1.0 Purpose

- This program covers Ardent policy related to Ammonia hazards in the workplace. The intent of this program is to provide Ardent employees with general knowledge and guidelines enabling employees to anticipate, recognize, evaluate, and better participate in controlling their exposure to Ammonia found in certain industrial worksites and processing facilities in which Ardent may work.

2.0 Scope

- This Ammonia Hazard Awareness Program and Policy is intended for support of and use by company operations both in business units and project operations.

3.0 Policy

3.1 Stop the Work Immediately - Upon discovery or suspicion of Ammonia being present on a jobsite, Ardent employees are to stop the work immediately and inform their supervisor.

3.2 Avoid Exposure – It is Ardent policy to train employees with general knowledge and guidelines enabling them to protect themselves and others from unnecessary Ammonia exposure.

3.3 Hazard Identification & Control – All employees assigned to jobsites where exposure to Ammonia may be possible shall participate in the identification, evaluation, and control of Ammonia hazards. All employees shall be familiar with the local Emergency Action Plan and specific contingency plans involving Ammonia.

4.0 Responsibilities

4.1 Management – Ardent Management is responsible for the following:
- Ensure that the HSE Management System includes an Ammonia policy and that the policy is reviewed annually and revised as necessary to reflect the most recent exposure monitoring data.
- Provide Ammonia Hazard Awareness Training for all employees assigned to at-risk areas.
4.2 Supervision – Ardent Supervision is responsible for the following:
- Understand and enforce the Ardent Ammonia Policy
- Implement site controls isolating employees from Ammonia hazards when Ammonia is discovered or suspected on a jobsite.
- Immediately inform management of any Ammonia exposures on a jobsite.
- Provide immediate on-the-spot training in recognition and control of Ammonia hazards for all employees assigned to at-risk locations, enabling employees to protect themselves and others from unnecessary Ammonia exposure.
- Contact a competent individual when Ammonia is discovered on a jobsite.

4.3 Employees – Ardent Employees are responsible for the following:
- Upon discovery of Ammonia being present on a jobsite, Ardent employees are to stop the work and immediately inform their supervisor.
- Protect themselves and others from unnecessary Ammonia exposure by wearing appropriate PPE and following safety rules and guidelines regarding Ammonia hazard protection.
- Immediately report to a supervisor any changes, deficiency or breaches in site controls established to isolate employees from Ammonia hazards on a jobsite.
- Participate in and understand Ammonia Awareness training.
- Participate in JSA and hazard recognition activities. Make every effort to identify Ammonia hazards during daily JSA’s.

5.0 What is Ammonia?

- Ammonia is a colorless gas under normal conditions. It can be a liquid under pressure. It has a pungent, suffocating odor. Anhydrous Ammonia is attracted to water and at ambient temperature is mainly a gas.
• Ammonia exposure can occur from the following:
  
  o Working on or near industrial refrigeration machinery rooms, equipment and/or piping  
  o Working in petroleum refineries  
  o Working with or near agricultural fertilizer  

6.0 Hazard Recognition

• Ammonia is a colorless gas under normal conditions. It can be a liquid under pressure. It has a pungent, suffocating odor. Anhydrous Ammonia is attracted to water and at ambient temperature is mainly a gas.
• High concentrations of ammonia gas, liquid ammonia and solutions of ammonia can cause harm if inhaled or contacts eyes or skin.
• Exposure of the eyes to ammonia may cause burning, tearing, temporary blindness and severe eye damage.
• Exposure of the skin to ammonia may cause severe burns 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.

7.0 Controls – Protection

• Employees will be 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 containing more than 10% by weight of ammonia. Similar precautions should be taken to prevent the skin from becoming frozen from contact with vessels containing liquid anhydrous ammonia.
• Employees should be aware of clients' contingency plans and provisions.
• Employees must be informed where ammonia is used in the host facility and aware of additional plant safety rules.
8.0 Training

- Training will be provided on the health hazards and any use/handling requirements for Ammonia at time of initial assignment and annually.