EP005 Accident Prevention and Management Plan

An environmental risk assessment EP008 is in place, which has 3 components:

1. Identifies the hazards posed by the Activity.
2. Provides assessment of the risks of accidents and their possible consequences.
3. Outlines measures to mitigate the risks

This risk assessment considers possible accidents and their consequences for the low impact installation. The warehouse is a part of the footprint for the installation and so is included in this accident prevention and management plan.

Possible sources of environmental impact considered included fire, spillages, release of dust, odour, flooding of site, hazards from the installation and arson/vandalism.

Prevention

The first step in an accident management plan is prevention.

This can be achieved by identifying the risks of all the substances, storing materials appropriately with segregation of incompatible materials.

There is an inventory of substances with environmental impact which may reside within the installation footprint. Some of these may not be part of the Sofnocat process but are used in the manufacture of other products in the Molecular Products portfolio.

Substances are specifically identified by CLP label as hazardous to the environment or aquatic life are identified in the document WI- 339 Appropriate Storage of chemicals. These substances shall not be allowed to enter the water courses.

Substances used in the Sofnocat process that are incompatible with other chemicals (as identified on Safety Data Sheet) found on the MPL site are also listed in the above document.

Incompatible materials are stored separately from one another, to avoid the risk of them coming into contact.

Liquids are stored in a bunded area, any stored inside metal cabinets will also have a tray/bund of sufficient capacity to contain contents of a bottle, IBCs are stored on a bund.

Oxidising substances are stored in a separate dedicated store, within the warehouse which is accessed by an electrically operated metal shutter door. This provides segregation between the oxidising store and the rest of the warehouse facility.

If a new substance is brought on site, then it is assessed for incompatibilities with any other substances by a COSHH assessor, so that appropriate precautions are taken, and appropriate storage location can be designated.

An inventory of all the substances stored on site is available on the company's ERP system and also compiled on a separate spreadsheet.

Goods -in are received in packaging and stored either in a vertical carousel system or on storage racking (unless they have been identified as falling into a special category such as oxidising, flammable or corrosive) which can be accessed by fork-lift or pallet truck. Most of the racking is protected by impact protection devices. Racking is formally inspected at regular intervals.

Smoking is prohibited and there are relatively few sources of ignition.

Empty Cardboard boxes are removed from the Warehouse on a regular basis, to prevent the build-up of combustible materials.

Flammable substances are stored in metal, lockable cabinets identified by the CLP flammable symbol. These cabinets have a tray in the bottom to ensure that in the case of a leak, the liquid is contained.

Acids are stored in vented lockable metal cabinets, to keep them separate from bases. Mixing of acid and base can cause exothermic reactions, which are undesirable in a storage location. These substances can also corrode containers, resulting in escape of material into the environment.

Gas cylinders are stored in gas cages which are located externally. This is in accordance with best practice and reduces the damage in the event of an explosion as well as preventing the torpedo effect if a regulator becomes severed.

The access to the Sofnocat packaging and storage area is restricted by card key access, to reduce the risk of vandalism or theft.

Minimizing impact of accidents

In the Sofnocat process, the process is carried out in an interior room provided with a made floor so any spilled material can be confined to this area. Spills will be managed by HS-032 Spill Management Procedure for Sofnocat 423 available on site.

Spill kits are available on site in various locations, and operations staff have received training in their usage.

For fires, there are fire extinguishers and fire blankets located around the site. The extinguishers (eg Water, Foam, CO2, powder) will be compatible with the type of fire that is most likely to occur in their vicinity and will be identified by the SDS for that substance. Fire extinguishers are currently serviced on contract by M&G Fire Protection Ltd. Of Witham, Essex.

Fire alarms are tested every Friday and fire evacuation drills are undertaken on a 6-monthly basis.

Fire prevention and Emergency Preparedness details are available on site in the procedure HS-031.

An DSEAR ATEX assessment of the new O2/GF/Sofnocat facility will need to be completed.

There was a fire in the O2 manufacturing facility (which is adjacent to the Sofnocat manufacturing suite) resulted in a fire in September 2019, which rendered the facility inoperable. The following steps are in place to prevent a recurrence:

- Alarm system in place which will cut power to ovens and summon the emergency services.

- Fire suppression system which will spray water into the ovens (from where previous fire originated) and surrounding area.
- Enclosures which will be deployed around the ovens, giving a minimum of 2 hr containment of fire. This will ensure that by the time the emergency services arrive, they will only be tackling a localised incident, rather than one which has spread into adjacent processing areas.
- Fire Water run-off is collected into sluices, which can be pumped into IBC for disposal. Reference: EH70 Control of fire water run-off to prevent environmental damage

Emergency situations

A tactical fire plan has been developed with the Essex Fire Services. This includes:

- List of key personnel and contact details
- Number of personnel in each area at what time
- Site and drainage plan, which includes details of the interceptors
- Location of gas cylinders
- Details of all materials held in the oxidising store
- List of all materials for which water is not a suitable extinguishing media
- Location of switches for water/electricity/gas
- Firefighting facilities

This emergency plan will be available for the emergency services in the weatherproof GERDA Box on site.

HS-022 “Fire & Emergency Procedures”, HS-023 “Primary Plant Fire & Emergency Procedures” and HS-024 Site Emergency & Utilities information are available for consultation on site.

In the case of an environmental emergency eg a major spill, the Environment Agency must be informed as soon as possible.

Staff will evacuate to a designated safe location during the emergency.

The crisis management team will co-ordinate Molecular Products response during and after any emergency; their roles and responsibilities are described in the Business Community Plan SOP-082.

Due to the size of the Sofnocat process and output, a major incident involving the product is considered unlikely because the batch size is small. In addition, the overall inventory of raw material, wastes and finished product held on site at any one time is also relatively small.

Any accidents will be reported following the Accident Reporting procedure SOP-073, with an Incident Investigation form QF 281 being completed. Hazards and near-misses are reported on hazard form QF 136. All these forms are readily available to staff on site at specific locations.

Location of Molecular Products site in relation to sensitive environmental receptors

The Site is not on or in the vicinity of a European Site, SSSI, National Nature Reserve, Local Nature Reserve, Ancient Woodland, or a National Park.

The closest site of special scientific interest is Hundson Mead SSSI which lies 800 m NNE of the site.

There are no other SSSI known within 2 km of the site.

The nearest local Nature Reserves are

- Hawkenbury Meadow LNR which lies 1800 m SE of the site
- Harlow Marsh which lies 2 km ENE of the Site

The River Stort (Navigation) lies approximately 800 m NNE of the site.