

What's that smell?

Expanding the boundaries of the industrial hygienist

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Expanding your role - What is enterprise risk?



There are risks beyond the traditional plant setting that can threaten facility operations.



The industrial hygienist's toolbox

Fundamental skills and principles can be applied to nontraditional IH problems.

HAZARD ASSESSMENT

Identify the odor source

EXPOSURE ASSESSMENT

Evaluate odor impacts

EXPOSURE CONTROL

Develop recommendations for odor control and mitigation



Off-site odor evaluation: A case study

What was the problem?

CHALLENGE:

Consumer product manufacturer needed to resolve community odor complaints while minimizing financial and business impacts.

THE CLIENT:

- Didn't understand if or how much they were responsible for off-site odors
- Faced fines for violating state nuisance odor regulations
- Didn't know why their control devices weren't working
- Had to stop making certain products to eliminate the odor issues

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What did the client value?

- Assurance that the technical solution would work while maintaining manufacturing and operational flexibility
- Guidance to help navigate agency negotiations
- Prevention of client loss to competitors
- Minimization of financial impacts from both fines and loss of production
- Protection of the brand and preservation of community relationship

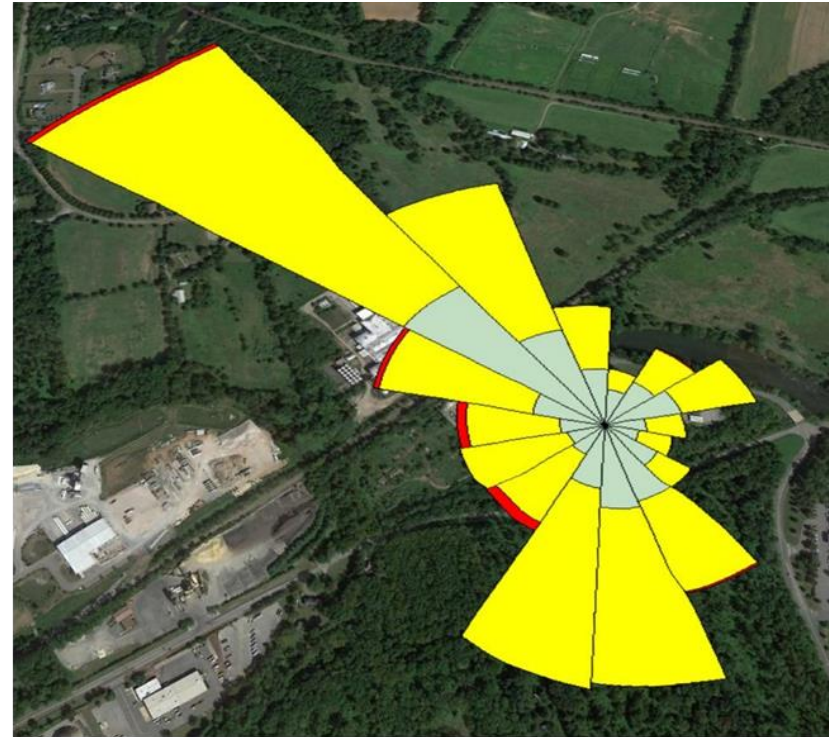
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1 Hazard assessment – identify the odor source

- Documentation review
- Personnel interviews
- On-site observations
- Off-site observations
- External research



Odor Wind Rose Plot

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Off-site odors were associated with a specific product run under certain manufacturing conditions.



Odor Wind Rose Plot

2 Exposure assessment – evaluate odor impacts

- Developed sampling plan
- Conducted odor sampling
- Collected meteorological data
- Quantified odor impacts



Odor Impact Contours



2 Exposure assessment – evaluate odor impacts

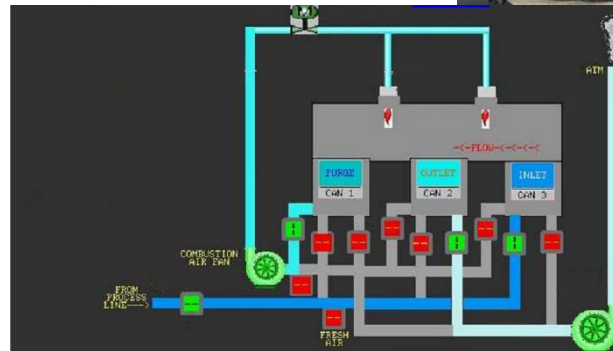
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- Quantified odor impacts

Confirmed hypothesis developed during hazard assessment and gathered information to inform control analysis.



3 Exposure control – recommendations for odor control and mitigation

- Mitigation feasibility
- Additional sampling
- Engineering analysis
- Presented findings



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Evaluated several mitigation options and presented the best option to senior management.



Off-site odor evaluation: A case study

Results

- Quantified traditionally subjective problem
- Diagnosed problem's source and scope
- Recommended technically and economically feasible solution to allow continued manufacturing of products, future operational flexibility
- Eliminated need for ineffective control equipment, saving client \$140,000 and estimated 2 years' experimentation
- Reduced potential fines, improved agency relationship
- Helped client maintain strong brand and community reputation

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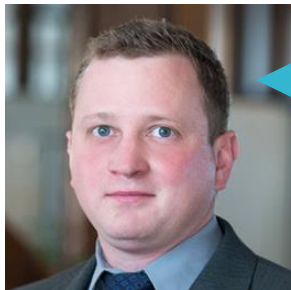
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Thank you!



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