AC/R Services LLC
Bellevue Distribution Center
Emergency Action Plan

Facility: Bellevue Distribution Center
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Bellevue, WA 98005
Telephone (425) 453-5011
Contact: Dave Parmley
47° 37'25"N 122° 10'36"W

Facility Operator: AC/R Services, LLC

Purpose: The purpose of this document is to ensure that the cold storage facility is prepared to respond to an accidental discharge of anhydrous ammonia. The EAP outlines procedures to protect employees, alert the public, and mitigate any potential environmental impact subsequent to an unplanned ammonia release.

Regulations: This plan was specifically designed to meet the requirements of WAC 296-24-567 Emergency Action Plans, WAC 296-67-053 Process Safety Management Emergency Planning and Response, WAC 296-824 Emergency Response Awareness Level Training and 40 CFR Part 68.95 Risk Management Emergency Response Programs, as well as to provide direction to personnel in making federal, state and local notifications required by CERCLA and EPCRA laws.

Policy: It is the policy of AC/R Services, LLC to manage and operate this cold storage facility in accordance with State and Federal regulations, as well as recognized and generally accepted good engineering practices. The company objective is to minimize the risk of an accidental release. Facility personnel will implement the requirements of this plan in collaboration with emergency response agencies to ensure the successful resolution of any release.

Distribution: Cold Storage Facility Office
Cold Storage Facility Control Room
1 each to main tenants (Safeway, Amazon, Orca Bay)
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**Alarm Procedures**

Evacuation of the cold storage facility or a part of the cold storage facility is the responsibility of the Emergency Coordinator (EC), or in the event the EC is not available, the next listed Alternate (see Appendix 2, Table 1 for contact information). Generally, sounding of the alarm to evacuate the cold storage facility should not be done by anyone without the express permission of the EC or a member of management unless the emergency requires immediate action.

As much information as possible about the potential emergency will be gathered and provided to the EC. This information will be used in making the decision as to whether to evacuate the building or not.

**Reporting Emergencies**

Notify a supervisor immediately of any emergency. The supervisor will notify the EC and other persons to take appropriate action. If a supervisor is not immediately available, notify other personnel in the area verbally.

The cold storage facility is equipped with an automated Fire Alarm System monitored 24/7 by ADT. In the event a sprinkler is activated, ADT will automatically alert 911 and the Bellevue Distribution Center personnel listed in Appendix 2, Table 1.

The cold storage facility is also equipped with a manual evacuation alarm and a Public Address system. Speakers and horns are installed in all areas in the cold storage facility that have ammonia piping. Two alarm activation stations are available. The main station is outside the Machine Room near the Orca Bay receiving office and includes a microphone for Public Address (PA) announcements. The other station is in the entrance to Amazon Fresh by guard check-point. Activation of either station will send alarms to all speaker/horns. Additionally, the PA system may be used to provide personnel with specific instructions.

AC/R has provided a copy of this plan to each cold storage tenant and has requested copies of each cold storage tenant’s emergency plans. Tenants are asked to provide updated copies to AC/R whenever their plans are updated. AC/R will hold a meeting with the cold storage tenants annually for the purpose of discussing emergency preparedness, and reviewing all plans to minimize any conflicts. Other facility tenants, in addition to cold storage tenants, will also be invited to the annual meeting. Tenants and their employees should follow the specific emergency instructions contained in their own Emergency Action Plans.

**Procedures for Notifying Fire Response or Medical Response Organizations**

Call 911. If possible, provide the location of the emergency, the type of emergency, the present situation, whether there are any injuries involved and if the buildings have been evacuated.

**Machine Room Ammonia Alarms**

The refrigeration Machine Room is equipped with a fixed ammonia sensor that monitors airborne levels of ammonia. When levels exceed 50 ppm an audible alarm will be activated in the Control Room. At 200 ppm, the compressors, pumps, and all evaporators will shut down. Activation of the alarm does not necessarily indicate an emergency, but does indicate that there is some type of problem that requires immediate investigation by trained and competent engineering personnel. If the situation is an emergency, or if it is determined that it would be safest to evacuate nearby areas of the cold storage facility, then the EC will initiate the evacuation. There are two emergency stop buttons to shut down Machine Room equipment, one behind the door in the alley and another at the entrance to the Machine Room. The ventilation is always on in the cold storage facility Machine Room.
**Cold Storage Facility Ammonia Alarms**

There are no sensors installed in the cold storage facility, nor are they required. Ammonia can be smelled easily; personnel are instructed to notify a supervisor of any ammonia smell, and to leave the area if the smell is ever uncomfortable.
Emergency Actions

The Bellevue Distribution Center may need to be evacuated for any of the following reasons:
- Fire
- Earthquake
- Ammonia leak
- Other emergency

All persons should evacuate the building when the following occurs:
- An announcement is made by the Emergency Coordinator by radio, PA System, or personal communication
- The evacuation horns are sounded
- There are obvious visible or audible signs of an ammonia release, a fire, or other disaster.

The evacuation system consists of evacuation signal controls that will initiate audible evacuation alarm that can be heard in all cold storage facility buildings.

Evacuation signal controls are located:
1. At guard checkpoint in Amazon Fresh north end of loading docks, and;
2. At main panel near Orca Bay receiving office east of Machine Room in loading dock.

In case of a failure of the alarm system, runners will be used to spread the word to evacuate. The alarm system is equipped with a backup power supply, which is inspected monthly.

When the Alarm Sounds
1. Familiarize yourself with the exits in each work area before you begin work.
2. If you smell smoke, or ammonia, notify your supervisor IMMEDIATELY.
3. Look to your supervisor for direction. The reason for the emergency may not be immediately known so be patient, do not panic.
4. Turn off any equipment you may be using before leaving your work area only if you have time to safely do so.
5. Exit the building immediately as directed by your supervisor. They will direct you to evacuate away from a fire or leak area. Do not run. Remain calm. Stay together.
6. NEVER enter a cloud or fog of ammonia. Chemicals in cloud form are very concentrated. Always move upwind, away from the leak.
7. Proceed to the designated assembly area. The primary assembly area is the East Parking Lot, North of the Guard Shack (ASSEMBLY AREA #1). If the East parking lot is not available due to a hazardous condition there, the West Truck Lot, West of the building (ASSEMBLY AREA #2) would be the first alternate. The second alternate is just east of the truck maintenance facility (ASSEMBLY AREA #3). Any change in assembly area will be relayed immediately via cell phone, bullhorn and/or direct voice communication.
8. Stay at the assembly area so that each tenant can take an accurate head count of their workers to ensure that everyone that has been evacuated is accounted for. DO NOT LEAVE THE ASSEMBLY AREA FOR ANY REASON UNTIL INSTRUCTED TO DO SO BY MANAGEMENT. You will be told when it is safe to return to the cold storage facility.
9. The EC is responsible for making any required notifications (see Appendix 2, Tables 1 and 2).
Evacuation Routes & Procedures

Exits from the building are clearly marked. If evacuation is necessary, evacuate using the nearest safe exit. Supervisors will ensure and assist in the orderly evacuation of personnel to the assembly area.

Supervisors will be responsible for informing their workers of the nature of the emergency and the proper direction in which to evacuate. They must be aware of where all their personnel are working so they can quickly contact and assist them.

Supervisors will:
1. Sweep the work area to ensure everyone has evacuated. Check rooms and other enclosed spaces for personnel who may be trapped or otherwise unable to evacuate.
2. Assist personnel in following the most appropriate emergency evacuation routes to the assembly area. Supervisors must ensure that employees are taking the safest route possible and not evacuating into or through the emergency area.
3. At the assembly area, the supervisors will account for all personnel.
4. Any missing personnel will be reported to the EC as soon as the results are known. The EC can be reached by calling the contact number listed in Appendix 2, Table 1.
5. Keep personnel at the assembly area until otherwise directed.
6. Contractors, visitors, and vendors will report to the supervisor in charge of their work. In the event of an incident requiring an evacuation, each supervisor must account for all visitors on-site in their area at the time of the evacuation.

The primary reaction in case of emergency should be defensive, with the safe evacuation of everyone the main priority. There may be situations in which strong ammonia vapors may block off the most direct route. You may need to evacuate using the nearest safe exit and make your way around the building to the assembly area. It is not possible to describe the many variables that may be present at the time of an incident, so the main things to remember are; stay calm, follow directions, and move quickly once instructed to do so.

Assembly Areas
Assemble on the East Parking Lot, North of the Guard Shack (ASSEMBLY AREA #1) to be accounted for. Make sure you leave room in the driveway for emergency vehicle access. If the assembly area becomes unsafe, the West Truck Lot, West of the building (ASSEMBLY AREA #2) may be used, or east of the truck maintenance facility (ASSEMBLY AREA #3) or an alternative assembly area will be designated by the EC. If an alternate assembly area is designated, it will be relayed immediate via cell phone, bullhorn and/or direct voice communication. The EC will generally be located at the guard house.
NO ONE may leave the assembly area until accounted for and released by the EC. No nonessential personnel will be allowed back into the building for any reason until the EC gives the all clear. The EC or his alternate will inform the Fire Department contact of the approximate area where any employee/contractor not accounted for might have been working.

Safe Distances and Places of Refuge
The EC may select an appropriate alternative assembly area based on the size, location and conditions of the emergency, and also wind and weather conditions.

Accounting for all Personnel
Once arriving at the assembly area, each supervisor must ensure all of their employees are accounted for. After careful checking, relay the results of the head count immediately to the EC. The EC will determine if
all personnel are accounted for and report the results to the fire department and other management personnel.

No attempts to find persons not accounted for will involve endangering the lives of others by reentry into emergency areas, unless those areas have been determined to be safe. Under no circumstances is anyone that does not have an assigned duty to do so, be allowed to return to the evacuated area or leave the assembly area until directed.

**Shelter-in-Place in the Event of an Outdoor Release**

If a release occurs outdoors, it may be safer for persons to stay indoors rather than evacuate to the outside through a leak area. This procedure is common in chemical spills and is called “Shelter-in-Place.” All personnel directed to do so will stay indoors, close all doors and windows and turn off office HVAC systems. If "Shelter-in-Place" is used, then it will be announced over the PA system, verbally, or by other means of communication. The evacuation alarms will NOT be used to signal a Shelter-in-Place event. Designated Shelter-in-Place locations are the Orca Bay Meats Area, and the Amazon dot com space. Upon being given the instruction to Shelter-In-Place, all persons should proceed to whichever Shelter-in-Place location is closest. Supervisors will attempt to account for all personnel and communicate their findings to the EC via radio, cell phone or any other feasible means of communication.

Persons sheltering-in-place should remain at the designated area until directed to evacuate by the EC or fire department personnel.

**Responsibilities**

**Emergency Coordinator/Alternates**

Determine and act on the following as quickly as possible:
1. Is evacuation necessary for parts or all of the plant?
2. Is outside assistance necessary?
3. If so, who needs to be called in?

**Managers/Supervisors/Leads**

1. Ensure all employees are safely evacuated.
2. Notify the EC of the emergency, its location, and other relevant conditions.
3. After the Assembly Area has been decided upon by the EC, direct all personnel to the correct Assembly Area.
4. Station persons as necessary at stairs, and outside doorways to ensure they are kept open.
5. Account for personnel and report the results to the EC.
6. Keep all personnel at the assembly area until instructions are received from the EC.

**AC/R Employees/Contractors**

1. Evacuate the cold storage facility safely when an evacuation has been initiated.
2. Follow instructions given by the EC and supervisors.
3. Once outside the plant, stay at the assembly area unless you are assigned a further task.

**Securing/Controlling Access to the Site**

The affected area around the site of an ammonia release will be secured from unauthorized entry for the duration of the event. Reentry into areas affected by an ammonia release will only be allowed if the release is not an emergency, entry is made only by individuals trained to repair incidental releases, and only
when readings show that the available Personal Protective Equipment (PPE) is appropriate for release concentrations.

The Fire Safety Director/designee or the Emergency Coordinator/designee will set up controls to secure the area by effectively blocking the entrance with barricades and posting a watch person to see that people do not enter. The Watch Person will allow authorized persons and equipment into or out of the site, as required, to facilitate the removal of injured persons or to facilitate the effective control of the situation.

Once the facility is secure and the situation is controlled the Watch Person will be relieved of his/her post and the barricades removed.

Additional security persons will be designated if needed by the police and/or fire department.

### Medical Duties

If the injury does not appear to be severe, then notify a supervisor immediately.

If the injury appears to be serious or life-threatening, call 911 and send someone to direct the ambulance and paramedics to the location of the victim. Notify the appropriate supervisor as soon as possible.

### Rescue Duties

Any rescues that are necessary will be performed by local emergency responders requested by calling 911.

### Training

This Emergency Action Plan will be reviewed with each employee covered by the plan:

1. Initially when the plan is developed;
2. Whenever the employee's responsibilities or designated actions under the plan change; and
3. Whenever the plan is changed.

Employees will be trained in:

- The presence of ammonia, its associated risks, and the potential consequences in an emergency;
- How to recognize the presence of ammonia in an emergency;
- How to recognize the need for additional resources and notify appropriate responders.

### For More Information or Explanation of Duties under this Plan

The person responsible for training employees in their emergency duties is the Safety Manager. Contact Dave Parmley or Tom Pentin for more information.

### Fire Prevention & Emergency Plan

#### Emergency Actions

1. Notify a supervisor and others in the immediate area verbally. There are two pull-stations in the cold storage facility that, upon activation, broadcast alarms in cold storage and silently alerts the fire department. One pull-station is located near the Amazon Security Office and the other is outside Orca
Bay. AC/R employees, and Orca Bay and Amazon supervisors are authorized to activate a pull-station. The PA can be used to announce any special instructions.

2. Call 911, or request that someone does so.
3. Attempt to extinguish the fire only if it is small, it can be done safely, and you have been trained in how to use a fire extinguisher.
4. If the fire grows or there is thick smoke, do not continue to fight the fire.
5. Notify the Emergency Coordinator (EC) of the situation.
6. Tell other employees in the area to evacuate.
7. All tenants of the building will be notified by alarm system, PA, or cell phone of the emergency and directed to the designated Assembly Area.
8. Restrict the fire by shutting doors and windows and shutting down ventilation.
9. Evacuate by using the nearest safe exit.
10. All managers and supervisors along with employees, contractors and other occupants of the building will report to the designated Assembly Area to be accounted for.
11. When the fire is out, the Fire Chief and the EC will determine the extent of the fire damage and whether or not the shift can be continued.

**Significant Fire Hazards**
- Fuels such as gasoline, diesel and propane
- Paint and solvent vapors
- Foam insulation
- Cardboard, pallets and litter
- Chemicals
- Acetylene
- Oxygen
- Space heaters
- Oily rags
- Battery storage areas (charging batteries generate hydrogen gas)

**Ignition Sources**
- Smoking
- Welding, grinding and cutting
- Damaged electrical components

**Recognizing Unsafe Conditions**
Unsafe conditions occur when fuel is in close proximity to ignition sources. Be alert for situations where this may occur.

**Reporting Unsafe Conditions**
If you notice an unsafe condition, report it IMMEDIATELY to a supervisor.

**Housekeeping Procedures**
Proper housekeeping can greatly reduce the risk of a fire. Preventative housekeeping includes:
- Complying with no smoking/no open flames rules near fuel sources and combustibles.
- Minimizing the collection of waste cardboard, wood pallets and combustible debris. Take out trash regularly.
- Surveying hot work areas for ignitable materials and removing them.
- Keeping paint and solvents tightly covered when not in use.
- Returning flammables to storage area each day after use.
- Maintaining at least 36” of clearance in front of electrical panels.
- Maintaining at least 18” of clearance away from sprinkler heads.
- Keeping oily rags in covered, metal container and emptying the container regularly.
- Not using equipment with faulty electrical components.
- Keeping all emergency exits and exit pathways clear.
- Keeping fire extinguishers and hoses in place and unblocked.

**Fuel Source Hazards Control**

Dave Parmley at AC/R is responsible for controlling cold storage facility fuel source hazards.

**Fire Systems and Equipment Maintenance**

The building owner's representative, Jeff Kasowski, is responsible for maintaining fire equipment and systems.

**Post Fire Operations**

After the emergency/fire has been contained and before the building is re-entered, the EC will contact NRC Environmental Services to coordinate the evaluation of the building condition before the building is re-entered. If major clean-up is determined to be needed, the EC will contact NRC Environmental Services to coordinate or perform clean-up. Minor clean-up can be performed by AC/R Services personnel.
How to Use a Fire Extinguisher

REMEMBER the basics of using extinguishers.

If you are called on to use your extinguisher to fight a fire, just think of the word, PASS:

Pull

the safety pin at the top of the extinguisher.

Aim

the nozzle, horn, or hose at the base of the flames.

Squeeze

or press the handle.

Sweep

from side to side at the base of the fire until it goes out.
**Earthquake**

If you are inside the building:
- Drop under a table, cover your head and hold on. Stay away from windows, heavy equipment, bookcases or stacks of materials.
- When the shaking stops, check for available evacuation routes, then evacuate to the designated Assembly Area.
- Evacuation should proceed as quickly as possible since there may be aftershocks.
- Account for all employees and visitors as quickly as possible.
- First aid certified employees should check for injuries and help evacuate injured persons. Do not attempt to move seriously injured persons unless they are in immediate danger of further injury.
- Do not re-enter the building once evacuation is complete.
- Do not approach or touch downed power lines or objects touched by downed power lines.
- Do not use any phones or cell phones except for emergency use.
- Turn on a radio and listen for public safety instructions.

If you are outside: Stand away from buildings, trees, telephone poles and power lines.

If you are on the road: Drive away from bridges and buildings. Stop in a safe area. Stay in the vehicle.

**AC/R Personnel**

1. If an earthquake occurs, stop Machine Room equipment (compressor, pumps, etc.,) at once by pushing the Emergency Stop button located outside the Machine Room door, or by using the computer to shut down the system.
2. The EC will decide whether evacuation is necessary from any of the cold storage facility buildings. He will also be in contact with the managers throughout the cold storage facility. The managers and other personnel will inform him of the situation and damage in their areas.
3. If the evacuation is necessary, standard procedures will be followed.
4. After the earthquake, the EC will analyze the building to determine if it is safe to continue the shift.

**Power Failure**

1. In the event of a power failure, turn machinery off and stay at your work station. Stay clear of machinery. If power cannot be restored quickly, proceed to the outside of the building in an orderly manner by utilizing the emergency lighting, your personal flashlight or the forklift lights.
2. Do not drive pallet jacks or forklifts unless equipped with lights and it can be done safely.
3. Once outside, report to your supervisor immediately.
4. Each supervisor will account for all their personnel to make sure everyone is out of the building and notify the EC of the results.
5. If an employee is not accounted for, a team designated by the EC will conduct a search for the missing person.
6. The EC will communicate with tenants, contractors and employees on the status and process involved with restoring power and will notify them when the electricity has been restored.
Ammonia Releases

Operational leaks from refrigeration systems are not uncommon, however sizable leaks are rare. The established exposure limit for ammonia in Washington is 25 ppm. We have leak detection equipment available and will evacuate non-essential employees from areas with airborne ammonia levels greater than 25 ppm until the leak can be fixed and the area ventilated below allowable concentrations. The Refrigeration Operators and/or properly trained and qualified contractors may repair leaks in areas above 25 ppm as long as they are wearing proper respirator protection and other PPE if needed, and as long as the leak does not constitute an emergency.

Ammonia-Specific Evacuation Considerations

Evacuating personnel should be directed away from the leak area and upwind.

NEVER enter a cloud or fog of ammonia. Ammonia in cloud form is very concentrated and can burn the skin and may also be extremely cold. If you are near a cloud, move away from it and then upwind. Once moved away from any visible clouds, proceed to the designated assembly area.

Procedures for Handling Small Releases

Cold storage facility personnel will only respond to releases within the capabilities of their training, personal protective equipment and monitoring equipment. Releases will be responded to conservatively. If there is any doubt as to whether actions can be taken safely, employees will not take the actions.

Procedures for safely handling incidental releases are located within the Standard Operating Procedures (SOPs) maintained by the contracted Refrigeration Operators.

1. The operator will attempt to determine the cause of the alarm, if unknown.
2. The operator will only respond to ammonia leaks for which he/she can do so safely and only within the limitations of their training.
3. All efforts will be made to contain or slow down any leaks from outside the affected space whenever possible.
4. Ventilation will be used to reduce inside ammonia concentrations. Refrigeration operators will carry a calibrated hand held ammonia detector whenever approaching or fixing a small release.
5. Personnel will wear appropriate PPE based on release conditions.
6. When investigating releases, if at any time airborne levels exceed available PPE capabilities, personnel will retreat and attempt to mitigate the release from outside the space and/or by using ventilation. If the release cannot be safely controlled, all personnel will evacuate and appropriate notifications will be made.

PPE for Incidental Releases

Respiratory protection required depends on the airborne concentrations:

25-300 ppm Full-face respirator with ammonia cartridges
300-2000 ppm SCBA only, work only with suitably equipped backup person(s) standing by
>2000 ppm Even if the leak is not an emergency, employees are prohibited from entry into the affected area. Evacuate, and ventilate if possible.
Available Ammonia-related Equipment

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>UNIT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia Cartridges, North, spare</td>
<td>5</td>
<td>pairs</td>
<td>See Refrigeration Operator</td>
</tr>
<tr>
<td>Ammonia Monitor, Manning, handheld, 0-500ppm</td>
<td>1</td>
<td>each</td>
<td>Machine Room Office</td>
</tr>
<tr>
<td>Drawings, plant layout</td>
<td>1</td>
<td>each</td>
<td>Guard House</td>
</tr>
<tr>
<td>Drawings, refrigeration system</td>
<td>1</td>
<td>set</td>
<td>Guard House</td>
</tr>
<tr>
<td>Drawings, refrigeration system</td>
<td>1</td>
<td>set</td>
<td>Machine Room Office</td>
</tr>
<tr>
<td>Fans, Electric 110 V, aluminum, box</td>
<td>2</td>
<td>each</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>Fans, Electric 110 V, aluminum, pedestal</td>
<td>6</td>
<td>each</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>Flashlights</td>
<td>2</td>
<td>each</td>
<td>Machine Room Office</td>
</tr>
<tr>
<td>Gloves, butyl rubber</td>
<td>8</td>
<td>pairs</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>Respirator, Full-Face, Ammonia Cartridges</td>
<td>8</td>
<td>each</td>
<td>Machine Room Office</td>
</tr>
<tr>
<td>Tarp, medium</td>
<td>2</td>
<td>each</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>Tarp, small</td>
<td>1</td>
<td>each</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>Wrench, Crescent</td>
<td>8</td>
<td>each</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>Wrench, Pipe</td>
<td>9</td>
<td>each</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>3/8&quot; Rope</td>
<td>200</td>
<td>feet</td>
<td>Tool Cage</td>
</tr>
<tr>
<td>1/2&quot; Rope</td>
<td>100</td>
<td>feet</td>
<td>Tool Cage</td>
</tr>
</tbody>
</table>

This equipment will be inspected and maintained per manufacturer's instructions. Serviceability will be verified annually and prior to use.

Emergency Recognition

Not every release of ammonia is an emergency. Although ammonia normally is contained within a closed system, operational and incidental releases are not uncommon. Emergencies include ammonia releases that cannot be controlled at the time of the release by maintenance personnel, releases involving a fire or explosion, and situations with the potential to become catastrophic. The EC has the authority to enact the EAP for any other incident based on the area where the leak occurs, size of leak, and other conditions present at the time.
Emergency Releases

When an emergency occurs, all personnel will be evacuated from the danger area. Employees will not perform emergency response\(^1\) in the event of an ammonia emergency. Each Refrigeration Operator will only handle leaks and process upsets that do not meet the definition of an emergency and only within the limits of his/her training. The Refrigeration Operators may perform limited actions in emergencies but only outside the danger area; allowable actions include closing valves, shutting down equipment, etc., per standard operating procedures if it can be done outside the danger area and safely before he/she evacuates.

The EC will make the determination if an emergency exists, and call for the evacuation of personnel. The only actions that may be performed by Operators before they evacuate, with the permission of the EC, are:

1. Pushing the emergency stop button to shut down Machine Room equipment.
2. Shutoff off power just inside the building entrance.
3. Closing main valves ONLY if: a) the valves are located remotely from the leak area or operable via a computer terminal located remotely from the leak area, b) no PPE whatsoever is needed to access the valve(s), and; 3) actions can be performed very quickly.

If any of these actions will place anyone in any danger whatsoever, they shall not be performed.

The electrical panels that control the Machine Room are located just inside the entrance to the Orca Bay Receiving area and are mounted on the wall to the left. These breakers can be used to turn off power to equipment/areas of the Machine Room. Power shut-off for evaporators and the rest of the cold storage can be found in their respective loading docks (see photos in Appendix 4).

A yellow painted line on the floor directs emergency personnel from the entrance door of the building to the entrance door of the Machine Room. Inside the door, it proceeds down the steps into the Machine Room to the High Pressure Receiver. The King Valve is located on the left end of the receiver and the Queen Valve is located on the right end (see photos in Appendix 4).

In the event of catastrophic fire, main power can be disconnected at high-voltage pole-mounted disconnects located at each transformer station located outside and east of the cold storage buildings.

In the event of leaks involving an uncontrolled release of ammonia, situations with the potential to become catastrophic, and/or situations involving rescue operations, the Fire Department and NRC Environmental (under contract) will be called to arrange an appropriate response to the release.

Emergency Prevention

This facility utilizes a Process Safety Management Program and a Risk Management Program to aid in preventing releases. Tier II forms are submitted to the Fire Department, LEPC and SERC each year to ensure they are aware of the ammonia used at the cold storage facility. Local Code officials have approved construction at the facility.

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\(^1\) “Emergency response” is “a response to a release of a hazardous substance that is, or could become, an uncontrolled release.” An “uncontrolled release” is a release “where significant safety and health risks could be created. Releases of hazardous substances that are either incidental or could not create a safety or health hazard (i.e., fire, explosion or chemical exposure) aren’t considered to be uncontrolled releases. Examples of conditions that could create a significant safety and health risk are large-quantity releases, small-releases that could be highly toxic, potentially contaminated individuals arriving at hospitals, airborne exposures that could exceed a WISHA permissible exposure limit or a published exposure limit and employees aren’t adequately trained or equipped to control the release.” An “incidental release” is “a release that can be safely controlled at the time of the release and doesn’t have the potential to become an uncontrolled release.”
Ammonia Health Hazards

Vapor health hazards:

Eyes: May cause immediate irritation to the eyes. Liquid ammonia will cause blindness. Ammonia is attracted to moisture in the eyes.

Skin: May cause chemical burns, blistering, or frostbite. Ammonia is attracted to moisture on the skin. Moist skin may experience intensified burning.

Lungs: May cause immediate irritation to the respiratory tract.

Liquid health hazards:

Eyes: Liquid ammonia will cause blindness.

Skin: Chemical burns, blistering, frostbite.

Lungs: Pulmonary edema, pink frothy sputum, chest pain, bronchial spasm

Ammonia First Aid

Inhalation: Move victim to fresh air

Eyes: Flush eyes with large amounts of running water for more than 15-30 minutes. Flush as long as possible.

Skin: Flush skin with large amounts of running water for at least 15 minutes, or immerse the affected area in water. Remove and isolate contaminated clothing and skin. Clothing may be frozen to skin. Frozen clothing should be quickly and thoroughly thawed before removing. DO NOT use any burn creams. DO NOT bandage tightly.

Ingestion: Obtain medical attention immediately. Do not induce vomiting.

ALL (Serious Exposure): Summon transportation. Life support as indicated. Keep victim quiet and maintain body temperature. Treat victim for shock. Decontaminate the victim with water before transporting in the close confines of a vehicle or an ambulance. Include MSDS when transporting victim.
Appendix 1  Floor Plans and Assembly Areas

PREVAILING WINDS OCTOBER THRU JUNE-S-SW

PREVAILING WINDS JULY THRU SEPTEMBER-NE

WINDSOCK LOCATIONS
## Appendix 2 Emergency Notifications

### Table 1: Cold Storage Facility Personnel

<table>
<thead>
<tr>
<th>AC/R Personnel</th>
<th>Notification</th>
<th>Name</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emergency Coordinator</td>
<td>Dave Parmley</td>
<td>(206) 391-6765 Cell</td>
</tr>
<tr>
<td></td>
<td>Emergency Coordinator Alternate 1</td>
<td>Josh Shepherd</td>
<td>(425) 377-3799 Cell</td>
</tr>
<tr>
<td></td>
<td>Emergency Coordinator Alternate 2</td>
<td>Ryan Young</td>
<td>206-409-1510</td>
</tr>
<tr>
<td></td>
<td>Emergency Coordinator Alternate 3</td>
<td>Cody Allen</td>
<td>206-409-1510</td>
</tr>
<tr>
<td></td>
<td>Emergency Coordinator Alternate 4</td>
<td>Adam Mooney</td>
<td>206-409-1510</td>
</tr>
<tr>
<td></td>
<td>Emergency Coordinator Alternate 5</td>
<td>Mark Davis</td>
<td>206-409-1510</td>
</tr>
</tbody>
</table>

### RESOURCES (OPTIONAL – ONLY CALL IF DESIRED)

<table>
<thead>
<tr>
<th>Resources</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permacold Refrigeration</td>
<td>(425) 678-8905</td>
</tr>
<tr>
<td>NRC Environmental Services</td>
<td>(800) 337-7455</td>
</tr>
<tr>
<td>Poison Control</td>
<td>(800) 342-9293</td>
</tr>
</tbody>
</table>
Table 2: Off-site Notifications

<table>
<thead>
<tr>
<th>NOTIFICATIONS</th>
<th>CRITERIA</th>
<th>PHONE</th>
<th>NIGHT PHONE</th>
<th>OTHER</th>
<th>TIME CONT</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC/R SERVICES, LLC</td>
<td>ANY RELEASE</td>
<td>(425) 453-1150</td>
<td>(206) 391-6765 Cell</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANY SIGNIFICANT RELEASE</td>
<td>(206) 409-1510</td>
<td>(425) 377-3799 Cell</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANY SIGNIFICANT RELEASE</td>
<td>(206) 409-1510</td>
<td>(206) 852-6062 Cell</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CALLS THAT MAY NEED TO BE MADE DEPENDING ON THE RELEASE (SEE CRITERIA COLUMN)

<table>
<thead>
<tr>
<th>FIRE &amp; POLICE DEPARTMENTS</th>
<th>CALL TO REPORT ANY EMERGENCY, A RELEASE WITH OFFSITE CONSEQUENCES, OR FOR ASSISTANCE</th>
<th>911</th>
<th>Police (425) 455-6917</th>
<th>Fire (425) 452-6892</th>
<th>Notification required by EPA and the State of Washington for the circumstances listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington Department of Ecology (NW)</td>
<td>CALL TO REPORT ANY RELEASE OF AMMONIA INTO WATER OR AIR</td>
<td>(425) 649-7000</td>
<td></td>
<td></td>
<td>Northwest Regional Office, notification enforced by DOE</td>
</tr>
<tr>
<td>Washington DOSH</td>
<td>A DEATH, OR HOSPITALIZATION OF ONE OR MORE</td>
<td>(800) 423-7233</td>
<td>(800) 321-6742</td>
<td></td>
<td>Notification enforced by WA L&amp;I, report within 8 hours, do not move any equipment involved in the accident until L&amp;I arrives</td>
</tr>
<tr>
<td>KING COUNTY PUBLIC WORKS</td>
<td>CALL IF AMMONIA IS GOING INTO SEWER</td>
<td>(206) 296-8100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CITY OF BELLEVue UTILITIES EMERGENCY RESPONSE</td>
<td>CALL IF AMMONIA IS GOING INTO SEWER OR STORM DRAIN</td>
<td>(425) 452-7840</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUILDING OWNER REPRESENTATIVE JEFF KASOWSKI</td>
<td>CALL TO NOTIFY OF ANY EMERGENCY</td>
<td>(206) 224-7090</td>
<td>(206) 396-7551 Cell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUILDING OWNER REPRESENTATIVE ALTERNATE ROB MARKS</td>
<td>CALL TO NOTIFY OF ANY EMERGENCY</td>
<td>(206) 515-4750</td>
<td>(206) 963-0664 Cell</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REQUIRED CALLS FOR RELEASES OVER 100 POUNDS

Use the call-out form to record the facts of the incident before you make the calls. Make sure and write down the time you called each party, as well as the name of the person you talked to. Get a Report Number from the NRC.

<table>
<thead>
<tr>
<th>CALL TO REPORT A RELEASE OF OVER 100 LBS OF AMMONIA (Call within 15 minutes of ensuring life/safety!)</th>
<th>24 hour</th>
<th>(Notification enforced by EPA) REPORT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Response Center (NRC)</td>
<td>(800) 424-8802</td>
<td></td>
</tr>
<tr>
<td>Washington 24 hr EMD Communications Center (SERC)</td>
<td>(800) 258-5990</td>
<td>EMD Duty Officer (Notification enforced by EPA) Written follow-up report within 14 days of release</td>
</tr>
<tr>
<td>King County Department of Emergency Management (LEPC)</td>
<td>(206) 296-3830</td>
<td></td>
</tr>
</tbody>
</table>

You must talk to a live person in order for the notification to be complete. Keep attempting the contact until you reach a live person. Log each attempt.
NOTE: If the Washington Department of Ecology is notified, then a written follow up report must be provided **within 14 days** to:

Ecology Community Right-to-Know Unit  
Department of Ecology  
PO Box 47659  
Olympia, WA 98504-7659

For information on the follow up report, call WA DOE at 425-649-7000.


## Appendix 3 Ammonia MSDS

### Material Safety Data Sheet # 4001

<table>
<thead>
<tr>
<th>Last Revision 05/2009</th>
<th>Page 1 of 2</th>
</tr>
</thead>
</table>

#### SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**CHEMICAL NAME:** Ammonia

**TRADE NAMES / SYNONYMS:** Ammonia

**DISTRIBUTOR:** Airgas Specialty Products

**EMERGENCY TELEPHONE NUMBERS:**
- Transportation (CHENTREC): 1-800-424-9300
- Transport Canada (CANUTEC): 1-613-996-6666
- Environmental Health and Safety (24 hr): 1-800-228-5833
- Customer Service (Toll Free): 1-800-295-2225

#### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL FORMULA</th>
<th>% BY WEIGHT</th>
<th>CAS</th>
<th>OSHA REL/ACGIH TLV</th>
<th>IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>80.0</td>
<td>7647-14-7</td>
<td>50ppm (TWA)</td>
<td>None</td>
</tr>
<tr>
<td>Water</td>
<td>0.4</td>
<td>143-62-7</td>
<td>35ppm (STEL)</td>
<td>None</td>
</tr>
<tr>
<td>Oil</td>
<td>0.1</td>
<td>2ppm</td>
<td>300ppm</td>
<td>None</td>
</tr>
</tbody>
</table>

#### SECTION 3: HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** 1. Colorless gas or compressed liquid with a pungent, suffocating odor. 2. Liquid ammonia reacts violently with water. Vapor cloud is produced. 3. Avoid contact with liquid and vapor. 4. Stay upwind and use water spray to absorb vapor. 5. Not flammable under conditions likely to be encountered outdoors. 6. Stop discharge if possible.

**POTENTIAL HEALTH EFFECTS:**

**ROUTES OF ENTRY:** Inhalation, Skin Contact, Eye Contact, Ingestion. **TARGET ORGANS:** Eyes, skin and respiratory system.

**EYE CONTACT:** Exposure to liquid or high concentrations of vapor can cause painful, instant and possibly irreversible damage to tissue such as conjunctiva, cornea and lens. **SKIN CONTACT:** Prolonged contact with high concentrations can cause painful tissue damage, frostbite and serious chemical burns. **INHALATION:** Depending on exposure concentration and duration, effects can vary from none or only mild irritation, to obstruction of breathing from larynx, bronchial spasms, to edema and severe damage to mucous membranes of the respiratory tract with possible fatal results. Latent edema and residual reduction in pulmonary function may occur. **INGESTION:** Tissue damage, chemical burns, nausea and vomiting can occur. Ammonia is a gas under normal atmospheric conditions and ingestion is unlikely. **CARCINOGENICITY:** NTP? No. IARC? No. OSHA? No.

#### SECTION 4: FIRST AID MEASURES

**EYE CONTACT:** Flush with large amounts of water for at least 15 minutes than immediately seek medical aid.

**SKIN CONTACT:** Immediately flush with large quantities of water for at least 15 minutes while removing clothing. If clothing has frozen to skin, thaw with warm water before removal. Seek immediate medical aid.

**INHALATION:** Remove from exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen as needed. Seek immediate medical aid.

**INGESTION:** Do not induce vomiting. Have victim drink large quantities of water if conscious. Immediately seek medical aid. Never give anything by mouth to an unconscious person.

#### SECTION 5: FIRE FIGHTING MEASURES

**FLASH POINT (Method used):** Not Applicable. **FLASH FLAMMABLE LIMITS:** 15-25% in air (for labeling purposes, not DOT flammable gas). **EXTINGUISHING MEDIA:** Stop flow of gas or liquid. Ammonia will burn in the range of 16-25% in air with a constant source of ignition. **SPECIAL FIRE FIGHTING PROCEDURES:** Move containers from fire zone if possible; if not, use water to cool fire-exposed containers. Use water spray to control vapors. Do not use water directly on liquid ammonia. Personnel must be equipped with appropriate protective clothing and respiratory protection.

**NFPA HAZARD CLASSIFICATION:** Health: 3. Flammability: 3. Reactivity: 0 (least—0 through 4 highest).

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

In US, federal regulations require that a release of 100 lb. or more of ammonia must be reported immediately to the National Response Center at (800) 424-8802, the SERC and the LEPC. In California, ALL releases must be reported to CUPA, state and local agencies. Additional state and local regulations may apply. **SUGGESTED LOCAL ACTION:** Stop leak if feasible. Avoid breathing ammonia. Evacuate personnel not equipped with protective clothing and equipment. Use copious amounts of water spray or fog to absorb ammonia vapor. **DO NOT put water on liquid ammonia.** Contain run-off to prevent ammonia from entering a stream, lake, sewer, or ditch. Any release of this material, during the course of loading, transporting, unloading or temporary storage, must be reported to U.S. DOT as required by 49 CFR 171.16 and 171.16.

#### SECTION 7: HANDLING AND STORAGE

Refer to the ANSI K81.1 standard for storage and handling information. Protect containers from physical damage and temperatures exceeding 120°F. Use only approved storage systems. Zinc, copper, silver, cadmium, and their alloys must not be used in ammonia systems since they can be rapidly corroded by it. Avoid hydrostatic pressure, which can cause equipment rupture, by adhering to proper filling procedures and the use of hydrostatic pressure relief valves where appropriate.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**RESPIRATORY PROTECTION:** Respiratory protection approved by NIOSH/MSHA for ammonia must be used when exposure limits are exceeded. Whether chemical canister respirator or self-contained breathing apparatus is sufficient for effective respiratory protection depends on the type and magnitude of exposure.
Revised 06/15/2011

MSDS 4001 Revision 05/20/09

SKIN PROTECTION: Rubber gloves and rubber or other types of approved protective clothing should be used to prevent skin contact. A face shield should be used for increased protection from contact with liquid or vapor.

EYE PROTECTION: Chemical splash goggles, approved for use with ammonia, must be worn to prevent eye contact with liquid or vapor. A face shield should be used for increased protection from contact with liquid.

VENTILATION: Local positive pressure and/or exhaust ventilation should be used to reduce vapor concentrations in confined spaces. Ammonia vapor, being lighter than air, can be expected to dissipate to the upper atmosphere. Ammonia concentrations may also be reduced by the use of an appropriate absorbent or reactant material.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>-28.1°F</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>High</td>
</tr>
<tr>
<td>Melting Point</td>
<td>-107.9°F</td>
</tr>
<tr>
<td>Percent Volatile by Volume</td>
<td>100%</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>4802.9 mm Hg @ 60°F or 107.6 psia</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.62 @ 60°F (water = 1)</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>0.60 @ 32°F (Air = 1)</td>
</tr>
<tr>
<td>pH</td>
<td>Approx. 11.0 for 1 N Sol'n. in water</td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless, pungent gas</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Material generally considered stable. Heating above ambient temperature causes rapid increase of vapor pressure.

INCOMPATIBILITY (materials to avoid): Ammonia can react violently with strong acids. Under certain conditions, ammonia reacts with bromine, chlorine, fluorine or iodine to form compounds, which explode spontaneously. Reactions of ammonia with gold, silver or mercury to form explosive fulminate-like compounds has been reported.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen on heating to over 850°F. The decomposition temperature may be lowered to 575°F by contact with certain metals such as iron or nickel.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None

SECTION 11: TOXICOLOGICAL INFORMATION

Ammonia is a strong alkali and readily damages all body tissues. Ammonia is not a cumulative metabolic poison.

Carcinogenicity: Reproductive, Mutagenic, Teratogenicity Effects: No information is available and no adverse effects are anticipated. Synergistic Materials: None known.

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY: 2.0-2.5 ppm/1-4 days/ goldfish and yellow perch/LC50 60-80 ppm/3 days/crayfish/LC50 8.2 ppm/96 hr/fathead minnow/LC50

WATERFOWL TOXICITY: 120 ppm

BIOCHEMICAL OXYGEN DEMAND: Not pertinent

FOOD CHAIN CONCENTRATION POTENTIAL: None

SECTION 13: DISPOSAL CONSIDERATIONS

Recover ammonia if feasible. Otherwise, let ammonia evaporate if appropriate. Only personnel experienced in ammonia spills should add water to liquid ammonia. Dispose of diluted ammonia as a fertilizer or in an industrial process. For Hazardous Waste Regulations call (800) 424-9346, the RCRA Hotline.

SECTION 14: TRANSPORT INFORMATION

DOMESTIC SHIPMENTS: Ammonia, Anhydrous

INTERNATIONAL SHIPMENTS: Ammonia, Anhydrous

CANADIAN TDG ACT: Ammonia, Anhydrous

Proper shipping name: Ammonia, Anhydrous

Shipping Class: DOT 2.2 (nonflammable gas)

Identification Number: UN1005

Packing Group: None

SECTION 15: REGULATORY INFORMATION

NOTICE: This product is subject to the reporting requirements of SARA (1986, Section 313 of Title III) and 40 CFR Part 370. Be sure to verify and comply with state and local regulations.

CERCLA/SUPERFUND, 40 CFR 117.302: Unpermitted releases of 100 lb. or more of ammonia in any 24-hour period must be reported immediately to the NICP at 1-800-424-8802, the SERC, and the LEPC. Written follow-up is required to SERC & LEPC.

OSHA HAZARD COMMUNICATION RULE, 20 CFR 1910.1200: Ammonia is considered a hazardous chemical.

TOXIC SUBSTANCE CONTROL ACT: This material is listed in the TSCA Inventory.

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (SARA, TITLE III): Section 302 Extremely Hazardous Substance: Yes, Section 311/312 Hazardous Categories: Immediate (Acute) Health Hazards: Yes, WHMIS: One percent (1%) CALIFORNIA PROPOSITION 65: Reproductive: No Carcinogen: No

OSHA PROCESS SAFETY MANAGEMENT, 29 CFR 1910.119: This product is subject to the Process Safety Management requirements of 29 CFR 1910.119 if maintained on-site in quantities of 10,000 lb. or greater.

EPA CHEMICAL ACCIDENTAL RELEASE PREVENTION, 40 CFR 88: This product is subject to the Risk Management Plan requirements of 40 CFR Part 88 if maintained on-site in quantities of 10,000 lb. or greater.

DRINKING WATER: Maximum use dosage in potable water is 5 mg/l.

SECTION 16: OTHER INFORMATION


MSDS PREPARED BY: Aigas Specialty Products
Appendix 4  Emergency Shutdown

Critical Isolation Shuts-offs - Electrical and Ammonia

In order to recognize and understand the Critical Isolation Shut-offs for the ammonia plant it is imperative that you recognize the function of each isolation or Shut-off. Figures 1 through 16 gives you visual recognition as well as an explanation of each shut-off’s function. The High Pressure Receiver has two main isolation valves, the King Valve and the Queen Valve. These only isolate the High Pressure Receiver. There are Feed Lines from the High Pressure Receiver to each of the re-circulation tanks. These are also isolated when the King and Queen valves are shut off.

AMMONIA SYSTEM EMERGENCY SHUT-DOWN SWITCHES

Fig. 1  EMERGENCY SHUT-DOWN SWITCH

Fig. 1 illustrates the location of the Emergency Shut-down Switch. It is located just to the right of the entrance door to the Machine Room. This switch will effectively shut down the entire mechanical operation of the cold storage plant. All pumps, compressors & motors in the Machine Room will be brought to a halt. This switch is never to be activated by anyone without the express permission of the E.C. or his alternate.

Fig. 2  Emergency Shut-down Switch

Fig. 2 illustrates the location of the second Emergency Shut-down Switch. It is located just to the left of the entrance door to the Machine Room from the alley. This switch will effectively shut down the entire mechanical operation of the cold storage plant. All pumps, compressors & motors in the Machine Room
will be brought to a halt. This switch is never to be activated by anyone without the express permission of the E. C. or his alternate.

**Electrical**

Just inside the entrance door to Orca Bay Foods from outdoors and to the left of the doorway is a bank of high voltage switches. These are marked MCC-1, MCC-2 and MCC-4. (MCC stands for Motor Control Center.) These switches are located on the power panels starting from the right hand side as you address them. MCC-1 and MCC-2 are located in the first panel box and MCC-4 is located in the second panel box on the left. These electrical switches control the feed to the electrical panels for each of the compressor motors and related pump motors in the machine room. By shutting down the MCC switches power is effectively shut off to all compressor and pump motors. The main breaker panel box located to the left of MCC-4 contains the main breaker for all the lights in the plant. By shutting off this breaker all the lights in the plant will be shut off.

**MOTOR CONTROL SWITCHES**

![MOTOR CONTROL SWITCHES](image-url)
MOTOR CONTROL SWITCHES

Fig. 4  MCC-4

MAIN POWER BREAKER

Fig. 5  Main Breaker
MOTOR CONTROL SWITCHES

MCC-3 is no longer active. It once controlled the evaporator fan motors in the meat cooling room in the old Safeway Cold Storage Plant. These are now inactive and are out of service.

MAIN ELECTRICAL CONTROL CENTER

Fig. 7 illustrates the locations of the major electrical control switches which are located in the hallway just inside the door and to the left as one would enter the
Fig. 8 HVAC Circuit Breaker Locations

Fig. 8 illustrates the locations of the circuit breakers controlling facility HVAC units.
Machine Room Exhaust Fan Disconnect

A/C Unit 4 Disconnect

A/C Unit 5 Disconnect
A/C Unit 1 Disconnect

A/C Unit 2 Disconnect

A/C Unit 3 Disconnect
**Ammonia**

There are three re-circulator tanks in the machine room. Hi-temperature (+35º), Medium temperature (+20º) and the Low temperature (-30º). All the tanks have isolation valves that may be shut off to prevent the loss of ammonia in the event of a sudden and unexpected release. There are two lines coming out of the bottom of the tanks. These lead to the circulation pumps. Between the pumps and the tanks are ¼ turn valves that will prevent additional loss of ammonia in the event of a failure in the line due to damage or damage to an evaporator.

Each vessel or re-circulation tank has a feed line from the high pressure receiver that is equipped with an isolation valve. These are wheel valves. The return lines from the evaporators are also equipped with wheel valves to isolate the return lines and prevent additional loss of product.

In the event of an accident that causes a sudden release of ammonia, the appropriate re-circulator tank may be isolated to reduce the loss of ammonia and lessen the employee danger from exposure to the ammonia vapors. Also, the High Pressure Feed lines must be isolated for the appropriate re-circulation tank. These isolation valves are identified in Figures 13, 14 and 15.

**AMMONIA ISOLATION VALVES MEDIUM TEMP. (+20º) RE-CIRCULATION TANK**

Fig. 8 illustrates the locations of the ¼ turn isolation valves for the Medium Temperature (+20º) re-circulation tank. These valves are located between the bottom of the tank and the re-circulation pumps.
AMMONIA ISOLATION VALVES MEDIUM TEMP. (+20º) RE-CIRCULATION TANK

Fig. 9  Isolation Valves on Return lines from evaporators

Fig. 9 illustrates the locations of the wheel valves isolating the return lines from the Evaporators back to the Medium Temperature (+20º) re-circulation tank. These valves are located above the catwalk between the Medium Temperature tank and Hi Temperature tank.

AMMONIA ISOLATION VALVES HIGH TEMP. (+35º) RE-CIRCULATION TANK

Fig. 10  Isolation Valves on Return Lines from Evaporators

Fig. 10 illustrates the locations of the wheel valves isolating the return lines from the Evaporators back to the High Temperature (+35º) re-circulation tank. These valves are located above the catwalk between the Medium Temperature tank and the Hi Temperature tank.
Fig. 11 illustrates the locations of the ¼ turn isolation valves for the low Temperature (-30º) re-circulation tank. These valves are located between the bottom of the tank and the re-circulation pumps.

Fig. 12 illustrates the locations of the wheel valves isolating the return lines from the Evaporators back to the Low Temperature (-30º) re-circulation tank. These valves are located approximately 15 feet above the floor, as shown.
AMMONIA ISOLATION VALVE FOR THE HIGH PRESSURE FEED LINE LOW TEMP. (+25°C) RE-CIRCULATION TANK

Fig. 13: Isolation Valve on High Pressure Feed Line from High Pressure Receiver

Fig. 13 illustrates the location of the wheel valve for the isolation of the High Pressure Feed line from the High Pressure Receiver to the Medium Temperature (+25°C) Re-circulation tank. This valve may be shut off in the event of an uncontrolled release of ammonia involving the Medium Temperature Receiver.

AMMONIA ISOLATION VALVE FOR THE HIGH PRESSURE FEED LINE HIGH TEMPERATURE (+35°C) RE-CIRCULATION TANK

Fig. 14: Isolation Valve on High Pressure Feed Line from High Pressure Receiver

Fig. 14 illustrates the location of the wheel valve for the isolation of the High Pressure Feed line from the High Pressure Receiver to the High Temperature (+35°C) Re-circulation tank. This valve may be shut off in the event of an uncontrolled release of ammonia involving the Medium Temperature Receiver.
AMMONIA ISOLATION VALVE FOR THE HIGH PRESSURE FEED LINE MEDIUM TEMPERATURE (+25°) RE-CIRCULATION TANK

Fig. 15 High Pressure Feed line Isolation Valve From High Pressure Receiver

Fig. 15 illustrates the location of the wheel valve for the isolation of the High Pressure Feed line from the High Pressure Receiver to the Medium Temperature (+25°) Re-circulation tank. This valve may be shut off in the event of an uncontrolled release of ammonia involving the Medium Temperature Receiver.
HIGH PRESSURE RECEIVER

In the event of an uncontrolled release of ammonia from any high pressure feed line or high pressure return line, the King and Queen valves may be shut down to isolate the ammonia and reduce loss of product and to protect the employees and the public.

Fig. 16: Photo showing location of High Pressure Receiver as Machine Room Is entered from the East or loading dock

Fig. 17: High Pressure Receiver

Fig. 16 & 17 shows the location of the High Pressure Receiver. By following the yellow line on the floor from the entrance door, through the left Machine Room entrance door and down the stairs, you will go directly to the large red vessel marked “High Pressure Receiver”. The “King Valve” is located on the left top of the vessel and has a wheel valve for isolation. The “Queen Valve” is located on the right top and also has a wheel valve for isolation.
# Appendix 5 Notification Information Form

**MMONIA RELEASE NOTIFICATIONS -- REPORTING INFORMATION**

**DRILL:** "I am calling to report a hazardous material release. This is a drill."

**INCIDENT:** "I am calling to report a hazardous materials release."

**Your Contact Information:**
- **Name:** _________________________________
- **Phone:** _________________________________
- **Email:** _________________________________

**Plant/Incident Location:** _________________________________ (city and state)

**Latitude/Longitude:** _________________________________

**Date/Time Incident Occurred:** _________________________________

**Responsible Party:** _________________________________

**Type of Incident:** FIXED PLANT

**Facility Type:** FOOD DISTRIBUTION CENTER

**Are you calling on behalf of Responsible Party?** YES

**Nearest City:** _________________________________

**Distance:** _________________________________

**Material:** ANHYDROUS AMMONIA

** CHRIS Code:** AMA

**Amount Released:** _________________________________ Pounds

**Address:** _________________________________

**Cause of Incident:**
- Equipment failure
- Operator error
- Earthquake
- Unknown
- Other: _________________________________________________

**Incident Description:** The Incident Commander should give you this information when you are requested to make the phone call. Ask if you can the following questions:

- Has leak been stopped Y / N
- Has ammonia entered the water Y / N
- What equipment is the source of the leak? (Freezer/piping/compressor/valve/pump/tank/cold storage)

**Description:** ______________________________________________________________________________________

**Action Taken:** Secured / Not Secured

**Duration of Release:** ________ minutes

**Medium Affected:** Air / Land / Water

**WEATHER CONDITIONS**

**Foggy / overcast / rainy / sleeting / snowy / sunny / clear / partly cloudy / other**

**Wind Speed:** ________ MPH/KNOTS  Direction: ___________  Air Temp: ___________ F

**SPILL ENTERED WATER**

**Amount in Water:** ________ Pounds / UNKNOWN  Water Temp: ________ F / UNKNOWN

**Body of Water:** _________________________________  Sewer: _________________  Storm Drain: _________________

**IMPACTS**

**Fire**
- Y / N  Community Impacted Y / N

**Injury**
- Y / N  How many: _________________

**Fatality**
- Y / N  How many: _________________

**Evacuation**
- Y / N  How many: _________________

**Damage**
- Y / N  How much $: _________________

**Roads Closed**
- Y / N  Which ones: _________________

**Air Corridors Closed**
- Y / N  _________________

**Waterways Closed**
- Y / N  Which ones: _________________

**Media Interest**
- Zero / low / medium / high

**INJURIES**

**Medical Information:** First aid given / taken to hospital / expected to stay the night / medivac / death

**Injury Cause:** Exposed to ammonia vapor / exposed to liquid ammonia / injured via slip, trip or fall

**First aid given:** CPR / flushing of the skin with water / moving to fresh air / other __________________

**Was injured person conscious?** Y / N
Ammonia Safety

Everyone who works here must understand:

1. Ammonia is used on site as a refrigerant.
2. What ammonia smells like.
3. What equipment contains the ammonia: piping, ammonia machine rooms and freezers.
4. Never run into ammonia equipment with equipment such as forklifts, scissor lifts, etc.
5. Report any leaks to your supervisor immediately.
6. Ammonia can cause breathing discomfort. Lung damage is even possible at high concentrations; however persons will not willingly stay in concentrations that are harmful due to ammonia’s pungent smell.
7. If the smell is uncomfortable, leave the area.
8. Leave the area if your supervisor tells you to.
9. Don’t ever touch liquid ammonia - it is cold and corrosive; it can cause frostbite and skin burns. If you get liquid ammonia in your eyes it can cause blindness.
10. Never walk through a visible cloud of ammonia; it can be -100°F and can burn the skin when it is that concentrated.
11. The first aid procedure for ammonia exposure is moving to fresh air. If it has contacted your skin or eyes, flush with water for 15-30 minutes.
12. The ammonia machine rooms are off limits to all non-refrigeration and non-management personnel.
13. Contact AC/R for more information.