

## CASE STUDY #31



**Q-PAC Increases Scrubber Capacity and Improves Emissions** 

"The scrubber was now pulling an extraordinary 85,000 acfm of exhaust-- a 34% increase in capacity."

## THE PROBLEM:

The Darling International rendering plant in Cold Water, Michigan was getting a lot of complaints from neighbors about the odor emitted from their plant. Darling already had five odor-control scrubbers, with their largest one treating 63,600 acfm. But this was insufficient to control odor emissions, and to give the proper number of room air turnovers required.

Besides the emissions, the packing in the scrubber (Tri-Packs) was a constant source of trouble. It was susceptible to fouling, making it a costly maintenance problem and gradually reducing capacity, which was already below requirements.

## WHY Q-PAC WAS USED

Darling needed to substantially increase their scrubbing capacity so that they could get the required turnovers per hour to control the odors that were being emitting from the facility. Darling also needed a packing that could resist fouling better so that maintenance could be at a minimum and there wouldn't be progressive reduction in capacity.

Q-PAC<sup>®</sup> was presented to DeSpain Engineering\* (engineering company hired to correct the problem) as a complete solution. Performance was corroborated with a diverse presentation of test data, an abundance of real-world examples that benefited from the use of Q-PAC<sup>®</sup>, and a complete performance guarantee.

\*DeSpain Engineering, Kernersville, NC, phone (336)996-0692



## MEETING THE REQUIREMENTS

In March, 1999, 2,500 ft<sup>3</sup> of Q-PAC<sup>®</sup> was installed into the largest of the five scrubbers. With a superficial gas velocity measured at 752 ft/min, the scrubber was now pulling an extraordinary 85,000 acfm of exhaust, a 34% increase in capacity. The ventilation rate now exceeded the 12 turnovers per hour required, and the improved packed tower efficiency eliminated all odors.

Interestingly enough, the negative draft created by the upgraded scrubber forced doors in the facility to slam shut. No odors escaped because air now leaked in, rather than out of the building.

Using Q-PAC<sup>®</sup> in place of Tri-Packs eliminated the odor problem without costly redesign or new equipment additions.



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