CTI

GAS DETECTION SPECIALISTS

Although CTI is new to the renewable energy space,
we are not new to Ammonia Detection.

CTi

GAS DETECTION SPECIALISTS

iiar

Tyson

Nestlé

Smithfield Farmland FOODSERVICE GROUP

BEN & JERRY'S

AMERICAN SEAFOODS GROUP

ConAgra Foods

Coca-Cola

Cargill

Lineage

OCEAN BEAUTY SEAFOODS

AMOGY
NH3 KRAKEN
NEW YORK, NY
AMOGY
POWERED BY NH3

ACCURACY IN AMMONIA DETECTION

Why is it important?
How do we assure it?

Characteristics of NH3

Naturally Occurring

Long history in agriculture and refrigeration

Very cold

-28F / -33C

Affinity for water

Distinctive Smell

The human nose can detect it but not measure it.

Effects are immediate & acute, not chronic

Direct contact will cause permanent damage.

B2L: Highly Toxic, Slightly Flammable

Levels of Concern

5-10ppm	Odor Threshold
25ppm	TWA
100ppm	EEGL
300ppm	IDLH
150,000-280,000ppm	Flammability Range
Direct Contact with Liquid	Burns

AMMONIA ENERGY ASSOCIATION

CTI GAS DETECTION SPECIALISTS

IIAR Standards

TAKE ACTION AT:

- 25ppm
- 150ppm
- 40,000ppm

How to Assure Accuracy:

1. **Match the detection method to the detection level**

   Low Level (25-1000): Electrochemical - High Level (>1000): Catalytic Bead

2. **10% rule**

   Set alarm trigger for no less than 10% of the detection range

3. **Regular testing and calibration**

   Bump Testing vs. Calibration

4. **Correct mounting location**

   Within 30 feet of any leak source, easily accessible for maintenance, in the breathing zone.

Why is Accuracy important in NH3 Detection?

Working in an enclosed space that contains a potential for an NH3 leak is dangerous. Concentrations can change rapidly and vary significantly. The human nose cannot be trusted to assess the level of danger.

The action you take depends on the level that is detected.

Overreacting to a small leak can be costly.

Underreacting to a significant leak can be deadly.

Goals of NH3 Detection

- Provide fast and accurate readings of the Ammonia level in the space
- In a manner that minimizes and prevents false alarms
- So that AUTOMATIC, IMMEDIATE and APPROPRIATE actions can be taken
- To protect people and property