## Nitrogen Awareness

1. **Purpose**

The purpose of this procedure is to provide general guidelines for working with or near nitrogen gas.

1. **Responsibility**

The Supervisor shall:

* Ensure personnel are aware of work that has the potential of exposure to nitrogen.
* Identify possible locations where nitrogen in the workplace may be used.
* Ensure employees comply with the nitrogen awareness requirements.

The Employee Shall:

* Comply with the nitrogen awareness requirements and direct any questions or concerns to the Safety Coordinator.
* Attend required annual training.

1. **Properties and Health Effects**

Nitrogen is a non-combustible, colorless, odorless, and tasteless gas. Exposure to nitrogen can occur through inhalation of the gas or contact of the skin. Nitrogen is a simple asphyxiant. The signs and symptoms of overexposure to nitrogen may include nausea, drowsiness, blue coloration of the skin and lips, unconsciousness, and death.

1. **Pre-Job Planning**

A site assessment shall be conducted prior to the start of operations involving potential nitrogen exposure. This includes anytime an active purge is being applied to a system in or around equipment associated with work. The pre-job site assessment shall be documented and include the identification of special precautions, equipment status, and personal safety equipment requirements.

Pre-Job planning shall include:

* Emphasis on confined space entry restrictions.
* Identification of all equipment where inert gas purging may be venting into the work area.
* Appropriate signage shall be posted and will include adequate warning by stating Danger, Inert Gas Present, and Possible Oxygen Deficient Environment.
* As determined by the hazard assessment, nitrogen vent / purge points will be labeled and barricaded with a 3' diameter safe zone or greater as determined by oxygen monitoring (must be > 19.5 outside of the barrier.)

1. **Nitrogen Cylinders**

* Nitrogen cylinders shall contain an identifying label UN1066.
* Cylinders for nitrogen, industrial-grade air and breathing-quality air shall have distinct, incompatible fittings that cannot be cross-connected.
* Nitrogen cylinders should be upright, properly supported, and stored outdoors or in a well-ventilated area.
* The protective cap must be in place when not in use.
* Nitrogen must not be used to power pneumatic tools or blowers except when they are used in an inert atmosphere.

1. **Training**

All affected employees shall be trained in Nitrogen Awareness. Training shall be documented including dates of training, employee name and trainer name.