Case History
0-83

Superior Odor Control at Wastewater Pretreatment Plant for Food Processing Facility

Background

The wastewater pretreatment plant was constructed in 2007 to handle process waste from a large food processing complex. The plant, which processes 600,000–800,000 gallons of water per day, receives process wastewater from three different food processing plants. Since the plant is located near local businesses and a residential area, the odors from the plant presented a significant public relations issue when a plan to expand was announced.

"My clothes no longer have a septic smell requiring me to change before I enter the house. I no longer must shower immediately upon entering the house when I get off work… My car no longer smells like the septic activity in the plant. It smells normal."

– Plant Employee

Solution

ChemTreat identified two areas of the wastewater plant that contributed to the odor-producing issue.

1. **Flow Equalization (EQ) Tank:** This is a circular 450,000-gallon, outdoor, open-top tank. Per the plant, this tank produces a strong odor and seems to be contributing part of the malodors from the wastewater plant. An HLDA300 blower unit was installed (inside the wastewater treatment building) with 200 feet of two-inch distribution hoses located around the top perimeter of the EQ tank.
2. **Dissolved Air Flotation (DAF) Unit:** The DAF is located inside of the wastewater building. An HLDA100 unit was installed with two-inch distribution hoses located around the perimeter of the DAF and above the skimmer paddles.

Air-driven/vapor phase odor control systems have several advantages:

- **No water is needed**
- **Operates year-round**
- **No freeze protection needed**
- **No spray nozzles**

Results

Odors from the dissolved air flotation unit and the outdoor equalization tank were eliminated immediately. On the first day, there was noticeable improvement but still some background odor. By day 15, treatment location and air flow were adjusted, decreasing the odor even more. The odor was not noticeable inside or outside the plant by day 30.

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Results are examples only. They are not guaranteed. Actual results may vary.