

## APPENDIX III: EMERGENCY EQUIPMENT

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# 1 FIRE DETECTION AND ALARM SYSTEM

The Malta-North facility is equipped with a Fire Detection and Alarm System covering all areas of the facility. The facility has four (4) separate fire alarm systems as follows:

- A fire detection and alarm system covering the MN Admin Building (including offices, showers, workshop, stores and canteen).
- A fire detection and alarm system covering the MN Mechanical and Biological Treatment Plant (including Reception Hall, Dry MT, Wet MT, Control Room, electrical rooms, Fire Pump room, and Weighbridge).
- A fire detection and alarm system covering the AD Admin Building (including laboratory, offices, kitchenette, showers, and stores).
- A fire detection and alarm system covering the AD plant (including Dewatering building, Manure Shed, Compost Shed, chemical store, and CHPs).

The fire alarm systems are not interlinked with each other, meaning that an alarm in one of the systems will not trigger an alarm in the others.

## 1.1 Location of Fire Alarm Panels (FAPs)

The location of the FAPs located at the MN facility is as follows:

Area	Main Panel	Repeater Panel
MN Admin Building	Reception	N/A
MN Mechanical and Biological Treatment Plant	MBT Control Room	Weighbridge
AD Admin Building	Near entrance	N/A
AD Plant	AD Control Room	AD Gate House

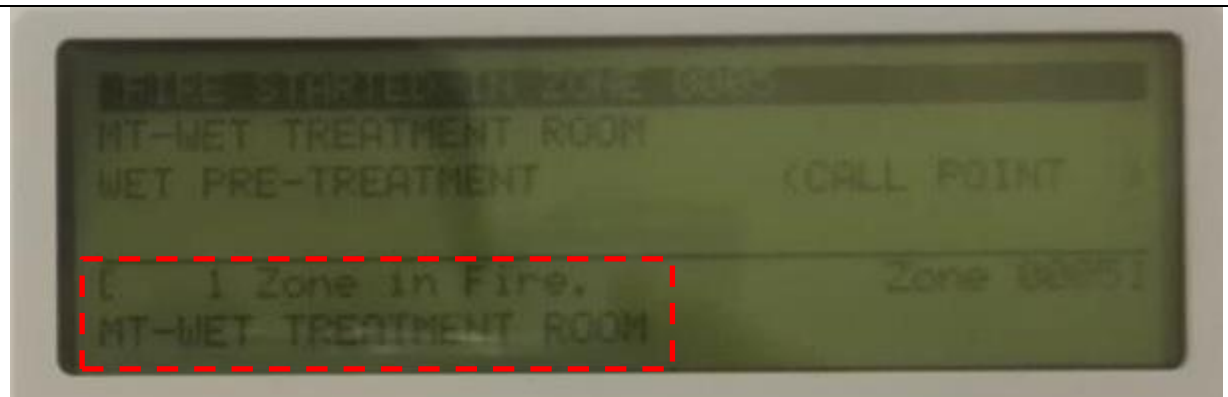
## 1.2 Alarm Activation

All areas within the same system shall be considered as one evacuation zone, meaning that if a fire alarm is triggered in one zone, the whole area will be evacuated.

The following sequence of events are expected to be followed when a detector goes on fire:

- A buzzer on at the fire alarm panel and repeater panel
- If the preset timer of 60s is not acknowledged on either panel the sounders in the area shall trigger on evacuation mode.
- If the preset timer of 60s is acknowledged another 60s timer commences, by which time the early response team shall decide whether to silence the sounders. If this is not sufficient, a third timer of 180s can be triggered.
- If the 60s and/or the 180s timer is not acknowledged the sounders in the area shall trigger to evacuation mode.
- If during the 60s and/or 180s timer a second device detects a fire in the same fire compartment the sounders in the area shall trigger to evacuation mode.
- Activation of a manual break glass unit shall immediately trigger the sounders to evacuation mode

### 1.3 Operation of FAP



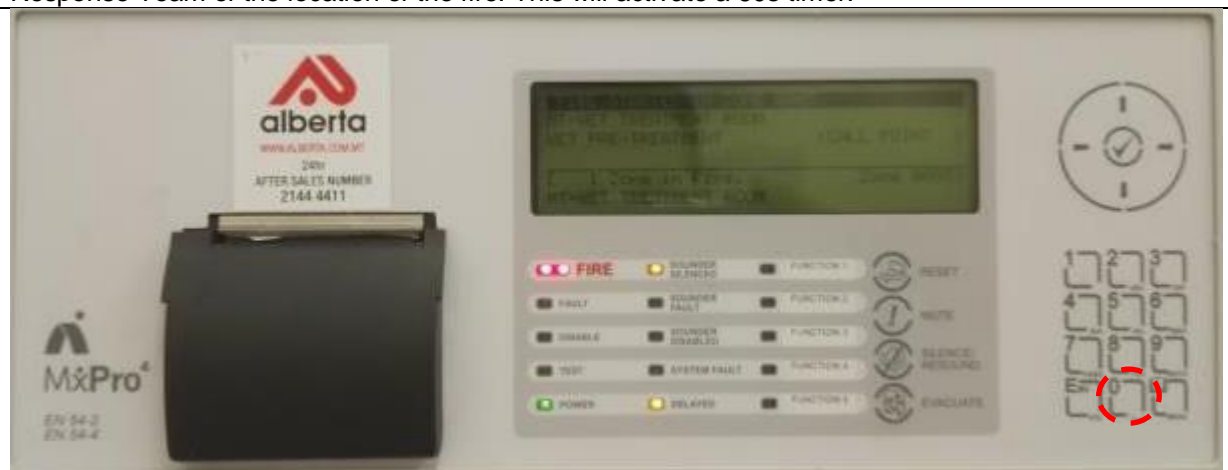
#### STEP 1:

If a detector goes on fire, a buzzer sounds at the FAP. The FAP will indicate the location of the fire.



#### STEP 2:

Scada Operator shall acknowledge the fire by pressing "0" button and inform the Emergency Response Team of the location of the fire. This will activate a 60s timer.



#### STEP 3:

If 60s are not sufficient, Scada Operator can activate a second timer of 180s by pressing "0" button.



**STEP 4:**

In case of a false alarm, Scada Operator shall reset the panel by pressing the “Reset” button.

If the fire alarm continues ringing, please send an e-mail to [hs.ws@wasteservmalta.com](mailto:hs.ws@wasteservmalta.com). **DO NOT** mute or disable the sounder or any other part of the system.



**STEP 5:**

In case of a real fire and to order an evacuation, Scada Operator shall press the “Evacuate” button.

## 2 FIRE EXTINGUISHERS

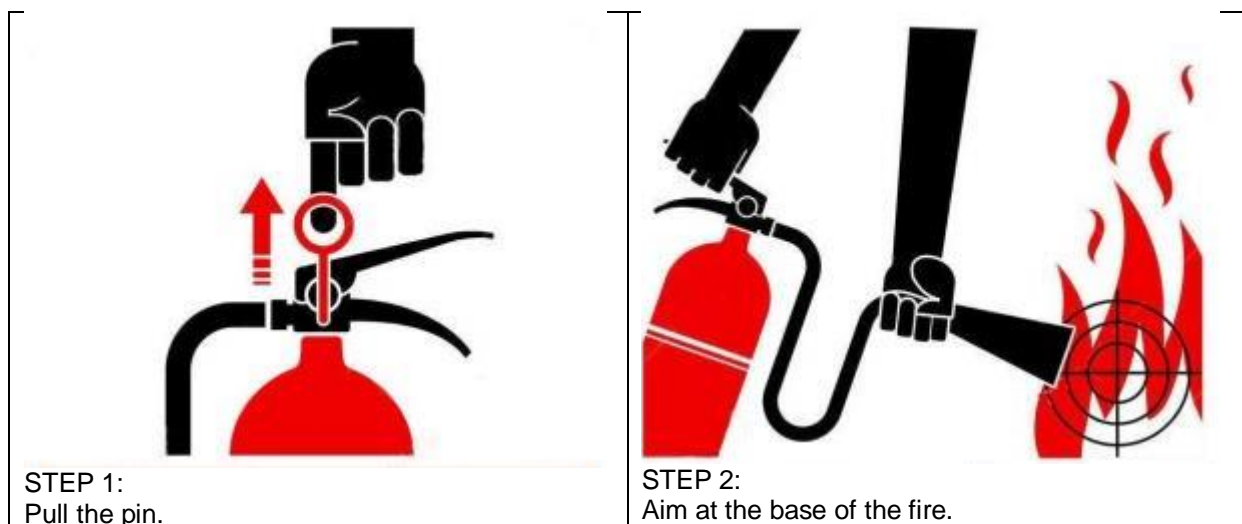
The Malta-North facility is equipped with portable fire extinguishers covering all areas of the facility. Employees shall not operate fire extinguishers unless trained to do so.

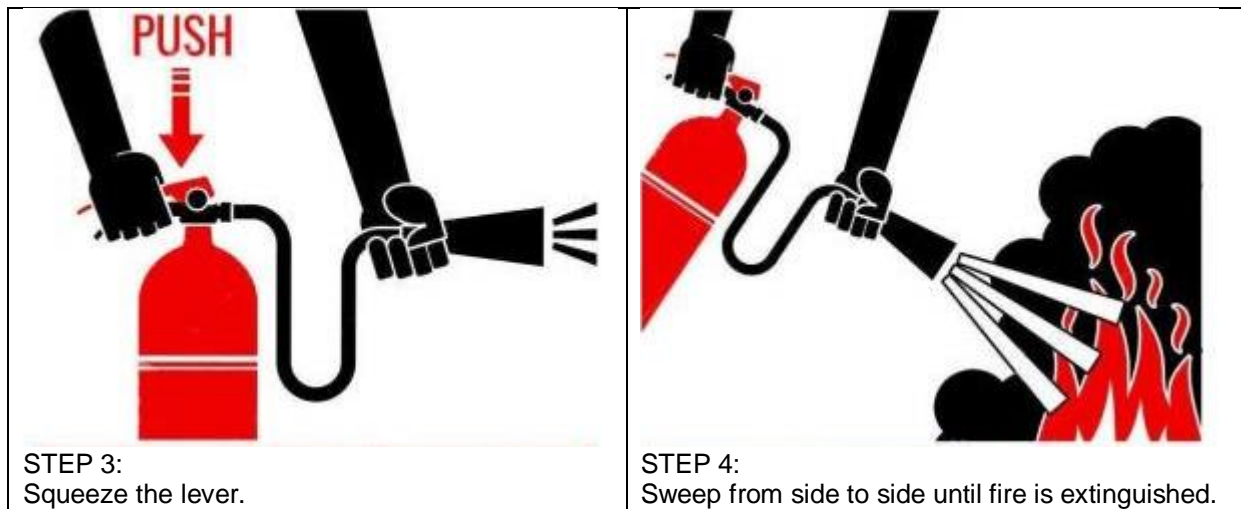
### 2.1 Classes of Fire

Below is a diagram showing which type of fire extinguisher should be used depending on the class of fire:

 <b>Know your fire extinguishers</b>					
	WATER	FOAM SPRAY	CO2	ABC POWDER	WET CHEMICAL
 <b>A</b> Wood, paper and textiles	✓	✓	✗	✓	✓
 <b>B</b> Flammable liquids.	✗	✓	✓	✓	✗
 <b>C</b> Gaseous fires.	✗	✗	✗	✓	✗
 <b>D</b> Cooking oils and deep fat fires.	✗	✗	✗	✗	✓
 <b>E</b> Live electrical equipment.	✗	✗	✓	✓	✗

### 2.2 Operation of Fire Extinguishers





**NOTE:**

Make sure to report used fire extinguishers to the Supervisor or Head of Shift.



### 3 FIREMAN'S SWITCH

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A fireman's switch is located near the transformer room. The scope of the fireman's switch is to cut off the electrical supply to the plant and the emergency generator will kick instead.

The following systems are powered by the emergency generator:

- Equipment that long term unavailability may cause damage to plant (such as biogas blowers, air compressor, agitators, drainage pumps, etc);
- All equipment in control room;
- Communication infrastructure;
- Fire safety systems;
- Administrative building lighting and sockets;
- Main gates and weighbridge;
- Roller Shutters of the reception hall;
- MT shed lighting.

**NOTE:**

The fireman's switch **MUST** be switched off when fire water will be used to extinguish a fire. It should only be operated by the Scada Operator under instructions given by the Head of Shift.

#### 3.1 Operation of Fireman's Switch



STEP 1:  
Break the break glass unit to retrieve the key.



STEP 2:  
Use the ladder to access the fireman's switch.





**STEP 3:**  
Press the pin located on the side of the lever and toggle the level upwards to switch off power to the plant.

**NOTE:**

The fireman's switch can only be turned back on by a member of the electrician's team.

## 4 FIREFIGHTING SYSTEM

The fire pump room is located opposite the bio-filter area and houses an electrical main pump, a diesel pump, and a jockey pump supplying water to the system at 10-bar pressure. Five branches are connected to the fire pumps as follows:

- Fire hydrants located around the plant;
- MSW fire monitors in the Reception Hall;
- BW fire monitors in the Reception Hall;
- Reception Hall drenchers;
- RDF drenchers.

### 4.1 Fire Water Reservoir

The fire water reservoir supplying water to the firefighting system has a capacity of 5,000m<sup>3</sup>.

### 4.2 Shutting down the Fire Pumps

After operating any parts of the firefighting system, the Head of Shift **MUST** immediately switch off the fire pumps. Failing to do so might cause extensive damage the fire pumps.

Depending on which pump is running, the Head of Shift needs to follow the procedure below:

#### Main Electrical Pump



#### STEP 1:

Long press the "Stop" button until pump stops.

## Jockey Pump



STEP 1:  
Press the "□" button until pump stops.



STEP 2:  
Press the "AUT" button to return jockey pump on automatic mode.

## Diesel Pump



### STEP 1:

Long press the "Stop" button until pump stops.



### NOTE:

The Diesel Pump can also be switched off by long press the "Diesel Engine Emergency Shut Off" button located outside the fire pump room.

## 5 FIRE HYDRANTS

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A total of eight (8) fire hydrants are located around the plant. A fire cabinet is positioned next to each fire hydrant and is equipped with a 30-metre fire hose, firefighting nozzle, and a fire key.



*Fire hydrant with fire cabinet nearby*



## 5.1 Operation of Fire Hydrant



STEP 1:  
Remove the outlet cap of the fire hydrant.



STEP 2:  
Take out the fire hose, connect the coupling to the fire hydrant and roll out the fire hose.





STEP 3:  
Attach the firefighting nozzle to the fire hose.



STEP 4:  
Unscrew the nut at the top of the fire hydrant using the fire key.



**STEP 5:**

When instructed to do so by the person/s operating the fire hose, open the valve slowly so that water is supplied through the hose.



**STEP 6:**

Spray water to the base of the fire to extinguish it.

**NOTE:**

The fireman's switch **MUST** be switched off when fire water will be used to extinguish a fire. It should only be operated by the Scada Operator under instructions given by the Head of Shift.

## 5.2 Shutting down the Fire Hydrant



### STEP 1:

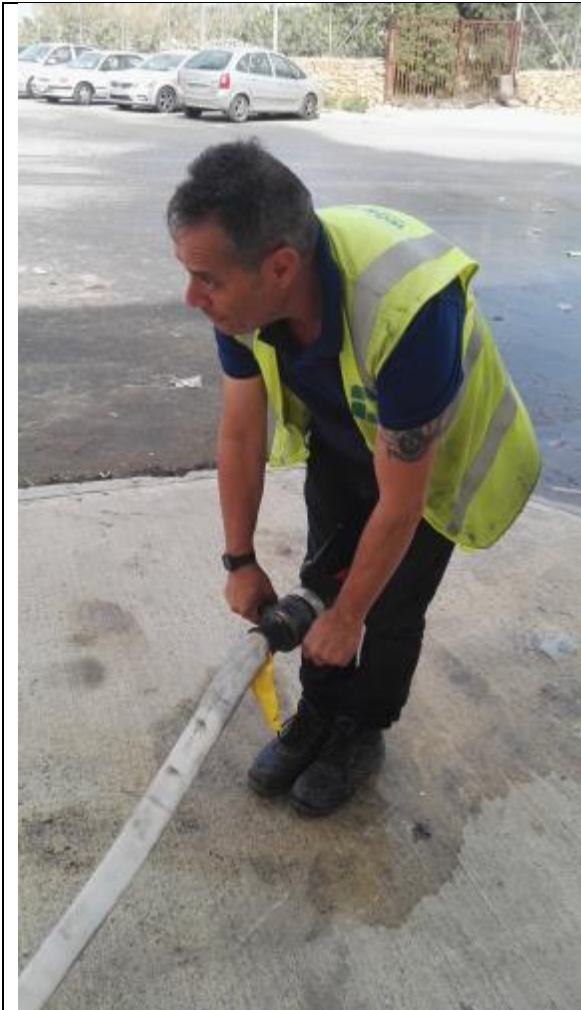
When instructed to do so by the person/s operating the fire hose, close the valve slowly so that the supply of water is stopped.



### STEP 2:

Tighten the nut at the top of the fire hydrant using the fire key.





**STEP 3:**

Place the firefighting nozzle pointing downwards between your feet, and pull the pins outwards to release the firefighting nozzle from the fire hose.



**STEP 4:**

Pull the pin upwards to release the fire hose from the fire hydrant.



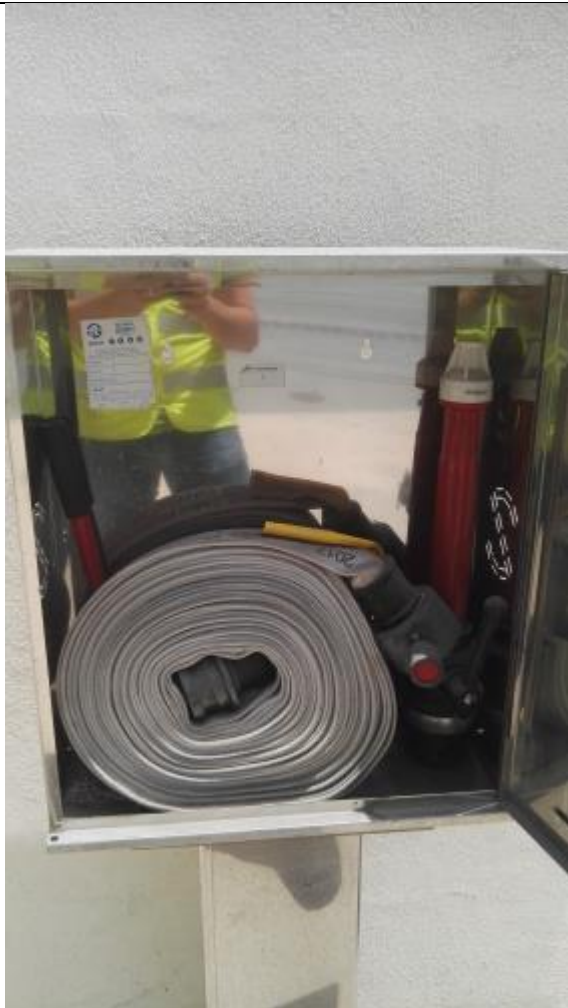
STEP 5:  
Apply the outlet cap to the fire hydrant.



STEP 6:  
Drain all the water from the fire hose.



**STEP 7:**  
Neatly roll the fire hose such that the coupling connector to the fire hydrant is at the outer part of the roll.



**STEP 8:**  
Put the fire hose, firefighting nozzle, and fire key back inside the designated fire cabinet.



**NOTE:**

After using the fire hydrants the Head of Shift **MUST** immediately switch off the fire pumps as instructed in Section 4.2 of this document. Failing to do so might cause extensive damage the fire pumps.

## 6 FIRE MONITORS

Two (2) lines having a total of three (3) fire monitors each are installed within the Reception Hall. The lines are named:

- MSW Fire Monitors
- BW Fire Monitors

The fire monitors shall only be operated by the Head of Shift and after approval given by the MN Facility Manager, or by a member of the top management at Wasteserv in the following sequence.

Name	Job Title	Contact Number
Derick Vella	Facility Manager	7926 4340
Nathan Gatt	Plant Engineer	9928 4410
Karl Mizzi	Plant Engineer	7993 5987
Andrea Brincat	Chief Operation s Officer	7931 2236
Tonio Montebello	Chief Executive Officer	9988 4210
Stefan Salomone	Senior Manager – Health & Safety	7981 0712

### 6.1 Operation of the Fire Monitors

The fire monitors can be operated from the fire suppression room located outside the entrance to the Dry MT from the hazardous cell's side. The fire suppression room is kept locked at all times but a key inside an emergency break glass unit is affixed near the door.



**STEP 1:**

Break the break glass unit to retrieve the key and open the door of the fire suppression room.

**MSW Monitors**



**BW Monitors**



**STEP 2:**  
Locate the fire monitors which need to be operated.



STEP 3:  
Open the door of the box located on the top right hand corner and pull lever to operate the system.



## 6.2 Shutting down the Fire Monitors



### STEP 1:

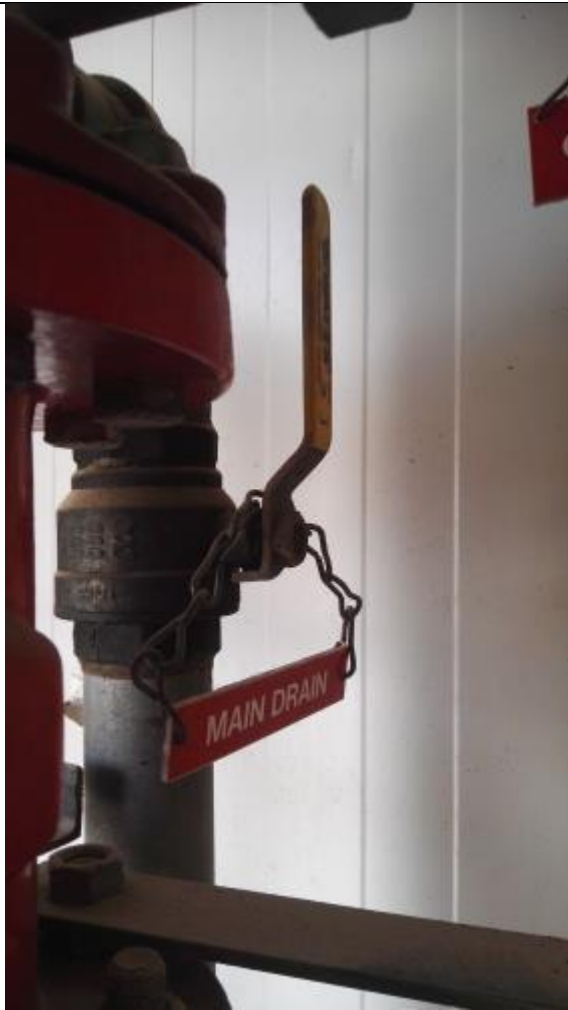
Put the lever located in the box on the top right hand corner in the upwards position and close the door of the box.





STEP 2:  
Close the hand wheel valve to stop the supply of water to the system.





STEP 3:  
Open the ball valve labelled "main drain" and let the water drain from the system.



STEP 4:  
Once water has stopped dripping from the drains, close the ball valve labelled "main drain".



STEP 5:  
Re-open the hand wheel valve to put the system back into its original position.



**STEP 6:**

Ensure that the system is under pressure via the two gauges located on the top right hand corner.

**NOTE:**

After using the fire monitors the Head of Shift **MUST** immediately switch off the fire pumps as instructed in Section 4.2 of this document. Failing to do so might cause extensive damage the fire pumps.



## 7 FIRE DRENCHERS

Two (2) lines of fire drenchers are installed within the plant in the following locations:

- Reception Hall Drenchers
- RDF Drenchers

Similar to the fire monitors, the fire drenchers shall only be operated by the Head of Shift and after approval given by the MN Facility Manager, or by a member of the top management at Wasteserv in the following sequence.

Name	Job Title	Contact Number
Derick Vella	Facility Manager	7926 4340
Nathan Gatt	Plant Engineer	9928 4410
Karl Mizzi	Plant Engineer	7993 5987
Andrea Brincat	Chief Operation s Officer	7931 2236
Tonio Montebello	Chief Executive Officer	9988 4210
Stefan Salomone	Senior Manager – Health & Safety	7981 0712

### 7.1 Operation of the Fire Drenchers

The fire drenchers can be operated from the fire suppression room located outside the entrance to the Dry MT from the hazardous cell's side. The fire suppression room is kept locked at all times but a key inside an emergency break glass unit is affixed near the door.



STEP 1:

Break the break glass unit to retrieve the key and open the door of the fire suppression room.

**Reception Hall Drenchers**



**RDF Drenchers**



**STEP 2:**  
Locate the fire drenchers which need to be operated.



STEP 3:

Open the door of the box located on the top right hand corner and pull lever to operate the system.

### Reception Hall Drenchers



**RDF Drenchers**





## 7.2 Shutting down the Fire Drenchers

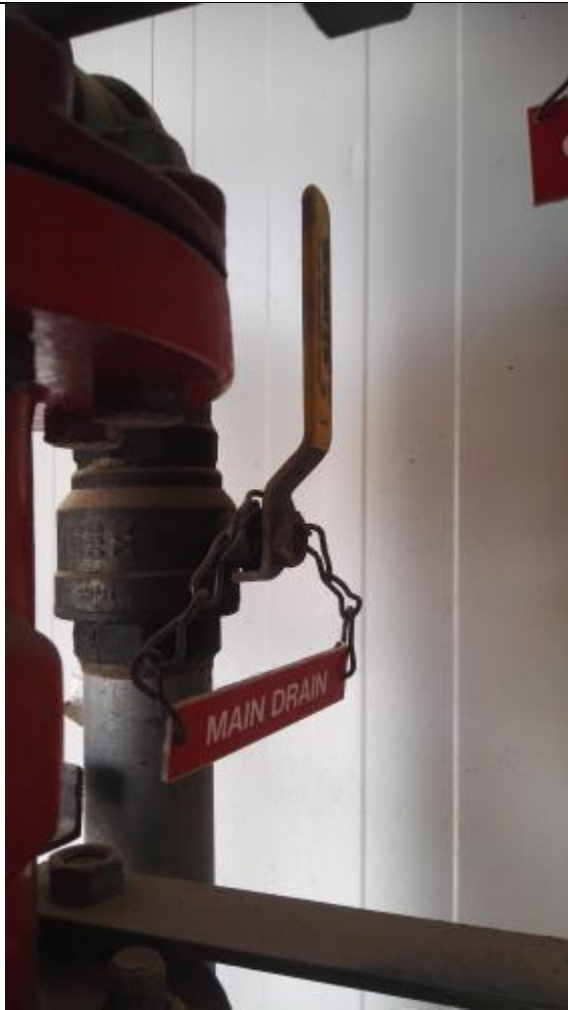


### STEP 1:

Put the lever located in the box on the top right hand corner in the upwards position and close the door of the box.



STEP 2:  
Close the hand wheel valve to stop the supply of water to the system.



STEP 3:  
Open the ball valve labelled "main drain" and let the water drain from the system.



STEP 4:  
Once water has stopped dripping from the drains, close the ball valve labelled "main drain".



STEP 5:  
Re-open the hand wheel valve to put the system back into its original position.





**STEP 6:**

Ensure that the system is under pressure via the two gauges located on the top right hand corner.

**NOTE:**

After using the fire drenchers the Head of Shift **MUST** immediately switch off the fire pumps as instructed in Section 4.2 of this document. Failing to do so might cause extensive damage the fire pumps.

## 8 SMOKE VENTS

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The Reception Hall is equipped with smoke vents which help ventilate the area from the accumulation of smoke.

**NOTE:**

The smoke vents can only be turned on by a member of the Civil Protection Department.

### 8.1 Operation of the Fire Drenchers

The smoke vents can be operated from the fire suppression room located outside the entrance to the Dry MT from the hazardous cell's side. The fire suppression room is kept locked at all times but a key inside an emergency break glass unit is affixed near the door.



**STEP 1:**

Break the break glass unit to retrieve the key and open the door of the fire suppression room.



STEP 2:  
Press the button to open the smoke vents.



*Smoke vents open.*



**STEP 3:**

The smoke vents can also be opened by pressing the red emergency button of the panel located just inside the entrance to the Dry MT shed from the hazardous cell's side. It can also be opened and closed by toggling the switch "Group 1 – Closed/Open" located on the panel.



*Smoke vents closed.*

## 9 BREECHING INLET

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The breeching inlet of the Mechanical and Biological Treatment Plant to the firefighting system is located next to the fire pump room. The Civil Protection Department may opt to supply water to the firefighting system using the breeching inlet.



Another breeching inlet is located at the AD plant behind the Compost Shed. This is connected to a fire hydrant positioned opposite the gas bubble.



## 10 SPILL KITS

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Nine (9) spill kits are located around the MN facility. These are strategically located in close proximity to locations where chemicals are stored.

Each spill kit has a capacity of collecting 300L of liquid spills and should contain the following:

- 200 (two hundred) Maintenance pads
- 10 (ten) Maintenance socks
- (five) Maintenance socks
- (two) Maintenance booms
- (six) Absorbent cushions
- 1 (one) container of plugging compound
- 1 (one) pair of Nitrile gloves
- 1 (one) pair of goggles
- 20 (twenty) disposal bags and ties
- 1 (one) Roll Barrier Tape



### 10.1 Location of Spill Kits

Spill kits are kept at the following locations:

- C001 – Outside workshop
- C002 – Dry MT area (near smoke vents control panel)
- C003 – Dry MT area (near stairs leading to primary sorting room)
- C004 – Reception hall (near shredder)
- C005 – Wet MT area (opposite service door)
- C006 – Dewatering building (ground floor)
- C007 – Digester pit (near biogas compressor room)
- C008 – Gas bubble area (near emergency shower)
- C009 – Near CHPs