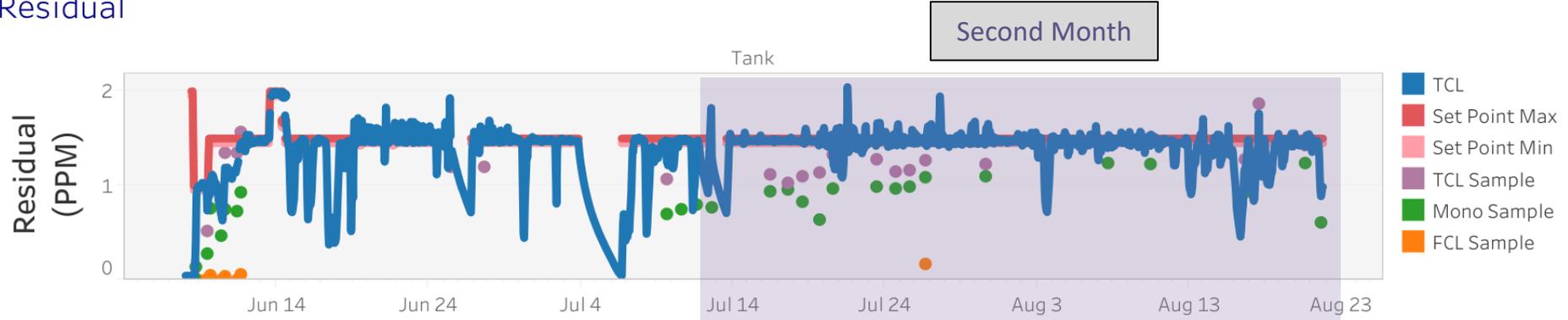


Control

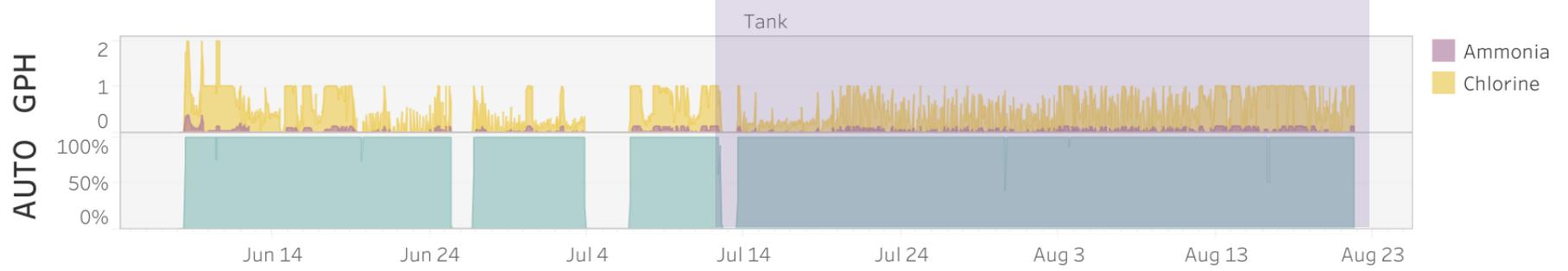


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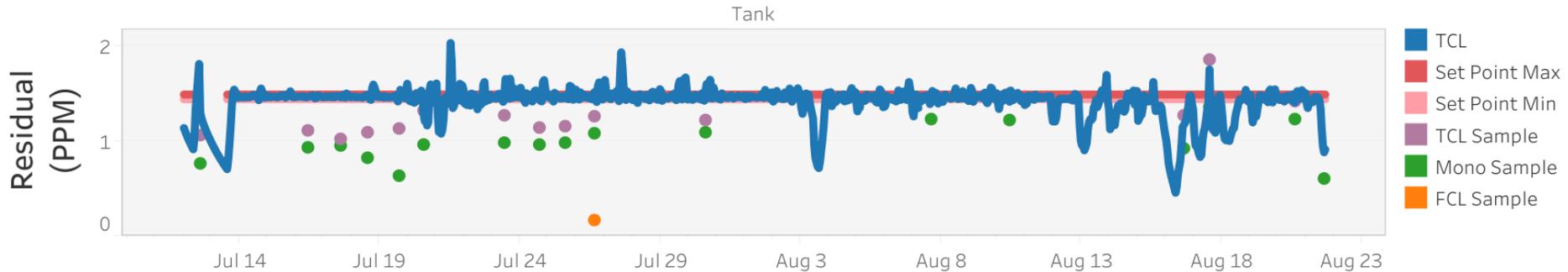


Control

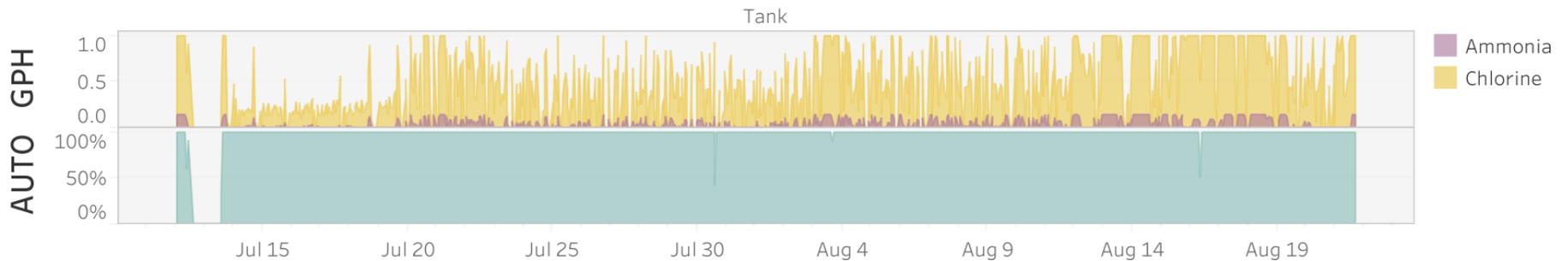


Second month residual data at Coy Tank: Monoclor® RCS maintained 1.5 ppm mostly throughout the month

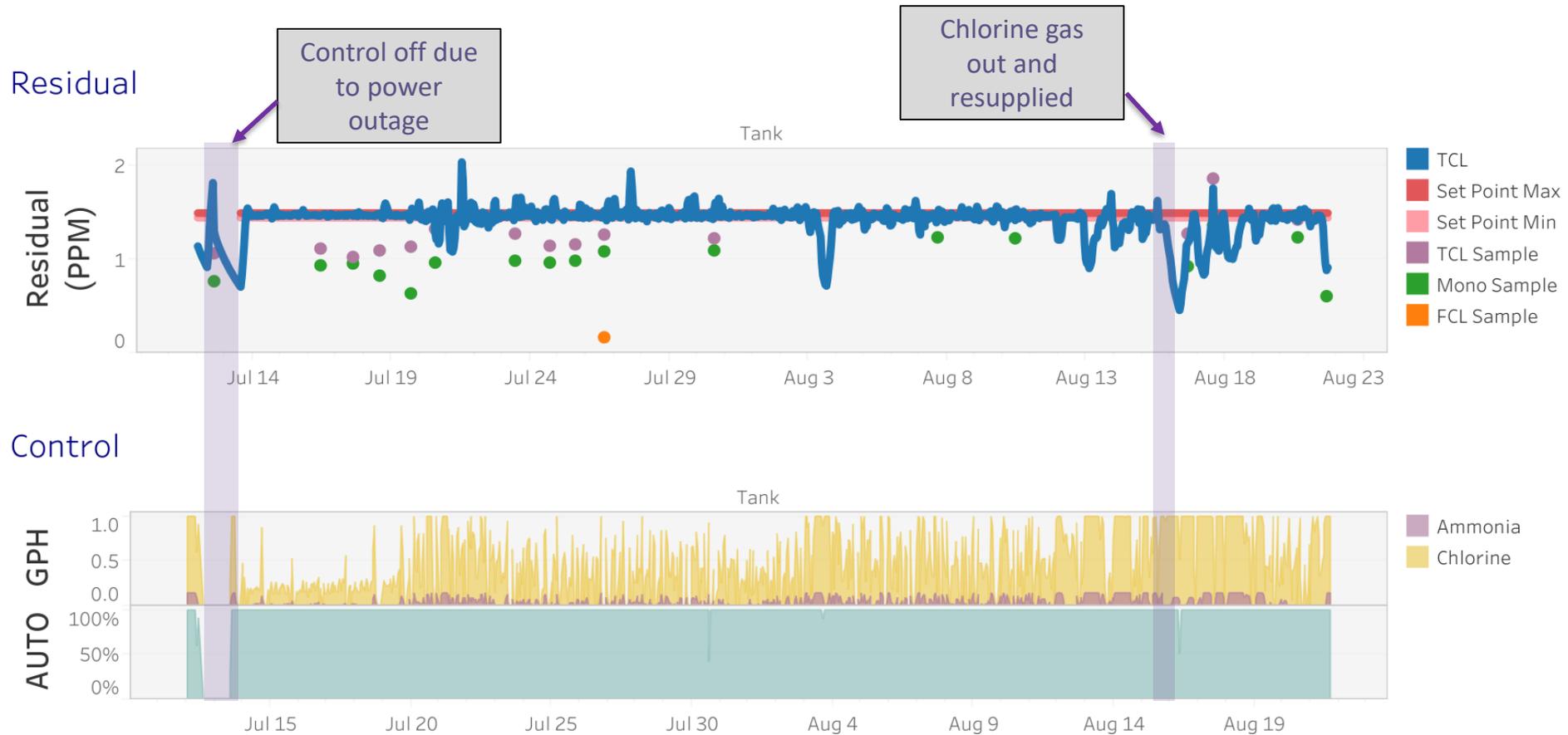
Residual



Control

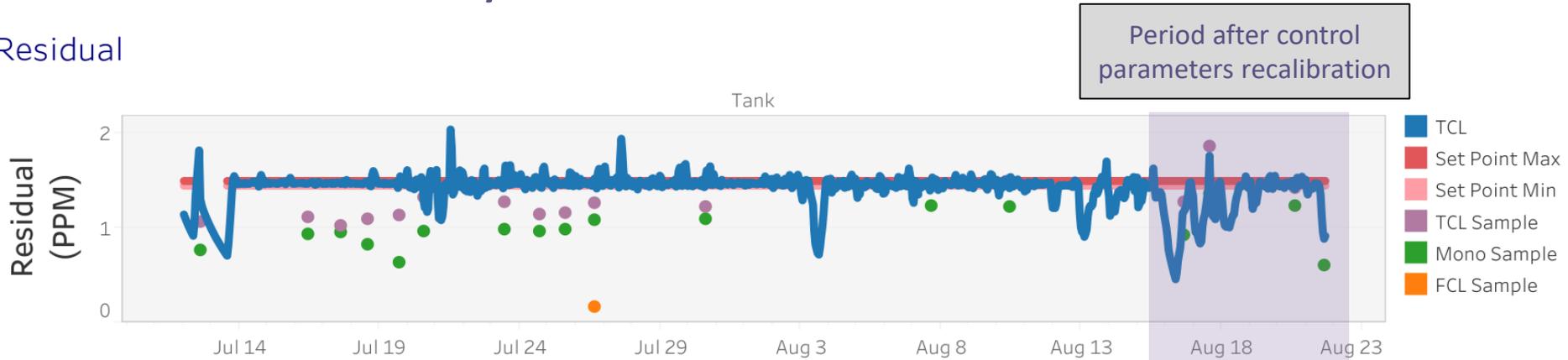


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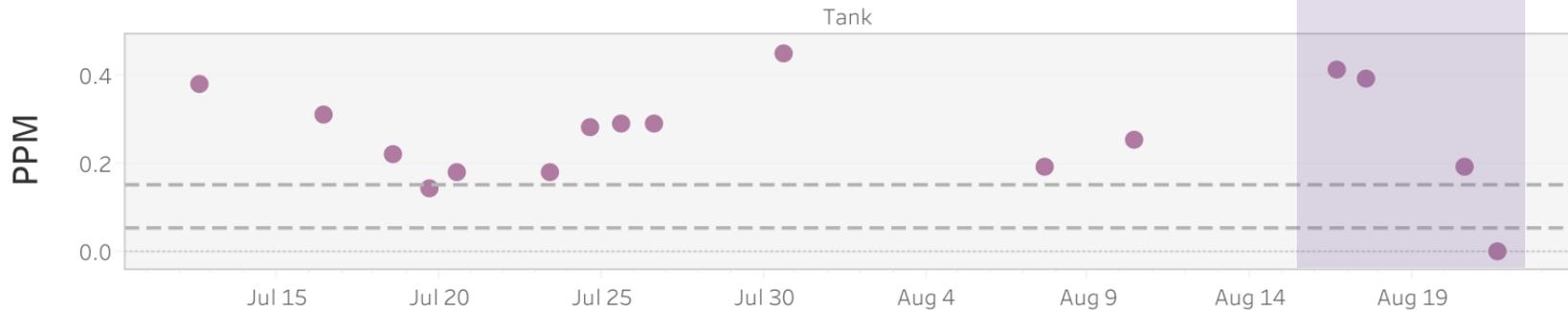


High free ammonia was also observed. Dichloramine regime detection control parameters adjusted to refine detection accuracy.

Residual

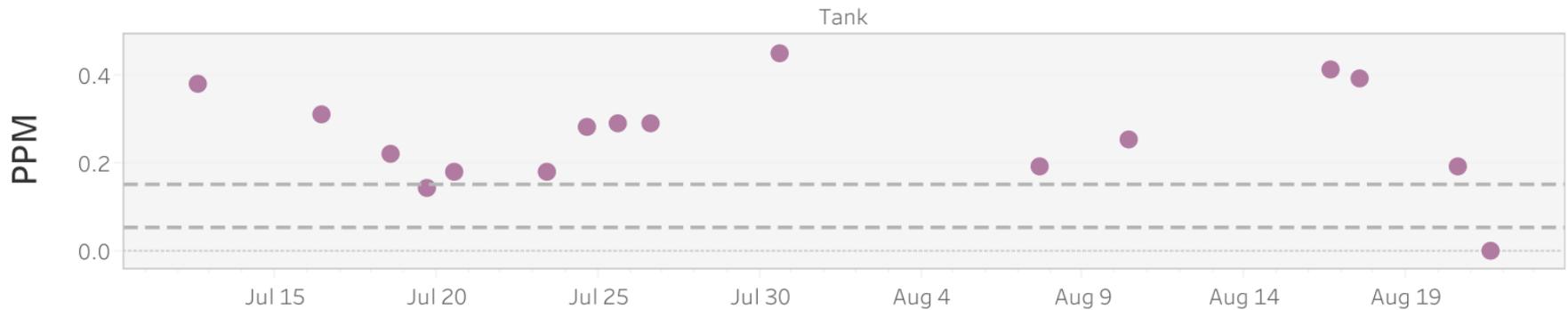


Free Ammonia

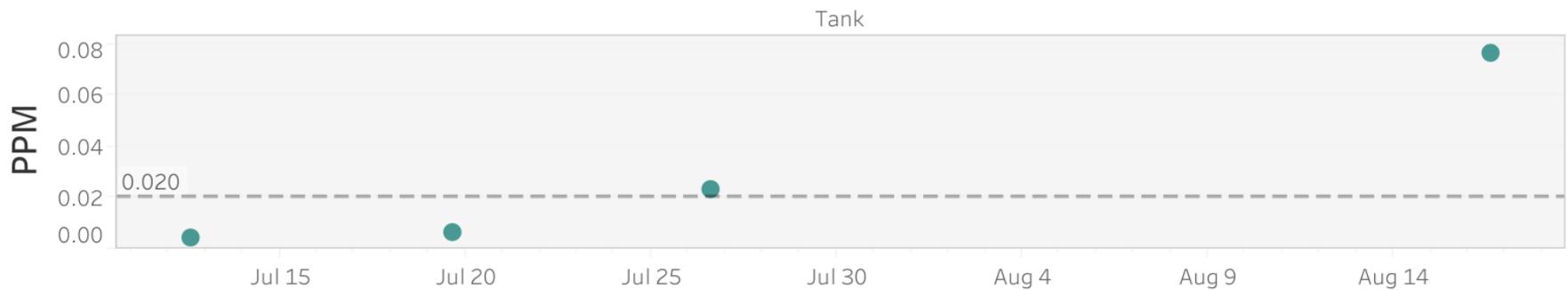


Free ammonia and nitrite samples during second month of operation.

Free Ammonia



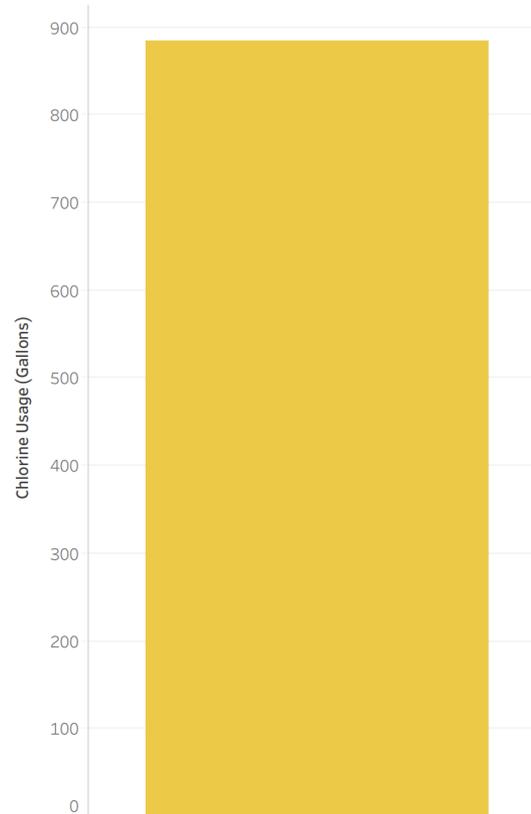
Nitrite



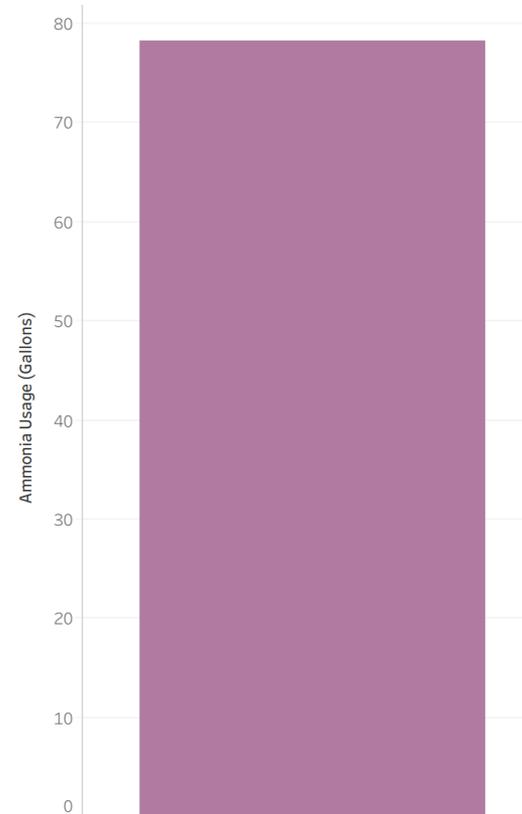
Chemical usage since startup is approximately 1070 lbs of chlorine gas and 80 gallons of 29% aqueous ammonia

Chemical Usage

Chlorine



Ammonia



Note: unit is shown as equivalent gallons of 12.5% sodium hypochlorite



Summary: What we learned

- Monoclor® RCS continues to maintain 1.5 ppm of chloramine residual at Coy tank.
- Dichloramine regime detection control parameters was adjusted to refine detection accuracy and to decrease existing free ammonia.

