



Case Study # 301

High Efficiency No. 3 Type-K Tellerette® Tower Packing Removes H₂S at High Velocity

A major engineering firm asked Verantis to provide designs for multiple odor control scrubbers on a wastewater application. Although typical industry practice is to design at throughput velocities below 500 fpm, Verantis recommended using our new No. 3 Type-K Tellerettes® at 600 fpm to reduce tower size and cost. The units were designed with 10' deep packed beds to remove H₂S generated by the aeration and influent tanks. The required removal efficiency was 99.5%. After installation, certified tests were conducted on inlet concentrations at metered levels of 5, 10, and 50 ppmv H₂S using a scrubbing solution of 0.10% NaOH and 0.03% NaOCl. The 3-K Tellerette met the efficiency requirement for all conditions achieving up to 99.7% with less than 2" W.C. pressure drop.

The unique No. 3 Type-K design provides a large quantity of interstitial holdup points that rapidly and continuously form droplets, exposing fresh liquid surface to the contaminants. This translates to high efficiency absorption at very low pressure drops.

Product Literature: (links will take you to the literature)

[Tellerette® Tower Packing 12-20](#)

[Tellerette® Tech Data 12-10.14](#)



Application	H ₂ S Removal
Exhaust Volume	10,000 CFM 38,000 CFM 55,000 CFM
Exhaust Temperature	Ambient
Exhaust Pressure	1.75" to 1.90"
Contaminant	Hydrogen Sulfide
Removal Efficiency	99.5+%
Scrubbing Solution	NaOH & NaOCl
Materials of Construction	Polypropylene