



WasteServ Malta Ltd

**EMERGENCY RESPONSE
AND
FIRE SAFETY POLICY
DOCUMENT.**

Description: Evacuation Policy
Status: Annexed to Collective Agreement and Manual of Safety,
Security and Emergency response
Ref: CA POL 004 2
Dated Issued:
Date modified: 20.07.2011

Policy Document

1. Policy

- 1.1 To ensure that evacuations are carried out safely and in a timely manner.

2. Scope

- 2.1 The policy covers all employees, visitors and contractors within the Wasteserv, Sant Antnin.

3. Responsibility

- 3.1 The C.E.O. shall be responsible for the contents of this documented policy.
3.2 The H&S coordinator shall be responsible for on going management of the policy.
3.3 All employees shall be responsible to follow and co-operate with evacuation instructions given.

4. Action and Methods

- 4.1 Persons shall be appointed and trained where necessary to carry out the duties of:-

- Crisis Management Team
- Evacuation Leaders
- Fire Wardens
- First Aiders

- 4.2 In buildings where an alarm is installed, on sounding of the alarm the building is to be evacuated immediately and people shall proceed directly to the designated Assembly Points.

In buildings where no alarm is installed, on discovering any emergency, the person making the discovery must draw the attention of any people in the area verbally who in turn will raise the alarm to others.

In all cases people may try to control the emergency if they are capable and if it is safe to do so. If the situation is out of control they will proceed to the Assembly point as well.

- 4.3 Evacuation Leaders shall oversee the above process, during evacuations
- 4.4 Fire Wardens shall make sure that ongoing preparedness is kept. Fire extinguishers maintained detectors tested, etc...
- 4.5 **Note:** Evacuation Leaders and Fire Wardens could be the same person
- 4.6 First Aiders assist accordingly.

The Crisis Management Team constitutes and assumes overall Command and Control throughout the process.

- 4.7 The Crisis Management Team is headed by the CEO and consists of the following:-
 - o CEO
 - o COO
 - o H & S Coordinator
 - o H&S representative
 - o CEO's secretary
- 4.9 Active Prevention is attempted through mandatory basic fire awareness training for all company personnel and training for Evacuation Leaders, Fire Wardens, Checkers and First Aiders.
- 4.8 All training and Evacuation drills are recorded by the designated H & S Coordinator.
- 4.9 The Emergency Response and Fire Safety Plan is subject to a three (3) year cycle.

5. References

- 5.1 Wasteserv Manual of Safety, Security and Emergency Response including its annexes.


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EMERGENCY RESPONSE AND FIRE SAFETY
POLICY DOCUMENT -
AMENDMENT SHEET

Ser	Amended Page; Section	Authority (CEO Only)	Initials	Date
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				
Ten amendments have been completed; the Policy Document should be reviewed and printed afresh.				

Notes for Use:

1. Amendments are to be entered manually in Red ink
2. Only the CEO or her designated official shall be authorised to enter amendments to this Policy Document.
3. Amendments shall be inserted in full in the following manner.
 - The relevant page is amended on the electronic copy, with text changes being entered in red
 - One (1) copy of the new page/s shall be printed out and attached to the existing page by secure staples
 - A short note regarding the circumstances and/or reasons necessitating the change is completed by the CEO or her designated official.
4. The Policy Document shall be re-printed every three years or upon completion of 10 amendments, whichever occurs first

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in Fire Fighting shall be documented as per the proforma at Appendix 1.

3. Operational Principles

In order for the evacuation plan to be operational, it is based on the following principles:-

- a. **Simplicity** – to work plans must be kept simple and uncomplicated, bearing in mind that they will be put into effect in conditions of high stress and, quite possibly, emotional involvement
- b. **Speed** – the importance of speed in emergency situations can never be overstated. It is an essential, often decisive, factor in the conduct of an operation and fundamental to a successful outcome. Information regarding the outbreak of a fire shall be communicated immediately and to the right persons who are authorised to take the appropriate action. A schematic flow of what to do in an emergency evacuation is produced at the Evacuation Procedure Schematic at Appendix 2.
- c. **Safety** – the safety of all staff members, visitors, guests and other persons who may be inside the factory is to be given paramount importance at all times. It is therefore imperative that all area / sections strive to inculcate into all staff members a safety culture.
- d. **Co-operation** – the effectiveness of procedures shall depend on everyone's co-operation in conducting a safe and successful evacuation.
- e. **Prevention** – *"... is better than cure"* goes the old saying. Fire prevention is fundamental to successful procedures. In this respect Wasteserv's Health and Safety representatives have a key role in fire prevention.

4. Training and Policy Review

This Policy is based on a 3-year cycle for personnel training, periodic drills and policy review. The cycle covers:

- a. Personnel Basic Fire Awareness (BFA) Training;
- b. Emergency Evacuation Drills;
- c. Policy Review.

It is the responsibility of the Health & Safety Coordinator to manage Emergency Response and Fire Safety in accordance with the provisions of this Policy Document, as per Appendix 6.

5. Concept Of An Evacuation

The evacuation strategy can be best described as "The Path of Least Resistance". The basic idea is to evacuate personnel into pre-designated Assembly Areas / Points along specific routes with minimum delay and disruption.

EVACUATIONS

6. Definition

An evacuation is a systematic withdrawal from a place of danger to a place of safety as a result of known or impending danger. The following considerations are therefore fundamental:

- When is an evacuation necessary?
- Where to?
- How?

7. Risk Factors

Careful hazard identification allows for a proactive approach to fire prevention, minimises risk, heightens individual and collective awareness and allows for a programmed response. The company provides sufficient training in general fire awareness and risk assessment know-how to designated members of staff to ensure that fire risks are identified, communicated and reduced. The main hazards that could lead to an emergency situation are classified as follows:-

- a. **Natural Threats, including;**
 - Floods;
 - An earthquake or significant tremor.
- b. **Human threats, including;**
 - Carelessness;
 - Accidents;
 - Disaffection and disloyalty leading to sabotage;
 - Equipment malfunction;
 - Explosions
 - Arson;
 - Bomb Threats.

To varying degrees, all hazards may potentially result in some form of disruption, damage, loss, and destruction of property, materiel and equipment, injury or loss of life. Basic fire awareness for selected employees is a mandatory requirement as stated in para. 2d; above – **Basic Requirements.**

THE PLAN

8. Introduction

The plan is based on the integration of a series of actions with a number of physical elements around the factory. For the purpose of this policy document these are:

- Areas / Sections;
- Exits;
- Routes;
- Assembly Points.

9. Concept

The idea behind the "*Path of Least Resistance*" is to marshal personnel safely to pre-designated assembly points, along well-marked and well-known escape routes, out of the emergency exits within each area / section.

At the Assembly Areas a head count of all personnel on duty shall be taken and visitors accounted for. The specific task of conducting the evacuation of a Product Group / Section falls upon the respective Evacuation Leaders.

10. Aim

WASTESERV shall take the necessary precautions to prevent emergency situations, particularly fire emergencies, from occurring.

In order to ensure that evacuations are carried out safely and with minimum risk of injury or loss to life or limb, management shall prepare for contingency situations necessitating such evacuations by providing:

- a. The necessary direction and training;
- b. Appropriate logistical support;
- c. Updated procedures and;
- d. A conducive environment

Where at all possible and only if considered absolutely safe to do so, areas / sections shall attempt to take adequate measures to salvage valuable equipment, information or other material in order to promote the swift recovery of operations.

PHYSICAL ELEMENTS

11. Area / Section

Area / Section refers to the location within which a number of staff, visitors and operators carry out specific tasks or duties. For the purpose of the Evacuation plan the following Area / Sections are listed:

- Administration Block
- Parking Area
- Material Recovery Facility (MRF)
- Mechanical Treatment Plant (MTP)
- AD plan

11.1 Exits

Within each Product Group / Section, there are basically three (3) types of exits:

- a. Normal exits – not signposted;
- b. Emergency exits – signposted;
- c. Other exits

11.2 Escape Routes

The idea behind identifying numerous exits for the purpose of the Evacuation plan is to make all members of staff aware of different options in an emergency.

For the purpose of the Evacuation plan, there are three (3) types of escape routes that personnel could take in order to exit the building:

- a. **emergency routes:** i.e. pre-determined and sign-posted route/s in an area / section that lead/s to an emergency exit;
- b. **normal exit routes:** i.e. any route within an area / section that leads to a normal exit;
- c. **alternative routes:** i.e. any other route in an area / section that leads to any other exit.

11.3 Assembly Areas And Assembly Points

An **Assembly Area** is a designated open space outside the factory to which personnel from within an area / sections will evacuate in case of emergency.

An **Assembly Point** is a specific location within an Assembly Area at which personnel from within respective Product Group / Sections will muster under

the evacuation leader for the purpose of personnel accountability by the checker and secondary actions.

OPERATIONAL PARAMETERS

12. Command & Control

Command and Control is a critical function during an emergency. Unless timely and effective direction is given by persons with the required authority to all members of staff, a crisis situation runs the risk of degenerating alarmingly. For this purpose, the crisis management structure has been designed as follows: -

- a. **Crisis Management Team** – consisting of a pre-designated Team of company Executives who shall exercise command and control over all aspects of an Emergency Evacuation of the complex. The Crisis Management Team shall ensure that communication links with Evacuation Leaders are established, and maintained, in order that information is obtainable during the course of an emergency, thus enabling the Team to make informed decisions.
- b. **Evacuation Leaders** – selected personnel specifically trained and tasked with overseeing the evacuation in their area / section up to and including personnel accounting procedures at the Assembly Point. An evacuation.
 - Evacuation Leaders shall be responsible for knowing the whereabouts of employees in their area / section.
 - Each Evacuation Leader will have a designated stand-in during his/her absence.
 - The duties of Evacuation Leaders are, specifically, to:
 - i. oversee the evacuation of all personnel in his/her Product area / section;
 - ii. physically "sweep-up" behind the evacuees, ensuring none are caught up or left behind in some remote area or location;
 - iii. carry out immediate investigations into the whereabouts of absentees and to immediately report the matter to the Crisis Management Team in case they are not found;
 - iv. The Evacuation Leader is authorised to evacuate his / her area or section (Schematic at Appendix 2.)
- c. **Fire Wardens** – selected personnel trained and empowered to act as first responders and who are authorized to utilise the fire implements to

conduct basic fire fighting as trained. They may also be called upon to assist in the evacuation while not fire fighting.

- to ensure that the list of employees has been updated by HR on a monthly basis;
 - report directly to the Assembly Point and lead members from his/her area / section to it if necessary;
 - reconcile the area / section staff-register at the Assembly Point;
 - report any absentees to a member of the Crisis Team;
- e. **First Aiders** – selected personnel trained and certified in First Aid who shall provide direct support to the Crisis Management Team and Evacuation Leaders by their first aid skills and competence.

13. Plan Integration

The importance of integrating the emergency evacuations with operations cannot be overstated. Management and supervisory staff at all levels will endeavor to ensure that the emergency evacuation procedures are well known and understood by all employees of Wasteserv. In particular, all area / sections must be well sign-posted, effectively creating an interactive environment with the employees in terms of safety awareness.

- **Evacuation routes** shall be clearly marked, unobstructed and provide for emergency lighting
- **Emergency signs** shall be clear, frequent, legible, put up in prominent places, unobstructed and understood by all. Signage is critical in creating the right awareness and safety climate amongst staff and visitors alike
- **Emergency Exits** shall be kept unobstructed. Where this is no longer possible, the Process Leaders shall ensure that alternative exits are made available in their respective area / sections.
- **Emergency Doors** must be kept unlocked from the inside at all times. A balance has to be struck between safety requirements and security. The important thing is that emergency doors are easily opened from the inside. This may mean fitting them with panic alarms, panic bars and/or return springs in some cases
- **Basic Fire Awareness** training shall begin at the induction process and shall be mandatory for all employees
- **Refresher courses** shall take place in accordance with the Fire Training Plan, in addition to any other periodic training that may be carried out

- **Evacuations and Fire Drills** shall be practiced in accordance with the law.

Evacuation Drills shall be documented as per Appendix 3.

14. Decision Making

It is critical for the timely and safe resolution of a crisis that decisions are taken by persons with the right degree of authority. This Policy Document constitutes in itself the authority by which the command and decision processes shall be guided. The Crisis Management Team shall exercise command and control, and provide direction in the event of an emergency evacuation.

Area / section Managers and the respective evacuation officials shall respond quickly and evacuate personnel to safety until such time as the Civil Protection Department firefighters arrive at the scene and assume control of the emergency. Particular attention shall be paid at all levels to the safety and well-being of persons with special needs who might be more vulnerable than others during an emergency evacuation.

15. Emergency Lighting

For the purpose of this Policy Document, the hours of darkness are taken as those between sunset and sunrise. Dealing with emergencies in darkness presents additional problems and complications, and the Plant Services shall be responsible to ensure that adequate and appropriate emergency lighting and luminous signs are available in all areas of the complex.

16. Communications & Emergency Equipment

Communications are vital to a successful evacuation and are available in many forms. The major components of the communications cycle are as follows:

- the main alarm;
- telephone;
- verbal communication;

In terms of specialist equipment, the following assets are available:

- Basic fire fighting equipment;
- First Aid kits;
- Other equipment.

17. Personal Effects

Personnel will make sure that they carry their car keys with them at all times; once out of the Area / Section, no one will be permitted to re-enter in hazardous conditions until such time as it has been declared safe to do so. All members of staff should bear this provision in mind at all times in relation to personal effects.

No person shall leave the Wasteserv complex unless duly authorised.

18. Standard Operating Procedures (SOPs)

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The Area / Section SOPs shall provide clear and concise instructions regarding emergency evacuations. The SOPs will be revised at least once annually, or whenever the Evacuation Leader, warden, security or some other appropriate authority notice some change in circumstances that requires a revision. Area / Sectional SOPs are found at Appendix 5 and are the following

- Fire Evacuations – Appendix 5.1;
- Medical Evacuations – Appendix 5.2 ;
- Response to Bomb Threats – Appendix 5.3

The pictograms on-site provide a summary of the evacuation procedure. A copy of diagram is attached overleaf.

FIRE WARDEN TRAINING RECORD

Notes:

1. This Annex forms part of the Wasteserv Fire Safety (Training) Records and shall remain attached to the Fire Safety Manual at all times.
2. The record shall be completed by the appointed Health and Safety Coordinator and a copy of the records shall be kept by the HR Department. The appointed Health and Safety Coordinator shall be responsible for maintaining and updating these training records.
3. Where individual and/or collective training has not been completed, the Health and Safety Coordinator shall document reasons and remedial action accordingly.
4. Departments are to retain copy of records for inspection.


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FIRE WARDEN TRAINING RECORD

Area / Section:

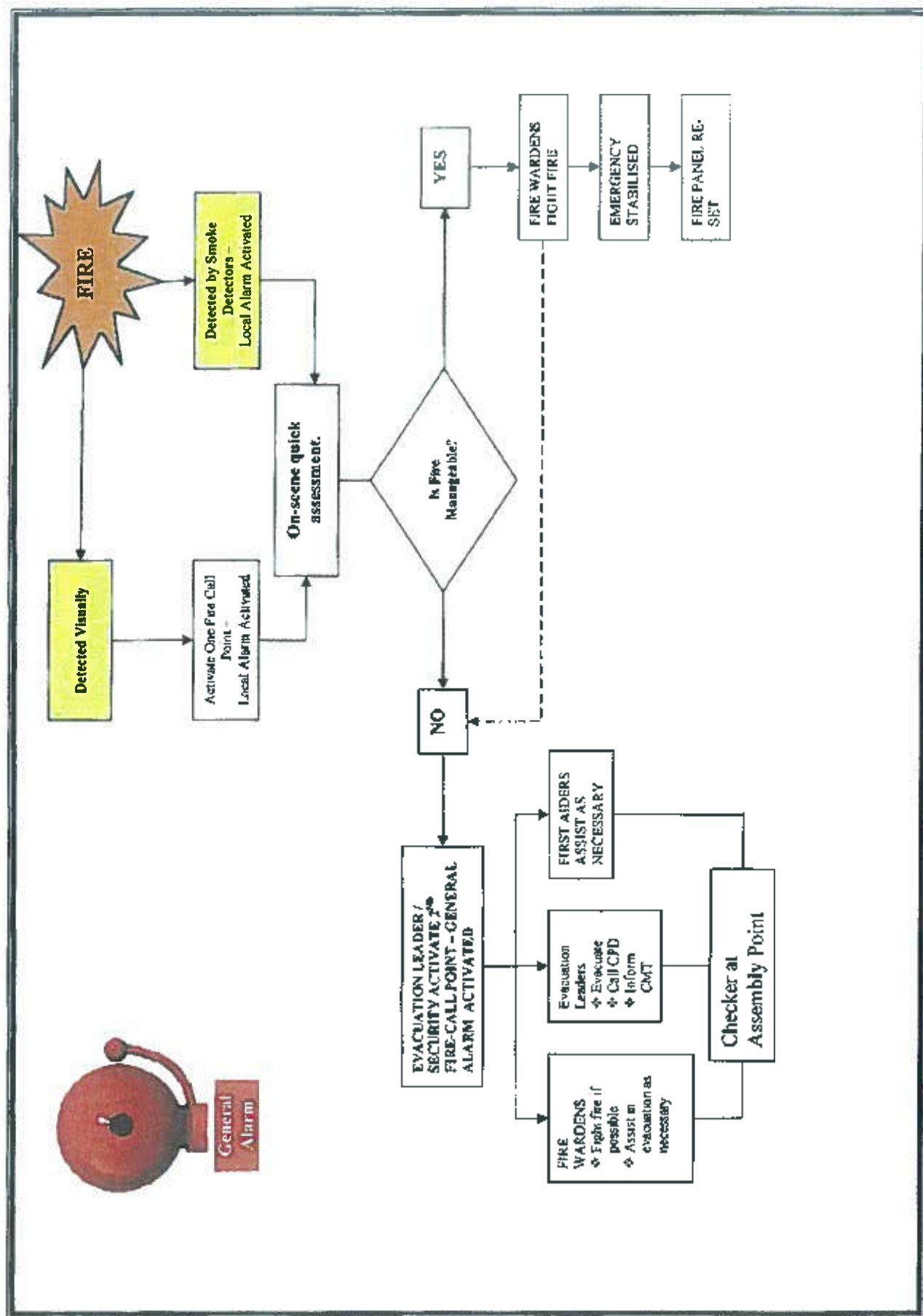
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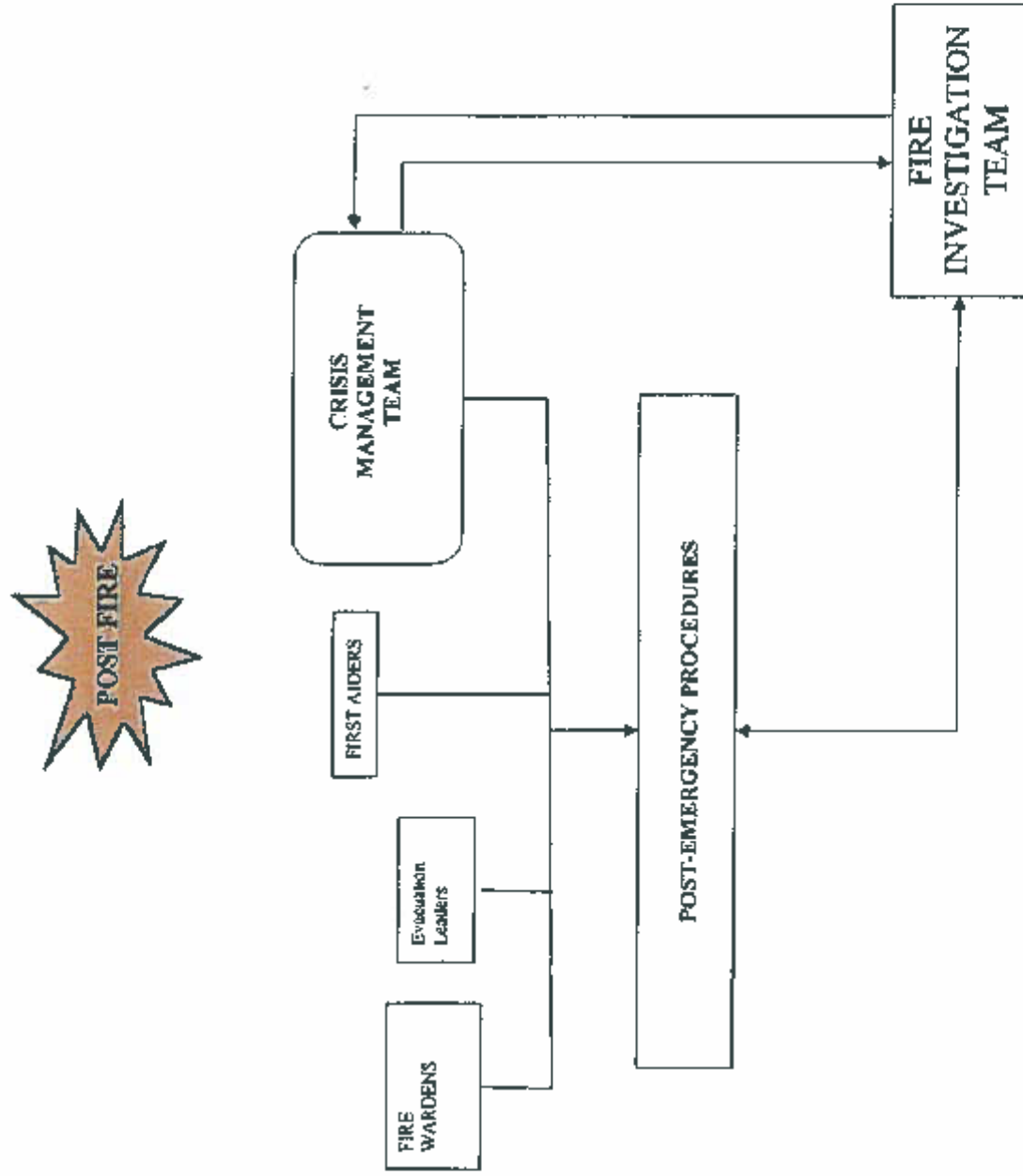
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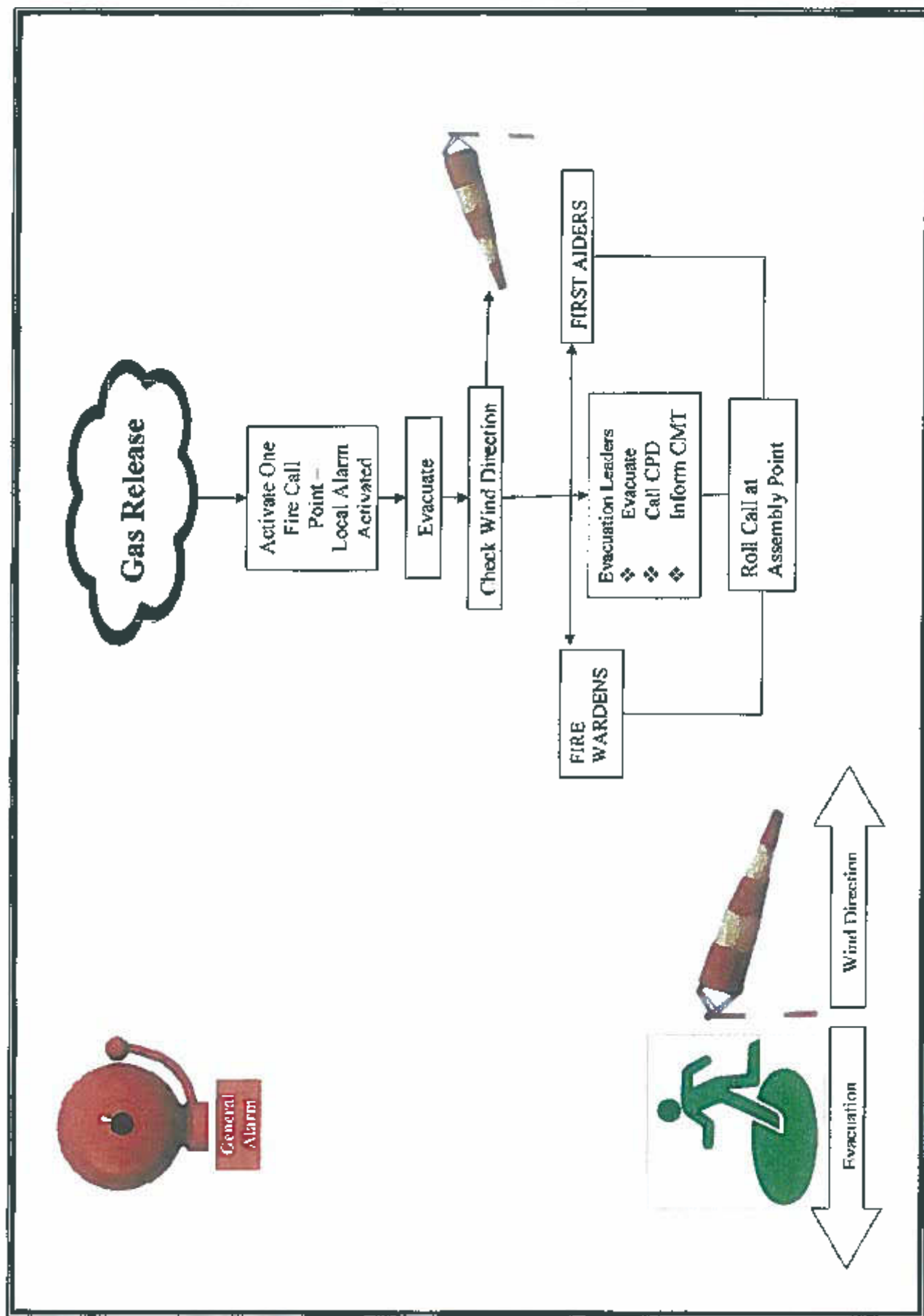
Appendix 2 to
Emergency Response and Fire Safety
Policy Document
Dated 20 July 2011

EVACUATION SCHEMATIC


**Civil Protection
Department**







**CRISIS MANAGEMENT
TEAM (CMT)**

Composition:

- CEO – Main Focal Point for decision making;
- COO – Supporting CEO on all operational matters;
- Health & Safety Coordinator – indirect support to CEO
- H&S representative – Supports CEO on all Plant related decisions;
- CEO's secretary (in support) – Incident diarist and direct support to Team

Location:

As appropriate.

Role and Tasks:

The CMT shall:

- Constitute in case of Emergency;
- Take steps to receive accurate and timely information;
- Provide a point of reference, leadership and support during the emergency;
- Make and communicate decisions as necessary;
- Co-ordination with external agencies, including Emergency Response, Media, Law Enforcement and Judicial Authorities.

Notes:

1. This Annex forms part of the Wasteserv Fire Safety (Training) Records.
2. The record shall be completed and kept by the appointed Health and Safety Coordinator.
3. Where individual and/or collective training has not been completed, the Health and Safety Coordinator shall document reasons accordingly.

WASTESERV FIRE EVACUATION TRAINING RECORD

Ser	Date of Evacuation Drill and Remarks		H&S Coordinator's Initials
01	2011		
02	2012		
03	2013		
04	2014		
05	2015		
06	2016		
07	2017		
08	2018		
09	2019		
10	2020		

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Salvage Guidelines (Reserved)

A STANDARD OPERATING PROCEDURE FOR AN EVACUATION AT WASTESERV

- Ref:
1. Policy Document
 2. Area plan (copies by doorways)
 3. Monthly updated employee list by Product Group / Section.
 4. Daily Visitors' List at Reception

Actions on hearing the general alarm

A. Person discovering the fire:

Raise the alarm

- a. Inform people in the vicinity by shouting
- b. Inform all the premises by activating closest call point

Fight Fire (if safe)

- c. Use closest available fire fighting equipment
- d. If fire does not seem to get smaller or it continues to grow, evacuate

Evacuate

- e. Go to nearest assembly point
- f. If assembly point is effected by incident move to another assembly point
- g. Report to fire warden
- h. Wait at the assembly point for further instructions.
- i. Give any information to Incident co-ordinator

B. Fire Warden / Evacuation leader

1. On hearing the alarm assume command, it is your responsibility.
2. Direct staff under your command to the nearest escape route/s.
4. Physically ensure that there are no people within your section-area before moving out; you have to physically "sweep" the section-area door by door, room by room, if safe. If it not safe for you to do so, move on
5. On your way out ensure that all doors and windows are closed (not locked) and that any hazardous equipment or machinery cannot inflict further damage or injury to evacuating personnel.
6. Instruct anyone competent to isolate the electrical supply. If possible and safe to do so.
7. Pay special attention to personnel with special needs

8. Lead personnel in your section to the assigned **ASSEMBLY AREA** and **Assembly Point**.
9. Collect employee list before leaving Area or Section.
10. Account for all personnel in your section by name.
11. Remain available at assembly point for further instruction.

B. Other Personnel:

1. On hearing the alarm stop whatever you are doing immediately but in a safe manner.
2. Proceed calmly towards the nearest **Fire Exit**.
3. Follow Evacuation Leader's Instructions.
4. Assist others in doing so as and, when necessary, pay particular attention to those persons with special needs.
5. If, for any reason, the nearest **Fire Exit** is blocked or somehow inaccessible, proceed calmly to the nearest point of exit available.
6. Proceed to your assigned **ASSEMBLY AREA**.
7. Stand in line at your **Assembly Point**.
8. Remain available at assembly point for further instruction.

Evacuation "Dos!"

- a. Carry your car and home keys on you at all times.
- b. Act calmly at all times.
- c. Act firmly and swiftly.
- d. Assist the Wardens and Checkers if so instructed.
- e. Communicate with and reassure those who may need your reassurance.
- f. Leave the routes behind you as clear as possible; keep escape Routes open at all times.
- g. Close doors behind you.

Evacuation "Don'ts!"

- a. Never panic.
- b. Never lose time or fret; it is totally unnecessary.
- c. Never issue instructions contrary to the Evacuation Leaders or First Aiders.
- d. Never wander off to do your own thing, however important you think it is!
- e. Never cause unnecessary damage; it may hinder someone else's escape!
- f. Never block off Escape Routes.
- g. Never return into a burning building!

Actions in the case of gas release:

A. Fire Warden / Evacuation leader

1. On becoming aware of release assume command and start evacuation.
2. Direct staff under your command to the nearest escape route/s.
3. Physically ensure that there are no people within your section-area before moving out; you have to physically "sweep" the section-area door by door, room by room, if safe. If it not safe for you to do so, move on.
4. On your way out ensure that all doors and windows are closed (not locked) and that any hazardous equipment or machinery cannot inflict further damage or injury to evacuation personnel.
5. Look at the wind sock for wind direction and move to assembly point apposite wind direction.
6. Pay special attention to personnel with special needs.
7. Lead personnel in your section to the assigned **ASSEMBLY AREA** and **Assembly Point**.
8. Collect employee list before leaving Area or Section.
9. Account for all personnel in your section by name.
10. Remain available at assembly point for further instruction.

B. Other Personnel:

1. On becoming informed of situation stop whatever you are doing immediately but in a safe manner.
2. Proceed calmly towards the nearest **Fire Exit**.
3. Follow Evacuation Leader's instructions.
4. Be aware of wind direction.
5. Assist others in doing so as and, when necessary, pay particular attention to those persons with special needs.
6. If, for any reason, the nearest **Fire Exit** is blocked or somehow inaccessible, proceed calmly to the nearest point of exit available.
7. Proceed to your assigned **ASSEMBLY AREA**.
8. Stand in line at your **Assembly Point**.
9. Remain available at assembly point for further instruction.

A STANDARD OPERATING PROCEDURE FOR A MEDICAL EVACUATION AT WASTESERV

THE AIM OF MEDICAL EVACUATIONS IS TO GET THE PATIENT TO ADVANCED MEDICAL CARE AS FAST AS POSSIBLE WITHOUT INFLICTING FURTHER DAMAGE TO HIS CONDITION AND WITH THE MINIMUM OF DISRUPTION TO ONGOING OPERATIONS AT YOUR PLACE OF WORK.

Note: Members of staff who are trained in First Aid and are present shall administer emergency aid to the casualty and the respective Evacuation Leader shall assume the role of incident co-ordinator and perform the following procedures:

Drill: The Medical evacuation is a 10-point drill as follows:

- Take charge of the situation as taught in your first aid and inform an appropriate authority.
- Call for an ambulance immediately if you decide it is necessary - take note of the time
- Administer First Aid
- Evacuate those parts of the building you consider necessary in order for the medical personnel to arrive at the site without hindrance
- Direct members of staff whose assistance you do not require to their normal place of work
- Contain the situation
- Post somebody to await the arrival of the medical services and escort them to the site
- Take note of the time of arrival and calculate the elapsed time
- Be prepared to brief the medical personnel in general terms of what happened
- Be prepared to assist the medical personnel as necessary.

Body Language: The way you act and your demeanor will influence those around you. It will determine whether they respond to your leadership or not. Remember to be positive, assertive and, above all, "direct don't dither!" Under no circumstances are you to tolerate panic and senseless fretting. Use available personnel and, perhaps, visitors who may be qualified and volunteer their assistance.

EMERGENCY RESPONSE PROCEDURES (BOMB THREATS)



Civil Protection
Department

PART A - BOMB PROTECTION GUIDANCE

General Threat Considerations

- 1.1 Throughout the world, terrorist groups and other extremists frequently resort to bombing attacks to promote their causes. Because they choose different targets and employ different methods, it is not possible to provide a generally applicable guide to assessing the threat of such attacks.
- 1.2 The risk of a terrorist bombing in a Maltese industrial facility may be considered to be low with respect to its *probability* rating. In terms of potential impact, however, a bombing event of practically any magnitude is likely to cause significant destruction, disruption and loss of life and general operational degradation, and must therefore be appropriately guarded against.
- 1.3 Experience from world events has shown that management should not dismiss completely the risk of relatively small, improvised explosive devices being placed at an industrial facility by some disaffected or disgruntled employee intending to exact revenge for a perceived grievance caused by the company. For many reasons, it is by far the favoured form of attack by terrorists and amateurs alike. Anecdotal evidence suggests that this method has been employed in Malta in the past, including within industry.
- 1.4 Basic precautionary measures can, and must, be taken against the bomb threat; these guidelines and procedures describe such measures. They are purposely comprehensive in order to inform Wasteserv management about the nature of the risk, to allow for effective personnel training if, as and when appropriate and to allow management to make informed risk based decisions as appropriate.

2.0 Bomb Types and Preventive Measures

- 2.1 Bombs can be constructed in many different ways and are easily disguised. They may be placed in bags, cases, or everyday containers that can be easily hidden. Vehicles can carry large bombs without showing any outward signs.
- 2.2 Based on type and means of delivery, there are essentially five kinds of bombs:
 - High Explosive
 - Vehicle

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- Incendiary
- Postal
- Suicide – (immensely rare).

2.3 All types of devices can be initiated by the use of timing devices, command detonation, anti-disturbance (pull, push, trip) or pressure pad. Vehicle and postal bombs can be either high explosive or incendiary, and all can be hand carried.

3.0 High Explosive

3.1 These are bombs intended to kill or injure people by their blast or by causing flying debris, particularly glass. Bombs small enough to be hidden in a hand-carried bag may be powerful enough to cause serious damage to property.

3.2 Bombs using high explosives are typically made with commercial or military explosives in blocks or sticks. Some will include an electric detonator, timer, or power source and will be contained in some way with the explosive material.

3.3 Three simple steps can be taken to protect against high-explosive bombs:

- Prevent them from being brought onto the property, e.g., by stringent access control procedures, inspection of packages, and the use of explosive-detecting devices as appropriate;
- Reduce the chances of someone planting a bomb which cannot be detected, e.g. by eliminating hiding places; not allowing packages, parcels, and bags to be left unattended or vehicles parked near the facility;
- Keep close surveillance over the site by guards, employees, and technical means, such as CCTV surveillance.

4.0 Vehicle Bombs

4.1 A vehicle containing high explosives can cause considerable damage and loss to life. Smaller bombs can be attached to the underside of vehicles either to kill the persons inside when they drive off or to smuggle a bomb into premises. Measures designed to protect the Facility against vehicle bombs may include:

- Controlling access to Wasteserv parking lots and garages;
- Ensuring that visitors park their vehicles well away from buildings, when possible;
- Stopping and search vehicles entering property when directed by the Qualified

Individual;

- Keeping close watch over the outside of the Facility,
- Asking drivers to check their cars before driving off

5.0 Incendiary Bombs

5.1 The purpose of these bombs is to cause fire. They are normally small and difficult to detect and are often concealed inside or among other apparently innocent objects. Measures designed to protect the Facility against incendiary bombs may include:

- Periodically inspecting packages entering the Facility;
- Looking out for people who act suspiciously;
- Security guards searching vulnerable points regularly, e.g. refuse bins, stores areas, workshops, exposed pipe works, toilets and common areas.

6.0 Postal Bombs

6.1 Letter and parcel bombs are envelopes and packages designed to kill or injure people when they are opened. They may not come through the mail and can be delivered by hand. Any of the following are signs that a letter or package may be a bomb:

- Grease marks on the envelope or wrapping;
- A smell like marzipan or machine oil;
- Visible wires or foil, especially if the package is damaged;
- The package may feel heavy for its size;
- It may be heavier in some places than others and may appear over wrapped;
- The envelope may feel soft but the contents feel hard;
- The package may have been delivered by hand;
- There may be poor handwriting, spelling, or typing;
- It may have come from somewhere unexpected;
- There maybe too many stamps on it.

6.2 If there is any reason to suspect that a letter or package may contain a bomb, the receiver should be instructed to:

- Put it down gently and walk away from it;
- Ask everyone to leave the area;
- Sound the General Alarm;
- The letter or package is not to be placed into anything (including water)
- The letter or package should not be covered or smothered.

7.0 Protective Measures

7.1 Following are steps to protect people and property against bombs.

- Ensuring that the doors, gates, and windows of premises are well secured by key-operated locks and bolts. Good security lighting, CCTV coverage over perimeter boundaries, main entrance doors, and critical points within the site all help to deter attack;
- Protecting people from flying glass by having special thin polyester film fitted to the inside of windows and in some cases by hanging special net curtains. Glass can be replaced in some cases with laminated glass;
- Making it difficult for unauthorized people to enter the property during business hours as well as when not operating by applying good access control procedures. If threat of attack is high, searches must be made of vehicles and those on foot entering the premises. Make sure people do not leave personal belongings unattended;
- Educating employees to be alert for bombs and to report suspicious circumstances to management.

8.0 Telephone Warnings

8.1 Bombers very often give warnings, though not always. So, unfortunately, do hoax callers. You may receive a warning that your premises are at risk. In such cases the Qualified Individual should be immediately notified.

8.2 Responding to warning calls often involves making difficult decisions. It is essential to get the maximum amount of useful information from the call. Receptionists, secretaries and switchboard operators most likely will have to deal with such calls but any member of staff who has a direct line might also receive a threatening call. The key rules are:

- To keep calm;
- To try to obtain as much information as possible;
- To Keep the line open after the caller has hung up;
- To Report the call up the chain of command as quickly as possible.

9.0 Searches

9.1 Bombs can be disguised in many ways. Search teams may be duly constituted on a voluntary basis upon a request by the AFM EOD experts and will be required to look for

unidentified objects that:

- Should not be there.
- Cannot be accounted for.
- Are out of place.

9.2 Searchers should be instructed to:

- Not touch or move suspect objects;
- Leave a distinctive marker near the object, if it is safe to do so;
- Move away from an object found to the control point;
- Inform the search coordinator who will then consider evacuation options;
- Take note precisely of the location of the device;
- Be available for interview by Response authorities.

9.3 If and when a suspect device is found, those using hand-held communications should move well away from the device and ensure others do as well.

10.0 Evacuations

10.1 The purpose of an evacuation is to move people from an area where there might be a risk to a place of relative safety. Options available to the CMT are:

- To authorise a partial evacuation (where large premises are involved and only a suspect letter bomb or small device is found);
- To sound a full evacuation.

10.2 In all cases the Police and/or AFM and/or CPD should always be immediately informed and advised what action is being taken. Depending on the assessment of the threat, the action choices are:

- Do nothing;
- Search, then evacuate if a suspicious object is found;
- Evacuate all except search teams and essential staff then carry out a search and evacuate fully if a suspected device is found;
- Evacuate immediately without searching

10.2 When the time of explosion has been disclosed in a threat call, searching must be finished and staff cleared at least twenty minutes before the deadline, whether any device has been found or not.

- 10.3 When a full evacuation is ordered it should be conducted in the manner prescribed in the Evacuation SOP.
- 11.0 Returning to the Facility
- 11.1 If the premises have been evacuated without searching and there has not been an explosion, no one should be allowed to re-enter before the site has been properly searched.
- 11.2 Where a time has been given for an explosion, at least one hour must elapse before search procedures are initiated or re-commenced.
- 11.3 When police or authorities have ordered the initial evacuation, they will declare the premises safe for re-entry.


Civil Protection
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PART B – RECEIPT OF BOMB THREAT AND WASTESERV RESPONSE

12.0 General

12.1 Bomb threats are generally speaking exceptionally rare and more often than not are hoaxes. All bomb threats must be taken seriously, however, since even hoaxes carry an inherent potential to cause disruption on a scale disproportionate to the threat itself.

12.2 These Procedures apply to bomb threat incidents at Wasteserv, Sant Antnin. They are intended to complement and not substitute the existing provisions within the Emergency Response and Fire Safety Policy, and must be implemented in strict accordance with the relevant provisions detailed in the company's Health and Safety Policy.

12.3 These procedures shall be adopted in the event that a bomb threat is communicated directly to the Facility in respect of a bomb threat directly to the Facility. The procedure path shall run as follows:

- Receipt of bomb threat by a Facility employee;
- Threat communicated to Qualified Individual and CMT;
- Threat evaluated – (Armed Forces of Malta and Civil Protection Department notified);
- Decision made regarding evacuation;
- Evacuation as appropriate.

13.0 Receipt of a Bomb Threat to the Facility

13.1 Guidance to employees who might receive telephone bomb threats is provided in the Bomb Threat Checklist that is appended to these Procedures.

13.2 A bomb threat is rarely made in person and is mostly transmitted as either through a telephone call or in writing.

13.3 A bomb threat made in writing must be handled carefully and touched by as few persons as possible.

13.4 The envelope or any other accompanying materials should be retained and preserved. Observing these simple precautions can be extremely helpful to a post-incident

investigation.

13.5 A probability exists that a bomb threat against the Facility will also be made to another party, such as the Police or Civil Protection Department.

13.6 In such cases the initial notice would come from the agency in receipt of the threat by telephone or in person. This initial notification might be supported by a Police Mobile Unit or a Fire Engine being sent to the building to stand by to render possible assistance.

14.0 Initial Response

14.1 Receptionists and security guards will be trained in the following notification procedures upon receipt of a bomb threat call. The objective is to begin implementation of the Bomb Response Plan as rapidly as possible.

14.2 When a receptionist or security guard receives a telephone message of a bomb threat, he or she shall immediately notify the Qualified Individual or a member of the CMT and await further instructions.

15.0 Quick Evaluation

15.1 Evaluation is the process for judging the credibility of the threat. When a threat is judged to be false, the evaluator may elect to take no action. An example might be a bomb threat made by a child over the telephone. A quick evaluation of the bomb threat will be made by the Qualified Individual and CMT. Evaluation will be made on the basis of all facts available at the time, most of which will be obtained from the person who received the bomb threat.

15.2 When a threat is judged to be credible, one of three decisions will be made:

- To search without evacuation.
- To evacuate, partially or fully, and then search.
- To evacuate and not search.

15.5 When a threat is judged to have no credibility at all, the decision will be to take no action.

16.0 Evacuation Options

- 16.1 If a credible bomb threat is received and if the decision is not to evacuate the Qualified Individual and CMT might consider taking the following action:
- Call a meeting of Heads of PG/Sections;
 - Notify them fully regarding what happened;
 - Reassure them that there is no reason to believe that anyone is in danger;
 - Inform them that the decision was made not to evacuate;
 - Inform them that the relative Emergency Response authorities were notified and that the situation was being monitored;
 - Make allowances for any person within the Facility not feeling reassured and who wishes to leave could be allowed to do so;
 - Notify the PG/Section Leader to expect an "All Clear!" message at some reasonable point in time.
- 16.2 If the decision made is to evacuate the Facility, the General Alarm shall be sounded. The procedures for a building evacuation shall be followed.
- 16.4 The decision to evacuate will take into consideration the location of a suspect bomb relative to the Emergency evacuation routes. Evacuation Leaders, wardens and checkers will remember that the principle of an evacuation is to evacuate away from known or suspected danger zones.
- 16.5 Total evacuation will not be an automatic response. Partial evacuation would be an appropriate response in those instances where the bomb threat caller mentions a specific location.
- 17.0 **Discovery of Suspicious Objects**
- 17.1 If or when a suspicious object is found, the Qualified Individual and CMT will be informed without delay and a decision made regarding an evacuation.
- 17.2 The area around the suspect device will be isolated immediately and is not to be touched or moved by another searcher or an uninformed bystander under any circumstances.
- 17.3 The Qualified Individual and CMT will take command of the situation until the Police or AFM arrive on the scene.

- 17.4 The Police and/or AFM will assume operational command of the situation; this includes directing Facility personnel as regards evacuation requirements and all aspects relating to the handling of the suspect bomb.
- 17.5 A partial or full evacuation will be immediately implemented by the Qualified Individual and CMT.
- 17.6 The Police and/or AFM may ask for assistance when a device is found. This help might be in the form of:
- Placing calls to additional authorities or decision makers;
 - Opening doors to dissipate a possible blast effect;
 - Interviewing knowledgeable employees to learn of other possible hiding places where a secondary device could be concealed;
 - Questioning employees as appropriate.
- 18.0 **Police, AFM and CPD Involvement**
- 18.1 The Police, AFM and CPD are the three agencies most likely to respond to an initial emergency call caused by a bomb incident.
- 18.2 The principal functions of the responding agencies will be to:
- Take over the situation from the Qualified Individual and CMT;
 - Provide appropriate guidance to the CMT;
 - Conduct searches of areas surrounding a suspect device;
 - Dispose of suspect devices found.
- 18.3 These agencies will deploy any assets to the scene that they consider necessary to manage and resolve the incident.
- 18.4 Initially assets will be few and the likelihood is that these might increase if the incident escalates.
- 18.5 The experts from within these agencies will decide what other notifications are appropriate with respect to fire, medical, and bomb disposal assets.

BOMB THREAT REPORT

(A copy is to be kept at Reception)

In the event of a bomb threat call the following proforma is provided to assist security staff in recording as much detail as possible.

1. When is the bomb going to explode? _____
2. Where is it right now? _____
3. What does it look like? _____
4. What kind of bomb is it? _____
5. What will cause it to explode? _____
6. Did you place the bomb? _____
7. Why? _____
8. Who are you? _____

Record the exact wording of the bomb threat.

Below is listed other possible information which may be filled in after the call is completed.

Sex of Caller Male/Female Age group _____

Language Spoken _____ Length of call _____

Number on which call received _____

Date _____ Time _____

The Callers Voice.

Calm _____ Angry _____ Excited _____ Slow _____

Crying _____ Familiar _____ Loud _____ Laughter _____

Rapid _____ Normal _____ Distinct _____ Slurred _____

Nasal _____ Stutter _____ Lisp _____ Raspy _____

Deep _____ Ragged _____ Accent _____ Pleasant _____

Whispered _____ Clearing throat _____

Deep breathing _____ Cracking Voice _____

Was the voice familiar, if so who did it sound like _____

What sounds could be heard in the background.

Street Noises _____ Crockery _____ Voices _____

House Noise _____ Music _____ Bar/Party _____

Animal Noise _____ TV/Radio _____ Static _____

Office machinery _____ Airport _____ Motor _____

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Factory machinery _____ Clear _____ PA System _____

Mobile Phone _____ Local call _____ Long distance _____

Any other sounds _____

Threat Language.

Well spoken _____ Incoherent _____ Taped _____
(Educated)

Foul _____ Irrational _____ Message read out by caller

Any other remarks or observations, _____

Having filled in all that is possible the report must be signed by the receiver of the call and any other persons present.

Name of Person receiving the call. _____

Position _____ ID Card _____

Reported to _____

Signature _____

Qualified Individual's Name _____

Position _____ ID Card _____

Signature _____

WASTESERV FIRE SAFETY PLAN –
THREE YEAR CYCLE FOR TRAINING AND POLICY REVIEW

A. PERSONNEL BASIC FIRE AWARENESS (BFA) TRAINING			
Ser	Year 1 (2011)	Year 2 (2012)	Year 3 (2013)
01	<ul style="list-style-type: none"> ➤ Induction Training to include BFA for all inductees ➤ Training recorded in personal Training Records 		<ul style="list-style-type: none"> ➤ Basic Fire Awareness Refresher training ➤ Training recorded ➤ End of Cycle ➤ Next BFA training in Year 4
B. EMERGENCY EVACUATION DRILL			
	Year 1	Year 2	Year 3
02	Annual Drill	Annual Drill	Annual Drill
C. POLICY REVIEW			
03	Policy approved	<ul style="list-style-type: none"> ➤ Feedback to Management from First and Second Annual Drills ➤ Policy review if required 	<ul style="list-style-type: none"> ➤ Mandatory policy review ➤ Next mandatory review in Year 3

Date

Appendix 7 to
WASTESERV
Emergency Response and Fire Safety
Policy Document
Dated 20 July 2006

DAILY VISITORS' LOG (Worked Example)

Notes:

1. This proforma shall be duly completed at Reception for every visitor to Wasteserv.
2. In case of a General Evacuation, the receptionist is to submit the form to the Checkers at Assembly Point A1.
3. All Visitors shall be escorted by a Wasteserv member of staff.
4. All Visitors shall carry the Wasteserv Visitors' Card.

Ser.	Name	Time In	Escorted By	Time Out	Initials
01	John Schembri	0900	Marco Caruana	1015	Initialled
02	Bill Baker	1120	Charles Abela	1430	Initialled
03					
04					
05					
06					
07					
08					
09					
10					

LIST OF ACRONYMS

AFM	Armed Forces of Malta
CEO	Chief Executive Officer
CMT	Crisis Management Team
COO	Chief Operations Officer
CPD	Civil Protection Department
EOD	Explosive Ordnance Device (often used to refer to the AFM's specialist unit)
H&S	Health and Safety
OHSA	Occupational Health and Safety Authority



WASTESERV EMERGENCY RESPONSE ARRANGEMENTS RISK ASSESSMENT

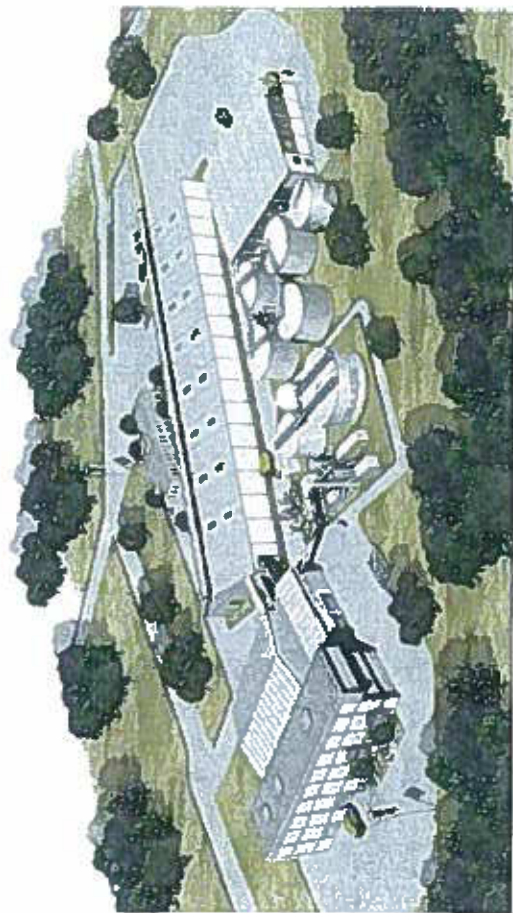
July 1
2011

WASTESERV EMERGENCY Risk Assessment

Date: 01-07-11

Report Number - WST/SSC 03-05-2011

Issued By: Andre' Muscat



The premises is used as a waste treatment plant where waste is brought in by trucks separated into organic and recyclable waste and then dealt with accordingly. Recyclable waste is compacted and placed into containers for shipping, and organic waste is processed through a system of tanks and pipe-work and gas is collected from it. This gas is then used to produce energy once it has fuelled generators.

This document will identify the emergencies that could arise during the running of this process. It will look at the processes and machinery that are involved, but also at any other cause that could cause an emergency on site such as a natural disaster or a bomb threat, and identify the control measures to prevent them or to mitigate the effect of such incidents.

Ser. No.	Observation	Remark	Remedy	By who	By when
1	Fire Fighting Equipment	<p>a) Fire extinguishers are present on site and are well distributed.</p> <p>b) Fire hydrants for the use of the Civil Protection Department (CPD) are present and these are fed by a large reservoir and pressurised by a pump room. This can be used by the CPD firemen only since fire hoses and nozzles are not available to employees and employees are not trained in doing such tasks.</p> <p>c) Smoke detection</p> <p>d) Emergency call points</p>			
2	Fire Training for staff	<p>a) Some of the employees are trained in fire fighting but no written record of this exists.</p> <p>b) Employees have not been instructed about their duties in the case of an emergency.</p> <p>c) Fire Drills are not performed regularly and no proof of any taking place exists.</p>	<p>Conduct regular training and keep records.</p> <p>Include emergency procedure in training and conduct drills.</p> <p>Conduct Evacuation drills every 6 months and keep records.</p>		
3	Incident co-ordinator	<p>An incident co-ordinator should be assigned, preferably, from top or middle management. This person is to:</p> <p>a) Monitor that all procedures being followed</p> <p>b) During emergencies:</p>			

		<p>i. Serve as a co-ordinator for the information gathered by fire wardens.</p> <p>ii. Be a point of reference to Emergency Services.</p>			
4	Assembly Points/ Role call	<p>a) Assembly points are in place and labelled. The positions chosen might not be the most suitable and others are suggested.</p> <p>b) A list of people present in each part of the premises should be kept available so that in the event of an evacuation it is used to make sure that all have been evacuated. Responsible people to keep this list should be identified and they will then need to get that list with them during evacuation. Visitors and guests should be recorded separately.</p>	Establish more suitable assembly point and place signs.		
5	First aid	<p>a) A first aid room is in the process of being completed. This will be serving as a first aid facility for all the premises. However first aid boxes in other location seem to be lacking.</p> <p>d) Some of the employees are trained in first aid but no written record of this exists.</p>	<p>Position first aid boxes in other parts of the premises.</p> <p>Provide regular first aid refresher courses for employees and keep records.</p>		
6	Chemical hazards	a) Emergency showers are installed around the premises.	Install a wind sock in a position to be easily viewed from everywhere so that in the event of a gas release		

		b) There is the possibility of gas releases, such as H ₂ S, a means of identifying wind direction and evacuating accordingly should be found	people can be directed away from the gas cloud.		
7	Signage	Due to the large size of the place it is suggested that more signs are installed of demonstrate the location of the nearest fire fighting equipment and assembly points.	Install directional signs		

Evacuation

When the need of evacuation arises personnel should be able to evacuate to their nearest assembly point without delay. In the event that that assembly point is affected by the emergency they should be instructed to move to the other nearest assembly point. Once at the assembly point a role call should be conducted by a designated person (Fire Warden). The result of the role call must be reported to an Incident Co-ordinator who in turn will be responsible to inform the Civil Protection Department fire officer.

Civil Protection
Department

Actions by persons discovering fire

1. Raise the alarm
 - a. Inform people in the vicinity by shouting
 - b. Inform all the premises by activating closest call point
2. Fight Fire (if safe)
 - a. Use closest available fire fighting equipment
 - b. If fire does not seem to get smaller or it continues to grow, evacuate
3. Evacuate
 - a. Go to nearest assembly point
 - b. If assembly point is effected by incident move to another assembly point
 - c. Report to fire warden
 - d. Wait at the assembly point for further instructions.
 - e. Give any information to Incident co-ordinator

Actions on hearing the alarm

1. Leave the building by the nearest safe exit route.
2. Do not stop to collect personal belongings.
3. Do not use lifts.
4. Report to the assembly point.
5. Contact fire warden.
6. Wait at the assembly point for further instructions.
7. Do not attempt to re-enter the building until instructed to do so.

Actions on hearing the alarm (gas release situation)

1. Leave the building by the nearest safe exit route

2. Do not stop to collect personal belongings.
3. Look at wind sock for wind direction and report to the assembly point opposite wind direction.
4. Contact fire warden
5. Wait at the assembly point for further instructions.
6. Do not attempt to re-enter the building until instructed to do so.

Contacting the emergency services

If the emergency requires emergency services to respond (Fire Brigade, Rescue, Ambulance, Police etc.)

1. Person discovering emergency should contact emergency services, by calling 112
 - a) State exact location
 - b) State nature of emergency
 - c) State how many people are involved/ injured, and if possible what condition they are in (breathing, bleeding, burns, etc....)
2. Person calling the emergency services must also contact the incident co-ordinator and inform about the incident and that the emergency services have been contacted.

Fire Safety Log Book

A fire safety log book should be kept so that every record/ document related to fire safety is filed in it. This is to include records for:

- a) Employee training records
- b) Fire equipment inventory and records
- c) First aid equipment inventory and records
- d) Risk assessment documents
- e) Emergency procedures
- f) Evacuation drill records
- g) Minutes of safety meetings.
- h) Any other Fire/Safety documentation

END OF REPORT

♦ Fire Hydrants – used only by firemen? Or can employees use them?

♦ Plans to review positions of assembly point.

♦ Smoke detectors – presence in buildings

♦ First aid boxes?

♦ Training for fire and First aid.

♦ How many people work there?

Total -

Administration -

Work floor .

Saviour Abela, Mr. Putzullu Caruana


Civil Protection
Department



B. D. ATHERSON ASSOCIATES Co. Ltd.



..... FIRE PROTECTION & SAFETY CONSULTANTS

P.O. Box 27 Naxxar, Malta

Tel/Fax: (356) 21 434865 Mob: 9949 8928

Wasteserv Malta Ltd.
Phoenix Buildings
Old Railway Track,
St. Venera.

SANT ANTIN WASTE TREATMENT PLANT
(MATERIAL RECYCLING FACILITY)
FIRE PROTECTION REPORT

1. Discussion

It is understood that the waste recycling facility will receive the equivalent of 24,000 tons of separated waste per annum. It is estimated that 25% of this total will be made up of inert materials, (glass & light metal).

Risk Category

The plant may be classified as a 'Remote Rural Risk' in terms of Fire Service response, as it is isolated from any centres of population and contains few buildings.

The Combustible Contents (Fire Load)

Calorific Value is the total of heat given off by the complete combustion of material. The rate at which this heat is released depends on other factors, such as air supply, fuel arrangements, decomposition kinetics and thermal properties of the building.


Fire Load Density: The total combustible material present, divided by the total floor area.

Both fire load and fire load density are usually expressed in terms of the wood equivalent, which is the total calorific value of all the combustibles present, divided by the calorific value of wood.

Calorific Values of Combustible materials (typical)

Material	Mj/Kg	Wood Equivalent (kg/kg)
Woods (hard or Softwood)	17.6	1.0
Paper (average)	15.4	0.88
Rubber	37.4	2.13
Polystyrene	41.8	2.38

The typical value of the fire load density for the processing and storage areas in the MRF is calculated at 150-200kg per square metre.

Approved by: 
Chief Officer
Civil Protection Department
29/1/08





Ignition Temperatures (loose solids)

Newspaper	185°C
Wood	200 - 220°C
Light Plastic	220 - 240°C

2. General

Given the foregoing, this report indicates those measures necessary for the fire protection of the MRF and its occupants and is focused on the design, protection and accessibility features necessary to:-

- Minimise danger to life from fire, smoke and fumes
- Provide adequate safe egress, for all occupants
- Provide structural stability, during a fire, for the required time
- Provide suitable access/facilities for the Fire Service

and is governed (as applicable) by the requirements of:

- Approved Document B (Fire Safety) – Building Regulations (UK)
- Design Guidelines on Fire Safety for Buildings in Malta
- BS 5839-1 Fire Alarm & Detection Equipment/Systems
- BS 5266-1 Emergency Exit Lighting and Signage
- BS 5306-EN3 Fire Suppression Equipment

3. Construction

The buildings are designed (and constructed), in accordance with the requirements of the Design Guidelines for Fire Safety on Buildings in Malta. It is confirmed that the structure and stability, is appropriate to the nature of use.

4. Fire Service Access & Facilities

Vehicle access to the exterior of the buildings is available to within 18m (or less), of each fire main outlet connection point. Access routes and hard standings are to conform with the following typical specifications:-

Minimum width of road between kerbs	3.7m
Minimum width of gateways	3.1m
Minimum turning circle kerbs	16.8m
Minimum clearance height	3.7m
Minimum carrying capacity (tonnes)	12.5m

The minimum carrying weight should be increased to minimum 29 tonnes

4.1 Water Supplies for Fire Fighting

The on-site reservoir has a capacity of 600,000 litres (600m³). This is sufficient to allow for continuous use by the Fire Service, for a duration of 5.5 hours, at 1,800 l/pm) or 11 hours at 900 l/pm. It is not envisaged that (in the event of a fire) the maximum anticipated combustible contents within the facility will indeed require the entire volume of fire fighting water available to extinguish same.



4.2 Fixed Fire Suppression Installation

A fixed fire main (wet), with outlet connections strategically located at 50m intervals around the site is to be installed. Two automatic fire pumps, powered from independent sources, one electric and one diesel, are provided. (Each acting as back-up for the other), and drawing water from the static reservoir on site.

The duty of the pump-set provides a minimum delivery of 1000 litres/min at 3bar pressure. An automatic top-up facility, direct from the water mains and supplying a minimum of 375 litres/min to the reservoir is to be provided.

The system is designed to conform to the requirements of BS 5306 Part 1, with the following characteristics:-

4.3 Characteristics – Fire Pumps

- Main fire pumps (Electric and Diesel)
- Pressure- 3bar
- Flow:- 1000 l/min
- Electrical power supply:- 415V/3ph/50Hz.
- Jockey fire pump
- Pressure- 3.2bar
- Flow:- 140 l/min

The motor of each electric pump shall be totally enclosed, ventilated type with class 'F' insulation, continuously rated and arranged for star-delta starting. Speed shall be 2900 rpm.

For the diesel driven pump, the casing shall be cast iron, axially split with a 15 degree angle that will minimize NPSH requirements and dimensions. Lower half shall contain suction and discharge nozzles. Suction and discharge connections shall be on the same elevation. Top half and rotating element shall be removable without disturbing the piping. Casing shall be fitted with replaceable bronze wearing rings. Impeller shall be bronze, double suction, enclosed type fully balanced and keyed to an alloy steel shaft. Shaft shall be fitted with replaceable bronze sleeves. Shaft shall be mounted in two dust tight deep grooves, sealed, and permanently greased ball bearings. Bearings shall be mounted in a cartridge type housing so that they shall be replaceable without opening pump casing. Bearings shall be removable without the need of special tools or bearing puller only by rotating the bearing removal nut.

The pump shall be direct connected through flexible coupling to a diesel engine, specifically approved for fire pump service. The cooling water supply for the heat exchanger shall be from the discharge of the pump, taken off prior to the pump discharge valve. The pipe connection shall include four (4) manual shut-off valves (including by-pass line), two strainers, two pressure regulators, a listed automatic solenoid valve and a pressure gauge, piping and fittings all fitted to engine, as per pump manufacturer's instructions.



One set of dual heavy duty lead acid batteries shall be provided and furnished in a dry charge condition with electrolyte liquid in separate containers. Suitable battery rack and 60' of battery cables shall be included. The fuel system shall consist of an above ground storage tank min 200 litres or as recommended by the manufacturer, fill pipe and cap, manual shut-off cock, flame arrestor, oil level gauge and braided bronze flexible connectors. The tank shall be supplied with legs for floor mounting. Approved seamless copper tubing and miscellaneous pipe and fittings shall be supplied by the mechanical contractor.

The electric main fire pump and jockey pumps shall have a bronze impeller, non corrosive shaft sleeve, packed gland with external flush line to the lantern ring suitable for 125 PSIG suction pressure. Pumps are supplied with cast iron casings incorporating a double volute design.

The pump set shall be supplied with the following accessories:

- One (1) combination suction gauge 3-1/2" dial type with 1/4" cock and lever
- One (1) discharge gauge, 3-1/2" dial type, with 1/4" cock and lever handle
- One (1) air release valve

The accumulator shall be manufactured from mild steel. Capacity shall be 150litre with a Butyl rubber diaphragm. The accumulator shall be pressurised.

The control panel shall be wired in accordance with the latest edition of the I.E.E. regulations with earthed equipotential bonding and earth leakage circuit breaker to give protection from direct and indirect contact, ensuring automatic disconnection of supply in the event of earth fault in either mains or control circuits. The panel must include the following features:

- Pump starters as specified
- Under voltage protection
- Overload and single phase protection
- Controller for sequential pump starting so that no two pumps start simultaneously
- Four pole main isolating switch
- Set of HRC fuses per motor
- Hand-off-auto switch per pump
- Indication lamps for pump running and low water alarm and light
- Anti-condensation heater

The panel shall be made of sheet steel to IP54 with lockable door. It shall have one incoming three-phase, four pole main isolating switch.

A float switch shall be included to protect the pumps against low reservoir water level.

Power supply shall be taken from an essential TP&N isolator next to the pumps (see Electrical Specification).



The jockey pump shall be connected to the fire main system and is intended to maintain pressure in a fire protection piping system to an artificially high level so that the operation of a single hose reel will not cause an appreciable pressure drop and the main fire pumps do not operate. On the other hand the use of 1 landing valve shall cause an appreciable pressure drop which will be easily sensed by the fire pump automatic controller, causing the fire pump or pumps to start. The jockey pump is essentially a portion of the fire pump's control system.

All pumps shall be controlled by a fire pump set control system conforming to BS 5306 and EN 12845.

5. Ventilation

5.1 Natural Smoke Outlets – Production Area

Smoke outlets are to be sited at high level in the (opposing) outer walls of the Production Area, (as shown on the attached drawings). The combined clear cross-sectional area of all smoke outlets are not less than 2.5% of the floor area that they serve. Given a floor area of 3825m² the size of each vent shall therefore have a free area of 6m² when fully open. (18 vents x 6m² provides an openable aggregate area of 108m²).

Each vent shall be an opposed blade damper and made from hot dipped galvanized steel. These dampers may be opened manually from floor level by means of a lever or levers.

5.2 Mechanical Smoke Extract – Storage Area

A mechanical ventilation system is to be installed in the Storage Area. Such system is required to provide between 2 and 6 air changes per hour and is to be capable of handling gas temperatures of 300°C for not less than one hour.

6. Fire Hose Reel System

A fire hose reel system is being installed. An independent fire pump providing a flow rate of 140 litres/min at 3bar pressure is dedicated solely to the hose reel system. Six hose reels are strategically located within the Hall.

(Pipe sizes and distribution network for both the fire main and hose reel stations are as indicated on the attached schematic drawing).

6.1 Portable Fire Fighting Equipment

The quantity, type and distribution of portable fire fighting equipment will be determined by the surrounding fire hazard and will be sited so that no one need travel more than 25m to reach a suitable fire extinguisher.

7. Means of Escape

Emergency exits (from enclosed buildings or areas), are to conform with the following requirements:-

- At least 2 escape routes, leading in opposite directions will be available
- Escape routes are designed so that no-one has to travel more than 30m, (25m in high risk areas), to reach open air or a protected escape route.
- The minimum width for any escape exit door is 800mm.
- The Control Room Bridge, if to be utilised by visitors/non-employees, requires an external staircase, to ground level, (from the Control room side of the building).

7.1 Marking of Exits

Escape route doors, used solely as a means of escape should be marked "FIRE EXIT" (and "FIRE EXIT, - KEEP CLEAR"), externally. All such signs are to be of a design and colour to BS 5499/BS 5378.

Although I accept the sign recommended above but in my opinion we should instead use the F.E. approved signage. JF

7.2 Exit Lighting

Exit lighting is required to illuminate exit routes and hazardous areas. The level of illumination required is to be not less than 2 lux at floor level of all exit routes. The installation of a system of escape lighting will be in accordance with BS5266-1 (2005). **The above requirements are to cover all occupied areas including the visitor walkway and Control Room bridge.**

8 Fire Alarm and Detection System

An automatic fire alarm and detection system is to be installed in all enclosed structures, (including the Control Room bridge). The system will be designed and installed in accordance with the requirements of BS 5839 Pts 1-4. The system shall incorporate both smoke and heat detectors, (depending on surrounding environment), audible/visual alarms and shall be configured so as to close down machinery, conveyors, etc in the event of a confirmed fire incident.

The main fire control panel is to be installed in the Control Room with a repeater panel located in the Security Room at the main entrance to the Plant.

Related Fire Risks & Contingencies

Sources of Ignition

These include but are not limited to:-

- Smoking Materials
- Electrical Apparatus
- Friction & Overheating of moving machinery
- Static Electricity and Lightning

The elimination or control of sources of ignition are to be included in the Plant Contingency Plan.

Contingency Plans

Contingency plans are to be drawn up primarily indicating:-

- Immediate action in the event of Fire
- Summoning the Fire Service
- Evacuation Procedures etc.

The Contingency Plan is to be implemented before the facility is fully operational.

CONCLUSION

Fire/Life Safety

The aspects concerning the structure, Fire Service access/facilities, smoke ventilation, fire suppression installations and related life safety issues will, when fully implemented, meet the requirements of the Design Guidelines on Fire Safety for Buildings in Malta.



F.J. WILSON GFireE., MIRS.M., MIFPO.
Fire Protection and Safety Consultant.

11th December, 2007.



B. D. ATHERSON ASSOCIATES Co. Ltd.



..... *FIRE PROTECTION & SAFETY CONSULTANTS*

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6th February, 2008.

Wasteserv Malta Ltd.
Phoenix Buildings
Old Railway Track,
St. Venera.

SANT ANTIN WASTE TREATMENT PLANT
(MATERIAL RECYCLING FACILITY)
AMENDMENT TO FIRE PROTECTION REPORT

Reference is made to the Fire Protection Report dated 11th December 2007, and in particular to paragraph 5 which is to be amended to read as follows:-

" 5. Smoke Ventilation

Ventilation of smoke, in the event of a fire, is available via 18 openings (8m² each) located along the length of the outer envelope of the building. The openings are 'glazed' with demountable thermoplastic panels, (synthetic polymeric material with a softening point below 200°C) which, in a developed fire situation, will not contain the products of combustion".

Given the foregoing, it is considered that the aggregate area of these 'openings' will suffice for the ventilation of smoke from the Production and Storage Areas, respectively.

F.J. WILSON GFireE., MIRS.M., MIFPO.
Fire Protection and Safety Consultant.





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FIRE PROTECTION COMPLIANCE CERTIFICATE

Sant Antnin Waste Treatment Plant
(Material Recycling Facility)

It is confirmed that the requirements of Fire Safety Report dated 11th December 2007 and the amendment thereto dated 6th February 2008, (as approved by the Civil Protection Department) in respect of the above premises, have been complied with.

It is understood that the facility is to be 'manned' on a 24 hour basis in order to ensure a prompt and efficient response to an alarm incident. The fire alarm panel is to be sited in a location where it can be regularly monitored particularly during the night.

F.J. WILSON GFireE., MIRS.M., MIFPO.
Fire Protection and Safety Consultant.

9th February 2008



B. D. ATHERSON ASSOCIATES Co. Ltd.



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WASTE SERV MALTA LTD.

**SANT ANTIN WASTE TREATMENT PLANT
MARSASCALA.**

FIRE SAFETY CONTINGENCY PLAN

Prepared by: F.J. Wilson GFireE., MIRS.M., MIFPO.
Fire Protection and Safety Consultant.

May 2008.



Member



1. Introduction

Fire safety is an important responsibility for everyone. The consequences of poor fire safety practices and lack of emergency planning are especially serious in properties where large quantities of materials are stored.

This Fire Safety Plan is a detailed document designed to deal with aspects of fire safety relating to Sant Antrnin Waste Treatment facility and is intended to be a reference manual outlining the fire safety practices to be routinely used.

This Fire Safety Plan is takes into consideration:

- the availability of human resources;
- the fire safety features provided and
- the materials stored, handled or processed.

Control of Hazards

Control of Fire Hazards

Management must take the lead role in identifying potential fire hazards and establishing fire prevention practices to eliminate or control the hazard(s) safely. All employees must understand that every precaution is to be taken to minimize accidents and prevent injuries. Employees must be fully trained in the established fire prevention practices and these practices must be adopted by everyone and be fully enforced.

(Many materials typically processed in a recycling facility or a waste management site are stable and inert and don't pose a problem unless they become exposed to a fire).

2. Supervisory Staff

The fire safety plan requires the appointment and organization of designated “**supervisory staff**” and alternates who are required to be trained to respond to a fire emergency in a predetermined manner. Supervisory staff duties and responsibilities are:

- Ensure the Fire Safety Plan is fully implemented.
- Appoint, organize and train emergency staff to carry out fire safety duties and emergency procedures.
- Ensure a sufficient number of assistants are designated and trained to act in a supervisory capacity in the event that the appointed emergency supervisory staff are absent from the building/site.
- Ensure that fire drills involving all staff are held at least once a year.
- Ensure that fire hazards are identified and eliminated or controlled.



- Provide alternate measures for fire safety during the temporary shut down of fire protection equipment or systems.
- Complete the necessary checks, tests, inspections and maintenance of fire protection equipment.
- Keep permanent records of all tests and corrective measures for a period of at least two years.
- Keep adequate records of training and fire drills for a period of at least one year.

3. Emergency Response

In order for the emergency response portion of the fire safety plan to be effectively implemented, management and every employee must understand the important role they play in promoting fire safety in the workplace. Everyone must be required to adhere to the fire safety practices and procedures. The orientation training program for all employees should include fire safety instructions on:

- what to do upon discovery of fire
- what to do upon hearing an alarm of fire
- how to prevent or minimize fire hazards in the workplace

The emergency procedures to be used in case of fire includes:

- sounding the fire alarm;
- notifying the fire department;
- provisions for access for fire fighting;
- instructing occupants on procedures to be followed when the fire alarm sounds;
- confining controlling and extinguishing the fire.

The procedures for outdoor areas will differ from procedures that should be followed for occupants within buildings.

Upon discovery of fire

- Leave the fire area immediately.
- Close all doors behind you to confine the fire.
- Activate the fire alarm and/or alert other staff.
- Notify the fire department. (All telephones on site should have the emergency phone number of the fire department listed and the address of the property conspicuously posted close by for reference in an emergency.)
- Leave the building.



Upon Hearing an Alarm of Fire

- Leave the building immediately.
- Close all doors behind you to confine the fire.
- Use the exits to leave the building.
- Ensure that the fire department has been notified.

NOTE:

- Do not re-enter the building.
- Call the Fire Department
- Provide access to the fire fighters
- Meet arriving fire fighters
- provide them with relevant information about the quantities and nature of materials stored or processed on site
- provide them with a copy of the fire safety plan and related drawings
- provide other assistance as required
- Do not silence the fire alarm system until instructed to do so by the fire department

Fire Drill Procedures and Training

Training and practicing fire drills must become an integral part of the facility's preparedness. Persons with little training or experience may have difficulty dealing effectively with the emergency.

Fire drill procedures must be prepared in consultation with the fire department. The fire drill must involve the response of supervisory staff while taking into consideration the response of other employees and people on site or present in the building.

Employees should receive training in the safe use of portable fire extinguishers and other fire safety equipment. This would include instructions on how to activate and reset the fire alarm system where appropriate.

Staff must be instructed to react quickly to a fire emergency with emphasis placed on promoting and practicing personal safety.

Fire drills must be conducted at least once each year. The date and time of all fire drills, as well as the names of participating staff, must be recorded and be retained for at least one year after the drill.



Factors to Consider When Organizing and Conducting Fire Drills

- Do all employees understand the procedures they are expected to follow in an emergency, (are there language barriers, etc.)?
- Are there people who require assistance in evacuating (mobility/hearing disabilities)?
- Are the fire drills pre-announced or a surprise?
- Are employees trained to safely shut down critical systems or equipment they are using during an emergency in order to prevent further hazards?
- Are fire drills conducted at different times to train employees and supervisory staff on all shifts?
- Are there measures in place to respond to the safety needs of contractors during an emergency?
- Will employees practice using fire fighting and related safety equipment to enhance their personal safety and response to a fire emergency?
- Is there a procedure established to evaluate the fire drill once it has been completed?

Posting Emergency Procedures and Emergency Phone Numbers

Every telephone should have the fire department telephone number and the premises name and address prominently posted close by for reference during an emergency.

Emergency Phone Numbers

Fire 112

Ambulance 112

Police 112

Be prepared to give the following information:-

**Address: Sant Antnin Waste Treatment Facility
 Marsascalea.**

Emergency Contacts:

Waste Treatment Engineer:	Ing. S. Dimech	79065770
Tech. Supervisor:	Ing. M. Agius	79454218
H&S Officer:	Mr. M.P. Caruana	79538021



Emergency Instructions are to be posted near all telephones and will contain the following information:-

Senior person responsible for site _____

Description and location of emergency equipment such as:-Fire extinguishers and fire alarm points.

In the event of an evacuation of the premises all personnel are to be accounted for. Once outside the building it is imperative that personnel re-assemble **upwind** from the emergency.



ON DISCOVERING A FIRE

IF YOU DISCOVER A FIRE SOUND THE ALARM BY ACTIVATING THE NEAREST CALL POINT (**BREAK GLASS**).

ATTACK THE FIRE, (IF SAFE TO DO SO), **DO NOT TAKE RISKS**.

CLOSE ALL DOORS AND WINDOWS - (*TO STOP THE FIRE FROM SPREADING*).

EVACUATE THE AREA - MAKE SURE EVERYONE IN THE AREA HAS BEEN ALERTED.

EVACUATION SIGNAL

FIRE ALARM BELL WILL RING CONTINUOUSLY!

This occurs once the senior person on duty has decided that a General Evacuation is Necessary.

EVACUATION PROCEDURE

EVACUATION PROCEDURE FOR ALL STAFF (**Except for essential personnel**).

- 1) *Using the nearest exit move quickly and calmly to the assembly point. The Assembly Point, for all staff is _____.*
- 2) **DO NOT** stop to collect personal belongings.
- 3) **DO NOT** re-enter the building for any reason.
- 4) *Report to the person in charge for roll call and stay at the Assembly Point until you are told it is safe to re-enter the building by the person in charge.*

THE PURPOSE OF FIRE DRILLS

Fire drills are intended to ensure, by means of training and practice, that in the event of fire or other emergency:-

- a) People are familiar with and understand the procedure.
- b) Persons designated to carry out specific duties are aware of their responsibilities and react without delay.
- c) The means of escape are used in accordance with pre-determined and practiced plan.
- d) If evacuation of the building becomes necessary, it is safe, prompt and orderly.

FIRE ROUTINE

The essentials to be covered in instructions, drills and on any outbreak of fire are:-

1) ALARM OPERATION



On hearing the fire alarm, evacuation procedures should be immediately initiated. Stopping certain processes or machines, isolating power supplies (including gas shut off valves). This duty will be carried out by designated persons.

2) CALLING THE FIRE BRIGADE



The duty of calling the fire brigade immediately the alarm is sounded must be specifically allotted to a particular person or persons.

3) ATTACKING THE FIRE



Circumstances will dictate whether fire fighting operations should be attempted. Action should only be taken by designated trained staff or fire teams on known small fires, and then, **ONLY SECONDARY TO PERSONAL SAFETY**.

4. EVACUATION.

The need to ensure that doors and windows are closed during evacuation and the nomination of certain responsible persons to search their departments to ensure that everyone has in fact evacuated the premises.

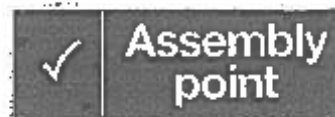
Note: Lifts, other than purpose built "Fireman's Lifts" should NEVER be considered for means of escape purposes because of:-

- i) The danger of mains failure, trapping person inside the lift.
- ii) The possibility of the lift transporting persons into a fire zone.

5. ASSEMBLY.

Assembly points are essential in order that a roll call can be taken, and all persons accounted for. As far as is practical these areas should be:-

- i) In a safe place.
- ii) Away from the premises.
- iii) Under cover.



6. ROLL CALL.

One person in each department should have the duty of conducting a roll call so that a quick check can be made. They should report their findings to the Duty Manager who in turn reports to the Fire Brigade Officer. This reduces the need for search procedures.





NOTES

RECORD OF FIRE DRILLS

Extent of Drill;

(location/site, etc)

minutes

[illegible]

EMERGENCY LIGHTING: ROUTINE (MONTHLY AND 6-MONTHLY) CHECKS

[illegible]

RE-INSPECTION REMINDER

[illegible]