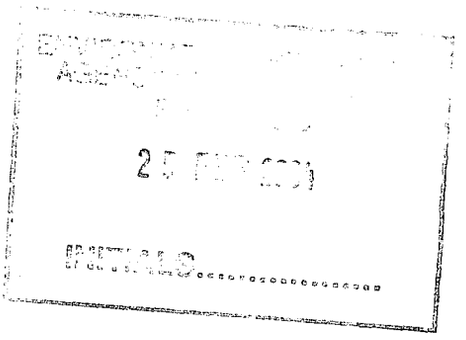
Section D

Facility Design



Section D.1 – Infrastructure

With the exception of the installation detailed below, the 430 Beech Road unit will remain as originally cited in the Waste Licence 55-1 Application, with the quarantine area present for the temporary storage of excluded waste before removal to 420 Beech Road.

In April 2002, a second shredder was installed to provide 100% shredding contingency. A new hydraulic powered bin hoist was positioned in front of the new shredding unit. This whole unit is fully enclosed and vented off to the HEPA filter. Waste travels from the new shredder to the base of the existing shredder by means of a transfer auger and thereafter through the main processing unit.

All laboratory tests for the overall facility will be conducted at 430 Beech Road.

Site drawing incorporating the 420 Beech Road Building are included in Section B.2. No change to any roads in the area has taken place since the previous licence application.

D.2 – Facility Operation

The facility will continue to operate in the same manner as it currently operates with the exception of the transfer station operation. Copies of procedures necessary for the operation of the STI system are included in Appendix 7 under ISO 9001:2000 procedures.

(a) System cycle

Briefly the system cycle operates as follows

The Sterile Technologies service commences at the dedicated collection point at the generating healthcare facility. This procedure will apply for the excluded waste fraction (5%) destined for the transfer station.

(b) Containment

- Healthcare risk waste is collected in UN approved wheeled bins for the carriage of healthcare waste. They carry the identifying marking. The current pool in the Republic of Ireland exceeds 3,500 bins. The company has instigated an annual new bin purchasing programme.

- All primary containers are placed in these wheeled bins prior to collection, thereby reducing manual handling of the waste to a minimum.

- All wheeled bins are bar-coded to facilitate the electronic tracking system employed by STI. This tracking system enables each generator to trace their bin from collection point to final entry to the treatment process at the STI plant.

- Wheeled bins have a secure locking mechanism to ensure safety during containment and transportation.

- Full bins are replaced with disinfected empty bins at all times.

© Collections

- STI operate a fleet of 22 dedicated vehicles for the transportation of healthcare risk waste.

- STI manage directly all scheduling, service performance and reviews against Key Performance Indicators (KPI's). Copies of KPI's are included in Appendix 1

- Collections are made to defined schedules, originally set out by the JWMB, these have evolved to suit individual client hospitals.

- Collections are structured in a way as to utilise vehicle capacity designed to suit client sites and volumes.

- Collection Procedure is detailed as follows:
    - wheeled bins are individually bar-coded
    - locations are uniquely bar-coded
    - On arrival at the collection point, the location barcode is scanned identifying the generating facility
    - wheeled bins are scanned before loading onto the vehicle
    - The consignment documentation is entered into the scanner, identifying the legal documentation with the generating facility
    - A print-out of the wheeled bins scanned is given to the producer, along with consignee portion of the documentation.

- Collection / deliveries are scheduled to ensure optimum plant throughput.

- Collections are transported directly to the Dublin Plant on the same day.

- The schedule is tracked through the IT-system based Key Performance Indicators (KPI).

- That fraction of waste requiring incineration (5%) is currently collected and transported directly to Irish Environmental Services Ltd. The operation of this service is governed by their licence no 40-1.

- This waste is transported under Transfrontier Shipping Licence to BIC-VDK Incinerator, in Mouscron, Belgium.

- The incineration facility provides IES with a certificate of destruction for all waste disposed of. Copies of these certificates are kept at STI and provided to all generators.

(d) Transport

- STI employ a dedicated Transport Manager to ensure optimum service levels to client Hospitals

- All vehicles are comprehensively insured. Employers Liability Insurance of €14M is currently in place, and the Certificate of Cover is included in Appendix 5.

- Drivers are compliant with the provision of Council Regulation (EEC) 3280/85 on Driver's hours, Council Regulation (EEC) 3821/85 on tachograph and the requirements of the European Agreement concerning the Carriage of Dangerous Goods by Road (ADR).

- The Waste Management Act 1996, Part IV, Section 34, requires a Waste Collectors Permit. STI are in receipt of all the required Collection Permits which are detailed in Appendix 3 .

- All vehicles display the following: - current insurance disc, current tax disc and current DOE Certificate.

- The transport fleet carries between twelve and forty-four bins. These bins are loaded by means of a deep tail-lift platform and are secured in a fully-enclosed carrying compartment. The driver's cab is isolated from the carrying compartment, protecting anyone in the cab from any potential spillage in the unlikely event of a collision.

- STI ensures that documentation in compliance with all regulations is fully completed by all parties.

- Due to the twenty-four hour operation, waste collections can be totally flexible and tailored to individual hospital requirements.

- Vehicles are maintained to the highest standards of safety and drivers are trained in Hazchem, ADR and CDGR.

- Drivers are fully trained to deal with any spillage of clinical waste during transportation. The use of the wheeled bin system reduces this risk to a minimum, and no incident of this nature has ever occurred.

- STI have an emergency response vehicle on standby at all times in the event that something goes wrong. This provides additional comfort to contracting bodies

- STI are fully compliant with the 'Duty of Care' requirement in respect of the service in the Republic of Ireland. The company had independent audits undertaken indicating industry leading standards in the UK and Ireland.

- A copy of the 'Duty of Care' audit in June 2002 is included in Appendix 2

- STI employ a Dangerous Goods Safety Adviser as a permanent member of staff.

(e) Weighing

- On arrival at the treatment plant, bins are off-loaded and scanned into the plant.

- Each bin is electronically weighed, with the weight attaching to the individual bar-code automatically.

- The tare weight is automatically deducted from the gross weight before data is transmitted to the accounts department for invoicing.

- Immediately prior to entry into the treatment unit, the wheeled bin is scanned again providing final proof of correct destruction.

- Weigh Scales at the Dublin plant are calibrated quarterly by independent auditors. Regulatory authorities undertake sporadic checks. Recent calibration certificate is attached in Appendix 1

(f) Processing Waste

- The bin serial number, date and time stamp are recorded immediately after the bin has deposited the waste into the shredder.

- Scanning at this point in the process provides an accurate record of the actual time of waste treatment.

- Once the contents of the bin have been discharged into the treatment process, it is then sent to the bin wash machine for thorough washing and disinfection

- Once disinfected, clean bins are re-circulated to client hospitals.

(g) Bin Wash System.

STI uses a Newsmith Bin Wash and Rinse System at the Dublin Plant.

- Bins are routed through the system following discharge of contents into the treatment hopper.

- The system can accommodate 360, 660 and 770 litre bin sizes

- Bin throughput is 20 bins per hour which equates to approximately one tonne of waste, which matches the overall capacity of the plant.

- Regular swab tests are performed on bins to assure the efficacy of the bin process.

The facility will continue to treat healthcare risk waste utilising the STI Model 2000 technology.

Where this is not possible (in the case of pharmaceutical, cytotoxic and anatomical waste), then the company propose to operate a transfer station within the newly acquired 420 Beech Road Building. STI

Requirements for Transfer Station Operation

The following is a list of items required for the efficient operation of a Transfer Station facility by Sterile Technologies Ireland Limited at 420 Beech Road. STI have previous experience operating a transfer station whilst operating under a different name (Waste to Energy Ltd). In addition, we also efficiently operate a transfer station in the Northern Ireland.

(a) Premises

STI will utilise the adjacent building to the current site of operation, at 420 Beech Road. A detailed plan of the internal payout of the premises is included in Section B.2.

(b) Competent Management

Two members of Senior Management (Vivienne Gillen and Tony Hutchins – reference Section L.2) have previous experience in the operation of Transfer Station. Tony Hutchins (Engineering Manager) currently operates a Transfer Station at the Antrim facility. STI also employ a full time Dangerous Goods Safety Adviser. STI propose to facilitate the onsite preparation of these materials for shipment in the same manner initially drawn up in the original Waste Licence Application 55-1 (Under Attachment D.2 (a)).

© Scales

The waste will be weighed in and logged in the same manner as the waste material that will be treated at the facility itself. This mode of operation will exactly mirror that currently utilised at the 430 Beech Road plant.

(d) Mode of Transportation

The current fleet of trucks owned and leased by STI will be responsible for the transfer of the waste material from the point of generation to the transfer station. All trucks conform to ADR and CDGR requirements.

(e) Drivers

All drivers employed by STI hold valid Haz-Chem licences.

(f) Waste Collection Permits

STI currently hold all Waste Collection permits necessary within Ireland. Details of these permits are included in Appendix 3 and submitted annually within STI's Annual Environmental Report to the Agency.

(g) Tracking of Waste

STI's electronic tracking system will be utilised the time waste has been picked up at the generation site (also by which driver and on which truck), as well as the time of arrival at the transfer station. Upon dispatch, this waste will again be scanned and will finally be scanned again at the port facility.

(h) Documentation

C1 documentation will accompany all special waste loads entering and leaving the Transfer station. The trucks are already stocked with TREM cards, and all waste being consigned to port will include Transfrontier Shipping Licences and TREM documentation, in addition to relevant Dangerous Goods Notes.

(i) Method of Containment

UN approved primary containers will be palletised, cling wrapped and tension strapped to ensure no movement can take place during transport. Cardboard boxes are used to over-pack smaller containers unsuitable for stacking. These pallets are fork-lifted on the container for shipment.

(j) Transfrontier Shipment (TFS) documentation

Annual Transfrontier Shipping Licences will be obtained from the local authority (South Dublin Co. Council) annually to facilitate the movement of waste, in addition to liaising with all other competent authorities. Contingency TFS's will also be applied for.

(k) Freezer Containment

Anatomical Waste will be contained within a freezer unit in accordance with storage guidelines detailed in the *'Specification for Collection, Transportation, Treatment & Disposal of Clinical / Healthcare Risk Waste'* document issued by the Joint Waste Management Board in 2003.

This area will be secured and bunded to prevent any potential leakage, which is a negligible risk.

(l) Bunds

All waste contained within the transfer station will be stored within a bunded area, which will be able to contain no less than 110 % of the total waste envisaged to be stored there. As a small quantity of this waste is envisaged to be liquid in nature, the possibility of significant spillage occurring is small.

(m) Spill Kits

Spill kits will be located within the transport unit bringing the waste to the STI transfer station, at the transfer station itself and on the transportation unit leaving for port.

(n) Revised Licence

This information is being submitted as part of STI's Waste Licence (55-1) review request. Amendments to the current licence will be required in order to allow transfer station activities to commence.

(o) Shipping Company

At least two competent shipping companies (to act as contingency) will be sourced to carry the waste from the Dublin port facility to the receiving port in mainland Europe.

(p) Final Point of Disposal

A competent incineration facility has been sourced, who will deal with this waste material dispatched by STI in a safe and complete manner. Any facility appointed must have sufficient contingency in place to allow for waste dispatched by STI to be treated at all times.

Certificates of Destruction will be received from the incineration facility and provided to generators.

Section D.3 – Material Management

Material management will involve all processable material being treated by the STI Model 2000 system already installed in 430 Beech Road and to be installed in 420 Beech Road, with the remaining excluded fraction being transferred through 420 Beech Road for incineration abroad.

The definitions given by the Priority Healthcare Waste Working Group into the various categories of Healthcare Risk Waste, which were submitted under Attachment D.3 (a) of the original Waste Licence 55-1 submission, still hold.

The guidelines specified in the *'Segregation, Packaging and Storage Guidelines for Healthcare Risk Waste'* will be strictly adhered to in the operation of these plants.