## Ammonia Awareness

1. **Purpose**

This procedure is to establish guidelines for employees and contractors who may be exposed to ammonia during work activities.

1. **Responsibility**

The Supervisor shall:

* Develop standard operating procedures to comply with this program.
* Identify potential exposure to ammonia before work begins.

The Employee shall:

* Comply with procedures and safe work practices established to minimize potential ammonia exposure.
* Abide by all signs/labels/assessment reports indicating the presence of ammonia.

1. **Exposure**

Ammonia is a colorless gas under normal conditions and can be a liquid under pressure. It has a pungent, suffocating odor. Ammonia’s strong, pungent and irritating smell gives early and positive warning that ammonia is present.

Ammonia exposure can occur while working with or near the following examples:

* Agricultural Applications
* Chemical Process Industries
* Pollution Control
* Refrigeration
* Water Treatment
* Metal Treatment

The airborne permissible exposure limit (PEL) for ammonia is 50 ppm averaged over an 8 hour workday.

* 5 ppm - You can smell it.
* 50 ppm - It can harm you – Long Term Exposure
* 300 ppm - IDLH – Immediate Danger to Life & Health
* 5,000 ppm - It can kill you

1. **Health Effects**

Exposure of the eyes to ammonia may cause burning, tearing, temporary blindness and severe eye damage. Never wear contact lenses when working near ammonia. Ammonia may become trapped behind the contact lens, increasing the risk of damage to the eye and reducing the effectiveness of the eyewash.

Exposure of the skin to ammonia may cause severe burns, frostbite, dehydration of body tissue and blistering.

Exposure of the respiratory tract (mouth, nose and throat) to ammonia may cause runny nose, coughing, chest pain, severe breathing difficulties, severe burns and death.

1. **Medical Response**

For eye contact:

* Immediately remove contact lenses.
* Hold the upper and lower eyelid open and flush with water for 15 minutes.
* Seek medical attention.

For skin contact:

* Immediately flush with large quantities of water and continue for 15 minutes.
* Do not remove clothing if frozen to skin.
* Seek medical attention.

For inhalation:

* Remove the person from exposure.
* Administer artificial respiration or oxygen if breathing has stopped.
* Seek medical attention.

For Ingestion:

* Do NOT induce vomiting.
* Give 1-2 glasses of milk or water.
* Seek medical attention.

1. **Personal Protective Equipment (PPE)**

Employees are provided with and required to use impervious clothing, gloves, face shields and other appropriate protective clothing necessary to prevent any possibility of skin contact with liquid anhydrous ammonia or aqueous solutions of ammonia.

Similar precautions will be taken to prevent the skin from becoming frozen from contact with vessels containing liquid anhydrous ammonia.

1. **Site Specific Contingency and Emergency Plans**

All employees will be made aware of any Emergency or Contingency plans at off-site locations. In addition all employees will be made aware of any ammonia that is located at a host facility and where specifically the ammonia is located and used at the host facility. All employees will be made aware of any additional safety rules and requirements while at a host facility.

If you smell ammonia, see it, or hear an alarm, immediately do the following:

* Evacuate the affected area.
* Move upwind to get out of the vapor cloud.
* Notify everyone in the affected and surrounding areas.
* Assemble to be counted.