

Outline decommissioning for Thermal Treatment Plant at Marsa

At the end of the plant life, a detailed plant decommissioning plan shall be compiled and eventually implemented to ensure that the site is returned to a satisfactory state for on-going use. The plan shall consist of the following elements:

1. An inventory of assets to be decommissioned shall be produced followed by consideration of the need for risk assessments, site supervision / management, and consultation of regulations. This shall cover, although not exclusively, the primary equipment that is on site. Current day, this equipment mainly consists of:
 - Incinerator Plant
 - Weighbridges
 - Emergency Generator 1
 - Fire pumps
 - Air Compressors
 - CEMS

 - Autoclave Plant
 - Autoclave Boiler
 - RTO
 - AHUs
 - Dual Fuel Burner
 - Marshalling shed
 - Fuel & LPG tanks
 - Emergency Generator 2
 - Wastewater Treatment Plant
2. But prior to the decommissioning of the equipment on site, first order of business would be to direct the waste streams (typically processed on-site) to authorised facilities in Malta or abroad. Priority shall be given to recovery, and only when not feasible, disposal shall be considered.
3. Disconnection of site services, whether partial or complete shall be considered prior to any dismantling work commences onsite. Consideration here shall be given to Health & Safety equipment which may need to be still powered on and put in stand-by during the actual decommissioning.
4. Equipment (see point 1 above), where possible, shall be decontaminated on-site, followed by inspection and if necessary further decontamination, once the equipment has been removed from position and before it has been removed from site.
5. Dismantling of equipment shall be subject to the same conditions and control of works as required by relevant Health and Safety legislation.
6. Certain general decommissioning steps involved:
 - **Health and safety precautions**, such as electricity, hazardous chemicals and fire/explosive atmospheres;

- **Deep clean of plant from any wastes** i.e. waste materials contained within tanks and piping. The wash waters generated during the deep clean would be handled as per the regular cleaning process.
 - **Draining of liquid wastes (e.g. oils, lubricants, coolants etc.)** will be into secure containment taking all necessary precaution against spills. Equipment in contact with such liquids will be cleaned with a detergent solution, and wastewaters segregated for safe disposal.
 - **Removal of hazardous components** and segregation in safe storage
 - **Dismantling of structures and equipment**, through; stripping of cabling and WEEE components (including switches and other peripherals), dismantling of metal components, systematically removing all ductwork, disconnecting valves, and segregation of plastic/rubber components as they are exposed/removed.
7. Envisaged waste streams from the decommissioning include: scrap metal, steel and plastics from the equipment material, insulation, textiles / fabric, WEEE, batteries, process waters, oils and grease.
 8. Dismantling would be undertaken either by WasteServ staff or by contractors under WasteServ's supervision. The work process would involve:
 - Review and evaluation of all environmental, health and safety precautions
 - Preparation of all equipment and contingency measures as required
 - Sequential dismantling and segregation of wastes as detailed above
 - Halting of works in case of accident or unforeseen circumstance
 9. Waste streams shall be segregated according to established criteria in place during time of decommissioning. Alternatives shall be sought to maximise reuse / recycling of such material, but in cases where this shall not be possible, treatment, conditioning, transport, storage and disposal/recovery methods will be carried out accordingly and in line with the best practices available. Eventually generated waste will be directed to authorised facilities in Malta or abroad.
 10. Dispatch of equipment from site whether as a saleable asset or as scrap, will be accompanied by a Certificate of Decontamination.
 11. All equipment containing chemicals will be drained and the chemical stored in appropriate containers and removed offsite to reduce the potential for spillage.
 12. Prior to carrying out each of the steps mentioned above, any potential sources of pollution to atmosphere, land and water will be identified. In cases where concerns may arise, corresponding mitigation measures to minimize the likelihood of such emissions will be provided accordingly.
 13. The site will be left in a safe manner and adequate regular site inspections will be carried out until such time as responsibility for the site has been transferred to the new owners. Assessment of the potential for contamination of land and ground water pollution will be carried out as agreed upon closure of the site.
 14. The entries highlighted above represent an outline; it is understood that a full decommissioning method statement would be required once a decision is taken to decommission these components, together with any ground investigations that may be considered necessary through an appropriate risk assessment.