

	Ammonia Leak Emergency Response Procedure	Revision No: 4
	Pilgrim's Food Masters-Shillelagh	Issue No: 1
Issued by: K. Moody EHS Lead		Issue Date: 10/11/2021
Approved by: L. Whelan QShe Manager	Environmental Operational Procedures	Supersedes Date: 16/04/2021

1.0 Purpose/ Scope:

This procedure documents how Pilgrim's Food Masters-Shillelagh deals with an ammonia leak in order to minimize any potential effects on the environment and the protection of its employees.

2.0 Responsibility:

The EHS Group Lead/Officer must ensure that all staff are aware of the following procedure and that the relevant authorities are informed after such an incident occurs.

3.0 Related Documentation:

An Incident Report Sheet will need to be completed.

Environmental Emergency Contact List

Incident Notification Form, EPA Guidance to Licensees/COA holders on the Notification, Management and Communication of Environmental Incidents.

Reporting and Recording of Incident Procedure

4.0 Background to NH₃:

Ammonia is used as a coolant for the refrigeration unit.

It is stored in liquid form at 20° C, 7 bar pressure.

From the storage unit the liquid ammonia is pumped through an evaporator unit where it is transformed into a gas, leaving the unit at - 15° C, 1 bar pressure.

A fan, situated behind the evaporating unit, distributes the cold air arising from the condensed ammonia into the chilling cabinet, which it is cooled, to - 10° C.

The gas upon leaving the evaporator enters a compressor in which the temperature of gas is raised to 80° C, 7 bar pressure.

The gas then enters a second condensing unit where it is cooled to a liquid at 20° C, 7 bar pressure, by water cooler.

The cooling water is collected in a water tank situated under the condenser and reused.

The liquid ammonia is then returned to the storage unit and the cycle continues.

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5.0 Emergency Procedure:

1. This procedure is to be followed if an ammonia leak occurs on site, in order to minimize the effects of such an incident on the environment.
2. Contact the EHS Group Lead/Officer and ADI Services Engineering Manager immediately.
3. Control valves are located before and after at each stage of the cooling system. In case of ammonia leak the section where the leak is located needs to be isolated immediately.
4. Those who are dealing with the emergency are to be fully trained and supplied with gas masks and breathing apparatus.
5. Gas monitors (available at security) are to be used to monitor ammonia levels
NOTE: The Occupational Exposure limit is 20PPM. The short-term exposure limit is 50PPM. If the NH3 level is above 20PPM, it is not safe to work in.
6. Any personnel in close proximity to the leak are to be evacuated in line with the emergency evacuation procedure.
7. The leak is to be isolated.
8. The emergency services are to be contacted on 999, if necessary.
9. If the ammonia has escaped in gaseous form, the gas can be hosed down so that it settles, and the water collected.
10. All drains will be protected so that contaminated water does not enter the treatment plant or surface water drainage system.
11. Collected water will be treated as necessary prior to disposal.

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12. The EHS Group Lead/Officer will then activate the Emergency Response Procedure & follow the Reporting and Recording of Incident Procedure. The EHS Group Lead must contact the EPA.

13. If any contaminated water does enter the river, then the Wicklow County Council and the Eastern Regional Fisheries Board will be notified immediately.

Change control details		
Date:	Details:	Approved by:
17/01/2020	Revision 2. Updated with new contact details	M. Ryan
16/04/2021	Revision 3. Updated with new header format. No other changes have been made.	M. Ryan
10/11/2021	Rev 4: Update to new Pilgrim's template	K Moody