Brinny	**Page 1 of 24**
Title: **Waste Management and Prevention Procedure**	**Doc No.** SAFTY 76 **Version** 19.0
Owning Area Safety & Environment	
Subset Documents	N/A

1. Purpose

To establish the requirements for managing wastes and preventing waste generation ***including project waste.***

2. Scope

This procedure applies to all MSD Brinny employees, NMP's, Visitors and Contractors that generate and manage either hazardous or non-hazardous wastes.

3. Requirements

In addition to the requirements included in this procedure, compliance must be maintained to all applicable local, state and national regulatory requirements.

4. Utilization of the *Procedure*

For MSD Brinny this document must be used as a Site Level Waste Prevention and Management Procedure.

5. Key Terms

Refer to **Attachment 1.0** – **Definitions**

6. Key Requirements

Requirements	Section
Characterize / Classify wastes and maintain a waste inventory	8
Manage on-site waste in accordance with requirements including proper handling, storage, labelling, inspections and treatment.	8
Use personnel qualified and trained in preparing waste for off-site shipment to manage waste and unwanted items sent to designated off-site locations.	8
Establish programs to prevent or minimize waste that are in compliance with regulatory and permit requirements and to the extent practical	8
Complete the required training consistent with waste prevention and management work performed	9
Complete an overall program evaluation and maintain records	10,11

7. Responsibilities

7.1 Site/Area Management – Provides resources necessary to implement the program requirements and manage compliance, supports the site's inspection, waste prevention, reduction and management efforts and non-regulatory initiatives, and confirms that program elements are implemented promptly.

7.2 Line Management – Be knowledgeable of waste requirements in their area of responsibility, schedule and conduct inspections as ***per SAFTY64 EHS Inspection, Self-Assessment and Audit Management*** as required, provide procedure-related training, and implement corrective actions. ***Line Management must ensure that Waste Stream Posters are implemented in their area, are accurate of the wastes generated and complied with. New waste streams must be included in Waste Stream Posters and posters updated as required.***

7.3 Competent Person/Program Subject Matter Expert (SME) – Provides specialized technical review and guidance; also defines program requirements.

7.4 EHS – Supports program administration, development, implementation and verification of compliance, obtains permits/approvals/registrations, assures regulatory required reports are submitted, communicates significant findings to site/area management, and acts as a liaison with overlapping programs (i.e., air, water, dangerous goods transportation).

7.5 Affected Persons – Comply with all waste prevention and management requirements related to their job activities. ***Follow Waste Stream Posters guidelines when disposing of waste.***

7.6 Global and Site Procurement – Complies with the procedures related to the management of contracts.

7.7 Waste Treatment Equipment Operator – Operates waste treatment equipment or systems consistent with equipment design, regulatory requirements and permits and maintains required certifications.

For MSD Brinny the Total Waste Management (TWM) contractor acts as the role of waste treatment equipment operator. The current TWM is Indaver.

7.8 Waste Handler/Shipper - Handles and/or ships wastes in accordance with regulatory, permit and ***MSD*** requirements. ***New waste streams are required to be highlighted through the EHS MOC procedure. Refer to SAFTY49 for guidance.***

7.9 TWM Contractors - Advise, identify, handle, prepare, load and consign wastes for offsite recovery/treatment/disposal in accordance with regulatory, IE License and MSD requirements. The contractor is responsible for;

- ***Ensuring that wastes are only sent to MSD approved waste vendors for treatment or disposal.***

- ***Maintaining a site waste inventory which provides details on all waste streams generated by MSD Brinny and waste management requirements.***
- ***Characterizing all wastes generated onsite.***
- ***Classification of all wastes (as per Dangerous Goods Transportation regulations and MSD SAFTY74).***
- ***TWM contractor ensures all waste movements comply with relevant legislation,***
  - ***Waste management acts and regulations***
  - ***Dangerous Goods regulations by relevant modes such as Road (ADR) and Sea (IMDG).***
- ***Ensure all wastes movements are contained, secured and transported. This includes the review of collection skips, containers, trucks, tanks, trailers used for the storage of waste during transit.***
- ***Maintaining waste disposal records for site waste ensuring access is available to relevant MSD personnel. These waste disposal records should include the following headings:***
  - ***Date of movement,***
  - ***Waste type,***
  - ***Regulation name,***
  - ***European List of waste code (LoW),***
  - ***DG classification***
  - ***Disposal/Recycling Codes***
  - ***Waste transporter/hauler,***
  - ***Intermediate and end recovery/recycling/Treatment/Disposal location***
  - ***Quantity,***
  - ***Confirmation of treatment (e.g. Certificate).***
- ***Ensure All contractors within MSD Brinny including subcontractors must be approved as per SAFTY50.***
- ***The TWM contractor is responsible for Tracking wastes onsite and ensuring no waste remains onsite for a period of greater than 6 months. If a TWM contractor cannot move a waste within 6 months timeframe, the contractor must notify CBRE/EHS six weeks in advance (i.e. in advance of generated waste remaining onsite for 6 months).***
- ***Ensures that the requirements of Attachment 10 are followed.***

- ***Ensure all Waste Incidents are notified to site and raised on Enablon within 24 hours of the event or as soon as it is notified to the TWM contractor***

7.10 Project Contractors/Catering Contractors – Conform to site practices and agreements regarding the management of wastes via designated TWM contractor. Ensure all project waste is managed in conjunction with the TWM. Follow project waste procedures as per SAFTY76

7.11 Waste Generator- Must ensure waste is managed according to requirements of this SOP and site waste inventory.

- ***Request Characterization of new wastes which are not on the site waste inventory prior to arranging for the waste stream to be managed by the TWM contractor.***
- ***Complete Attachment 7.0 - New Waste Generation Forrm at least 1 month in advance***
- ***Send completed forms to the TWM contractor for characterization and arrange for the site/local area waste inventory to be updated.***
- ***The Waste Stream cannot be added until the waste stream is approved, and direction provided by Indaver Technical Team.***
- ***Once the site/local area waste inventory is updated the waste stream can be managed by the TWM contractor.***
- ***Laboratory waste generated must be accompanied by the relevant attachment(s), 5, 6, 7, 8 or 11 where relevant prior to collection by the TWM contractor.***

8. Requirements

8.1 Site Waste Characterization / Classification and Inventory

1. Characterize / Classify wastes. Where allowed by regulation or permit, wastes may be combined for waste identification purposes in accordance with **Attachment 3.0.**
2. Maintain a waste inventory that lists each waste stream and its regulatory characterization / classification to identify applicable regulatory, permit and ***MSD*** program requirements. ***The TWM contractor is responsible for maintaining the Site Waste Inventory.*** The inventory includes the following information:
    - Waste name/identification
    - Waste Generating location (area, department, building, floor, room)
    - Hazard(s) associated with the waste
    - Name of process/activity producing the waste stream (if different from location)
    - Owner (if different from source)
    - Regulation Name
    - Regulatory characterization / classification and type of supporting information (e.g., waste profiles, sample analysis and characterization, process knowledge)
    - Rationale for any exemption determinations
    - Waste description
    - Method of on-site storage/treatment (tank, drums, boxes, incineration)
    - On-site waste collection, storage and/or treatment locations
    - Maximum quantity at each storage location and maximum amount produced annually
    - Method of disposition (e.g. recycling, reuse, treatment, disposal)
    - ***Corresponding Waste Stream Name as per area Waste Posters.***
3. Select waste sampling methods that are in compliance with permit and regulatory requirements and corporate guidance and are appropriate for the intended purpose. This is done when sampling may be necessary for determining the regulatory characterization / classification or appropriate handling requirements for a waste.
4. Review analytical laboratory data to assure that information used by operations for waste management decisions is accurate.
5. As part of the Management of Change (MOC) process, evaluate the impacts to existing wastes or the potential for generating new wastes prior to making operational or process changes. ***This should be captured through EHS MOC (SAFTY49***).

6. Characterize / Classify and add new wastes to the site waste inventory prior to or as soon as practical following initial generation and notify affected persons.

8.2 On-Site Waste Management

1. Manage each waste in accordance with regulatory, permit and ***MSD*** requirements.
2. Handle and store wastes to prevent:
   - Safety hazards
   - Conditions potentially harmful to on-site personnel or public health
   - Releases to the environment
   - Nuisances such as odours, dust, noise, and unsightliness
3. Prohibit on-site disposal of waste onto or into land unless specifically authorized by GSE. (e.g. via a variance). Except for manure disposal, GSE approval is not needed for on-site waste disposal when such disposal is permitted by a site operating permit. (Note: this restriction does not apply to soil and landscaping debris nor does it prohibit the temporary storage of equipment or building materials intended for future use).
4. Manage on-site waste in accordance with ***Attachment 2.0.***
5. Manure managed by land application must be in accordance with **GDL 18.03 Manure Management Guideline.**

8.3 Waste Stream Posters

- ***Waste Stream Posters provides a clear visualization of every step of a waste item's lifecycle: illustrating how to identify, safely handle and process waste.***
- ***Waste streams are identified as hazardous / non-hazardous, the required PPE when handling waste, the correct disposal methods, storage area and associated documentation to be correctly filled out to ensure proper disposal and procedures are followed.*** **Any new approved waste streams must be included in Waste Stream Posters**.
- ***If updates to a Waste Stream Posters are required, please follow the MOC process.***
- ***Updates to posters must be reviewed and approved by the relevant area prior to publishing, with the TWM and EHS BP.***

8.4 Project Waste Management

- ***Project waste is defined as waste financed by capital and expense projects.***
- ***Project Contractors/Catering Contractors – Conform to site practices and agreements regarding the management of wastes via designated TWM contractor. Ensure all project waste is managed in conjunction with the TWM. Follow project waste procedures as per SAFTY76***
- ***Project waste skips may only be placed in the designated project skip locations per Att 13.***

  If a project has requirements for additional skips being positioned outside of these designated locations, the project must propose and facilitate an appropriate area with EHS & Facilities approval. The proposal must be in line with condition 8 of the site IEL Licence requirements.

- ***The waste generator must engage with the TWM contractor <u>at least 6 weeks</u> before required delivery of skips to site.***
- ***The process for initializing project waste collection through to removal of full skips from site, is detailed in Att. 12 Project Waste Process Flow***
- ***The waste generator must engage with the TWM contractor at least 6 weeks before required delivery of skips to site. The TWM contractor will advise of required documented information which must be completed by the waste generator in full, in order to produce a quote for proposed works. Project waste must be carefully detailed, as there may be numerous projects happening at the same time, and each project requires a unique Purchase Order number***
- ***All skips of various sizes must be covered with a PVC Cover when not being filled. If a PVC cover is damaged while the skip is in use, the cost for repair / replacement will be invoiced to the waste generator. PVC Covers should be stored appropriately when not in place.***
- ***All skips must be clearly labelled with intended waste stream and point of contact.***
- ***It is the skip requestors responsibility to ensure the waste stream corresponds with the original skip request. The TWM contractor has the right to refuse collection due to mixed waste streams in skips. The TWM contractor may also re-classify skips when segregation non-conformances occur, at a cost to the skip requestor. Additional charges may also be incurred for cancellations of skips within 24 hours of the skip placement due date.***

8.5 Decontamination/Decommissioning of Buildings, Facilities, Plant or Equipment

- ***Decommissioning Waste is waste generated following the withdrawal and decommissioning of buildings, facilities, plant or equipment.***
- ***Waste management will, at a minimum, follow the requirements of MSD SAFTY 76- Waste management procedure, including waste tracking, waste documentation and wastes reporting for IE license purposes.***
- ***Equipment resulting from this project will either be re-used on site or will be disposed of off-site as a waste. No equipment will be sold or donated to a third party.***
- ***The anticipated waste generated during the decontamination project will include both hazardous and non-hazardous properties.***
- ***The TWM contractor, will advise, identify, handle, prepare, load and consign wastes for offsite recovery/treatment/disposal in accordance with regulatory, Industrial Emissions License and MSD requirements. The contractor is responsible for:***
    - ***Ensuring that wastes are only sent to MSD approved waste vendors for treatment or disposal.***
    - ***Maintaining a site waste inventory which provides details on all waste streams generated by MSD Brinny.***
    - ***Waste management requirements.***
- ***The TWM Contractor will ensure all wastes movements are contained, secured and transported. This includes the review of collection skips, containers, trucks, tanks, trailers used for the storage of waste during transit.***
- ***The MSD Brinny site has two independent waste management areas where waste is collected wastes (from satellite waste locations) stored, repackaged and prepared for shipment to an approved outlet. These areas are:***
    - ***Waste Compound on main site - All waste which is generated on MSD Brinny main site is collected by Indaver and brought to the Waste Compound located in north side of main site. No wastes from MSD Brinny main site are to be transported across public road (e.g. to B21 area).***
    - ***All wastes generated in B21 area is collected by Indaver and brought to the B21 Waste Compound area. No wastes from Building 21 area are to be transported across public road (e.g. to main site).***

Note: ***All waste deliveries to/collections from either waste compound must be completed by Waste Management contractor only***

- ***The TWM Contractor will maintain waste disposal records for site waste ensuring access is available to relevant MSD personnel. These waste disposal records should include the following headings:***
  - ***Date of movement,***
  - ***Waste type,***
  - ***Regulation name,***
  - ***European List of waste code (LoW),***
  - ***Dangerous Goods DG classification, Disposal/Recycling Codes***
  - ***Waste transporter/hauler,***
  - ***Intermediate and end recovery/recycling/Treatment/Disposal location***
  - ***Quantity,***
  - ***Confirmation of treatment (e.g., Certificate)***
- ***All waste generated following permanent withdrawal and decommissioning of any buildings, facilities, plant or equipment (Ref. EOP547) must have the relevant decontamination records prior to classification of waste as non-hazardous and disposal of waste off site. These records will be stored with the on-site Waste management records.***
- ***The Project Deletion Team must ensure that all pieces of equipment will be de-badged before waste disposal.***
- ***Dry recyclables, plastic/paper, general waste, food waste and shredded paper and uncontaminated glass are to be packaged, labelled and segregated as non- hazardous waste.***
- ***Hazardous waste, i.e. porous material such as gaskets, floor covering, tubing, must be packed into primary packaging e.g. red bags and outer UN approved packaging, and must be labelled to indicate contents and placed in 200 litre drum and labelled as 'Hazardous waste'.***

- ***Waste containers (e.g. drums/containers/tankers) must be approved by Indaver for safe disposal and transport.***

- ***The TWM Contractor will provide confirmation of all waste disposal including all waste metal/ steel i.e. certificates of destruction.***

    - ***If decontamination is not complete or cannot be verified with documented evidence to be decontaminated, then the waste should be managed by the TWM contractor and classified as 'hazardous' and must be disposed as 'Hazardous waste.***

8.6 General Requirements

The site shall ensure that the general requirements outlined in Attachment 1 and 2 are met and specifically that:

- ***Each waste is managed in accordance with regulatory, IE License and MSD requirements***
- ***Waste generated will not be stored on site for a period greater than six months.***
- ***Waste shall be stored in designated areas, protected appropriately against spillage and leachate run-off and:***
  - ***Where wastes that are intentionally collected in containers with covers to control nuisances or hazards, these covers must be kept closed except when being filled or emptied.***
  - ***All liquid wastes must be stored in closed tanks or sealed containers except when being filled or emptied. All liquid waste storage containers must be bunded.***
  - ***Waste containers including those in laboratory hoods and cabinets must be managed in areas with a non-permeable surface and adequate secondary containment or diversion systems to handle spills.***
  - ***Wastes that are incompatible must be stored separately and provided with separate secondary containment to prevent hazard upon concurrent release.***
- ***Waste shall not come into contact with rain.***
- ***Steel containers of waste must be stored in locations that protect the container from corrosion if the container is not designed for outdoor use.***
- ***Wastes containing harmful materials must be securely stored at designated locations to prevent accidental release, unauthorized access, and theft***
- ***Waste storage locations will be clearly identified and designated for consolidation and collection of waste with such methods as signage or floor markings. Examples include tanks, collection rooms/areas and storage compounds.***
  - ***Wastes shall be appropriately segregated (refer to segregation chart in SAFTY48) to prevent the following: Safety Hazards***
  - ***Conditions potentially harmful to on-site personnel or public health.***
  - ***Releases to the environment***
  - ***Nuisances such as odours, dust, noise and unsightliness***

- ***Waste sent off-site for recovery, treatment or disposal shall be transported only by authorized Waste contractors/transporters. The waste shall be transported from site only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols***
- ***Waste shall only be recovered, treated or disposed of at a facility holding the appropriate waste permit/license and for hazardous or production related wastes on the approved MSD master list.***
- ***In advance of transfer to another person, waste shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.***
- ***Test certificates shall be kept on file for each UN approved drum used onsite by the TWM contractor.***
- ***The loading and unloading of wastes shall be carried out in designated areas protected against spillage and leachate run-off***
- ***No mixing of waste categories shall take place on site***
- ***On-site disposal of waste onto or into land is prohibited, unless specifically authorized by GSE. (Note: This restriction does not apply to soil and landscaping debris, nor does it prohibit the temporary storage of equipment or building materials, intended for future use.)***

8.7 Waste Labelling, Inspections, and Treatment

1. Clearly label collection containers and tanks as to their intended contents and any associated hazards (e.g., poison, flammable, radioactive).
2. Clearly identify locations designated for consolidation and collection of waste with such methods as signage or floor markings. Examples include tanks, collection rooms/areas and storage sheds.

- ***Waste shall be clearly labelled at source (point of generation).***
- ***All waste Containers, IBC's, Drums supplied to MSD by the Waste Management Contractor will be pre-labelled with a blank MSD label (Attachment 4). This label shall be filled out by the waste generator requesting the packages. The TWM Contractor will provide these labels upon delivery of the empty packages.***
- ***All waste drums provided by MSD colleagues to the TWM Contractor shall provide the Closing Instructions so as to ensure that the TWM Contractorwill close the drum in the correct manner.***
- ***The TWM Contractor will refuse to collect waste from areas if it does not carry the MSD waste label clearly identifying the contents. Labels are available on request from the TWM contactor.***
- ***All waste must be appropriately labelled and clearly legible (see example label in Attachment 4.0) and at a minimum contain:***
  - ***Department & Waste Collection Location***
  - ***Waste form i.e. Solid, Liquid, Gas, Other***
  - ***Waste Name I.e. Regulation name***

    The regulation name is available from site waste inventory (TWM Customer zone. To view this, inventory contact area waste representative).
  - ***Composition of waste stream***
  - ***Approx. quantity/volume of waste***
  - ***Date waste was generated***
- ***Application of waste label (Attachment 4):***
  - ***Ensure the label is clearly legible Print Name***
  - ***Apply to directly to a clean dry surface on drum/container. Do not apply to a label on temporary/non-UN approved outer package (e.g. liner).***
  - ***Apply label to the side of drum/packaged***
  - ***Ensure label is secure to the container.***
  - ***CLP Label or Dangerous Goods Label***

3. Perform routine inspections of hazardous and special waste collection, storage, packaging and shipping locations to verify compliance with regulatory, permit and ***MSD*** requirements. The frequency of the inspections should be as required by local, state/provincial or federal regulations or facility permit. At a minimum, waste area inspections document the following:
    - Date of inspection
    - Name of area being inspected
    - Name of person completing the inspection
    - Type(s) of waste (e.g., hazardous, medical, radioactive)
    - Wastes are stored in the appropriate designated location
    - Substances stored in the same area are compatible
    - Containers and storage areas are clearly and accurately labelled
    - Containers are in good condition and are structurally sound
    - Evidence of spill or leak
    - Housekeeping and aisle space are adequate
    - Wastes are disposed within the appropriate timeframe
    - Corrective actions
4. Allow only qualified and trained personnel to operate waste treatment equipment (e.g., incinerators, autoclaves, compactors). All operators will be appropriately licensed or certified in accordance with governing regulations and/or recognized industry standards.
5. Maintain and inspect waste treatment equipment in accordance with regulatory permitting requirements and/or manufacturer recommendations.
6. Equipment or system procedures will be written and available for operating waste equipment and ensuring regulatory parameters are maintained. These procedures must address:
    - Operating control parameters
    - Monitoring parameters
    - Management of treatment residues
    - Plans for responding to operational upsets or malfunctions
    - A Review and update of procedures as system changes occur.

8.8 Waste Hierarchy

All personnel that generate waste onsite will have regard for the waste management hierarchy and where feasible shall be managed in the following order of preference:

a) Strategic Sourcing/Sustainable Use of Materials/Green Chemistry

b) Prevention

c) Reduction

d) Re-use

e) Recycle

f) Energy Recovery

g) Treatment

h) Disposal

The management and performance of waste programs is documented in the Site Annual Environmental Report.

8.9 Management of Empty or Unused Containers

Empty or unused containers must be managed appropriately, including:

- ***Until an empty unclean container (e.g. a drum, jerrican, etc.) is appropriately cleaned, it must be managed in the same manner as a full container, as it still holds a small amount of the original contents all Hazardous labels must be visible***
- ***If the original contents are classified as dangerous goods and regulated for transport, then the empty, uncleaned container must be shipped as dangerous goods. The dangerous goods transportation regulations apply.***
- ***Labels on containers must be defaced/blackened/removed and replaced with accurate label e.g. 'empty cleaned container' which previously contained Isopropanol or 'empty unused container'.***
- ***Cleaning should be accompanied by appropriate documentation.***

Empty container may only be cleaned, where the following has been completed:

- ***Cleaning refers to the use of suitable cleaning agents and cleaning methodology which will nullify hazard.***
- ***Appropriate risk assessments, including Chemical/Exposure assessments (and as required IH/exposure assessments) and ergonomic assessments are conducted for each operation.***
- ***Cleaning can be accomplished by any means (as per approved risk assessment) that completely removes the original contents from the container. Examples of cleaning methods include, but are not limited to, washing, triple rinsing and decontaminating. Containers must not be cleaned with another material that is classified as a dangerous good.***
- ***Empty containers to the maximum extent possible before washing or shipping offsite.***

The following practices are not permitted:

- ***Removal of chemical residues from containers using evaporation to the atmosphere.***
- ***Evaporation of residual solvent from laboratory reagent bottles by removal of caps and placing in a fume-hood overnight.***
- ***Evaporation of residual solvent from drums by removal of caps.***

- ***Inverting of chemical drums, allowing the contents to drain over a prolonged period.***
- ***Forced ventilation of a container with compressed air or warm air to remove residual liquid, where no prior cleaning has occurred.***

8.10 Waste Characterisation

The TWM contractor is responsible for characterizing all waste generated by MSD Brinny. Characterization must be completed in accordance with EPA guidelines, applicable regulations and MSD standards (see Attachment 10). Characterized waste will be listed in the site waste inventory (maintained by TWM contractor). Attachment 7 must be completed by the waste generator for any new waste streams and submitted to waste management contractor and EHS to enable characterization. Any new waste stream generated must be characterized (Attachment 7) prior to adding them to the site waste inventory and prior to disposal/treatment off-site.

8.11 Management of Wastes

- ***No wastes must be accepted by TWM contractor or taken offsite unless listed in the site waste inventory.***
- ***Label waste (see Attachment 4.0) with waste name and hazard as per site Waste inventory.***
- ***TWM contractor maintains a complete waste inventory for MSD Brinny.***
- ***TWM contractor characterizes/classifies wastes and provide directions on its packaging and management.***
- ***New waste must be notified to TWM contractor via Attachment 7.0 'New Waste Form'. On receipt of Attachment 7.0, TWM contractor must update Waste inventory.***
- ***TWM contractor must complete a viewing of all new wastes.***
- ***In the event of miss application of SAFTY76 requirements by the areas a Not Right First Time (NRFT) report (Attachment 17.0) must be issued when identified by TWM contractor. Examples of NRFT are: incorrect labelling, segregation, packaging requirements, etc.***
- ***Whenever a NRFT report is issued, the IFM Provider will raise an Incident within 24 hrs and in alignment with the area line management and area EHS rep, an Enablon owner is to be provided by the EHS rep and Incident is then assigned to the correct area.***

8.12 Management of Hazardous Wastes

- ***All waste packaging (primary packaging e.g. Red bags and outer UN approved packaging) must be labelled to indicate contents using the name in the analysis column of the waste inventory and where applicable (i.e. for Dangerous Goods) packaging roles and responsibilities document.***
- ***No Dangerous Goods wastes must be taken offsite unless listed in both the Waste inventory and the packaging roles and responsibilities document.***
- ***Ensure all streams are compatible and appropriate risk assessments are completed.***
- ***Waste containers (e.g. drums/containers/tankers) must be approved (compatible) for safe disposal and transport.***
- ***Dangerous Goods must be packaged as per Roles & Responsibilities document – contact TWM contractor or EHS.***
- ***Dangerous Goods duties (as described in SAFTY74) must be performed by suitably trained persons.***
- ***Before Filling***:
    - ***Keep container closed at all times except when filling.***
    - ***All Hazardous waste packaging must be specified on the Contract of Carriage (by TWM contractor).***
    - ***Use sealed connections i.e. no open handling where chemical poses exposure risks.***
    - ***Do not overfill-liquid containers i.e. need 10% space for ullage.***
- ***Before handling:***
    - ***Ensure correct PPE as specified in task/chemical risk assessment is being worn.***
    - ***Keep weight to a manageable level and before performing a lift assess lift options using manual handling principles.***
- ***Only approved liquid waste streams can be sent to the WWTP process drain. For characterization (Refer to SAFTY105).***
- ***Waste streams from laboratory instrumentation discharged through tubing must be arranged so that discharge tubing does not obstruct or hold-open the container's tight fitting or self-closing lid.***

8.13 Off-Site Waste Management

1. Manage waste in compliance with regulatory, permit and ***MSD*** requirements. ***MSD*** requirements for managing off-site waste are provided in **Attachment 3.0**.
2. Ship wastes off-site only from designated locations at the site.
3. Use personnel qualified and trained in preparing waste for off-site shipment, which may include waste and transportation requirements.
4. An Equipment Release Form must be used as required by the SN36 Acquisition- Divestiture Standard to communicate the decontamination status of laboratory and manufacturing-related equipment that may be contaminated with chemical, biological, or radiological materials. ***Refer to SAFTY140***.

8.14 Waste Prevention, Reduction, Recycling and Sustainable Use of Materials

Establish programs to prevent or minimize waste that are in compliance with regulatory and permit requirements and to the extent practical. These programs should address:

- Green Chemistry
- Recycling/**Reuse**
- Other beneficial reuse
- Recovery
- Strategic Sourcing
- Sustainable Use of Materials

9.0 **Training**

All personnel involved with waste prevention and management activities must be trained. The training must cover the roles and responsibilities a person is expected to perform. ***Completion of this training will be tracked using MyLearning.*** Training requirements are provided below.

9.1 Awareness Training

Affected Persons must be provided with suitable and sufficient information, instruction and training to ensure they understand their responsibilities associated with waste activities.

9.2 Waste Treatment Equipment Operator Training

Employees who operate waste treatment equipment must be trained on the responsibilities they are expected to perform.

9.3 Waste Handler/Shipper Training

Employees who handle or ship waste must be trained on the responsibilities they are expected to perform.

9.4 Waste Characterization Training

Employees who characterize waste must be trained on the responsibilities they are expected to perform.

9.5 Additional/Supplemental Training

Repeat training should be completed when

- specified by applicable regulations
- incident investigations or audits identify issues with the program or gaps in personnel understanding and/or application of waste prevention and management work practices
- significant regulatory changes are made.

10.0 **Program Evaluation**

An evaluation of the Waste Prevention and Management Program must be completed at least once every three years or more frequently if observations or audits indicate it is warranted. Information reviewed during the evaluation must include program documentation, waste generation rates, recycling rates, training records, audit and inspection findings, and field observations.

Actions must be developed, as needed, when opportunities for improvement are identified.

11.0 **Record Keeping**

Waste Prevention and Management Program records must be maintained consistent with the ***MSD*** records retention program and in accordance with local, state and/or national regulations. At a minimum, records include:

- Permits, authorizations and certificates related to waste. Copies of these must be maintained in the enterprise EHS management software. ***(Enablon)***
- ***Environmental Protection Agency*** correspondence including compliance reports
- Records of all sampling and analysis as well as chain of custody forms
- Compliance plans and SOPs
- Copies of personnel certifications/licenses and training records
- Contracts and agreements related to waste and waste management operations
- Shipping records including manifests, bills of lading and certificates of destruction where available. ***Shipping records to include:***
    - ***Tonnages and LoW Code for the waste materials sent off-site for disposal recovery,***
    - ***Names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number),***
    - ***Details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/license details and issuing authority,***
    - ***Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site,***
    - ***Details of all waste consigned abroad for Recovery and classified as 'Green' in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended). The rationale for the classification must form part of the record,***
    - ***Details of any rejected consignments,***
    - ***Details of any approved waste mixing,***
    - ***Tonnage and LoW Code for the waste* materials recovered/disposed onsite.**
- Results of inspections and monitoring
- Preventive maintenance and calibration records
- Calculations supporting compliance demonstrations
- Training records
- Program evaluations

12.0 **Reference**

- ***GSE Standard SN18 – Waste Prevention and Management***
- ***SAFTY27 EHS Risk Assessment***
- ***SAFTY48 Chemical Management***
- ***SAFTY49 EHS Management of Change***
- ***SAFTY51 Industrial Hygiene***
- ***SAFTY67 Spill control***
- ***SAFTY74 Dangerous Goods and Transportation***
- ***SAFTY105 Wastewater Characterization Procedure***
- ***SAFTY140 Acquistion-Divesiture Procedure***
- ***Industrial Emissions (IE) License Number: P0005-03***
- ***ADMIN869- Refrigerant Management Plan***
- ***TWM contractor Procedures***

13.0 **Attachments**

Attachment 1.0 - Definitions

Attachment 2.0 - Global On-Site Waste Management Requirements

Attachment 3.0 - Off-Site Waste Management

Attachment 4.0 - Waste Label

Attachment 5.0 - Waste Collection Point Locations

Attachment 6.0 - Laboratory/waste Smalls Packing Sheet

Attachment 7.0 – New Waste Generation Form

Attachment 8.0 - Solvent Waste Canister List

Attachment 9.0 - Waste Vials Record

Attachment 10.0 - Principles of Classification and Combining wastes

Attachment 11.0 - Waste Drum Record

Attachment 12.0 – Project Waste Process Flow

Attachment 13.0- Designated project waste skip locations

Attachment 14.0- Example of Non- Hazardous waste onsite

Attachment 15.0- Example of Hazardous waste onsite

Attachment 16.0 Training Matrix

Attachment 17.0 NOT RIGHT FIRST TIME REPORT Form

Knowledge Transfer Assessment (KTA)

Assessment questionnaire **Please answer the following questions** **Pass Rate : 100%**			
Procedure No.	SAFTY76	Version No.	19.0
Procedure Title (ensure exact title)	Waste Management and Prevention Procedure		
Questions / Answers			
Q1	Does Waste Stream Posters replace Delta Streams name?		
A1	a) True b) False		
Q2	How many times must a container be rinsed?		
A2	A) Single rinsed B) Double rinsed C) Triple rinsed D) No need to rinse		
Q3	Which Attachment is for on-site Waste Management Requirements		
A3	a) Attachment 1.0 b) Attachment 2.0 c) Attachment 3.0 d) Attachment 4.0		

14 Change History

Change History	
Proposed Version no.	**Description of change (for Editorial Changes only) Or Summary of changes and GCM no. (for non-Editorial Changes only)**
18.0	Editorial changes Attachment 16 Training Matrix added Updated section 8.3 Waste stream posters to include With TWM and EHS BP.
Version 18.0 was approved but not made effective as the following updates were required.	
19.0	Editorial updates to correct attachment numbering. New Attachment 17.0 NOT RIGHT FIRST TIME REPORT form. Section 8.11 updated to reference this attachment. L&D Consultation outcome: Training is required for this update.

ATTACHMENT 1.0 - Definitions

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road

Approved Facility – A disposal facility that has been approved for disposal of ***MSD*** waste, and has been added to the Approved Waste Management Facility List.

Approved Waste Management Facility List- The List of GSE- approved disposal facilities that can be sued by ***MSD*** sites.

Area Waste Inventory - A complete listing of waste generated by each area

Collection Container – A container that waste is added to over a period of time. Examples include trash cans, safety cans, drums, tanks.

Commercial Infrastructure – Non- ***MSD*** businesses including but not limited to transporters and facilities.

Container – Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like.

DGSA - Dangerous Goods Safety Advisor

Designated Personnel – Trained site personnel with assigned job responsibilities associated with waste handling.

Direct Reuse – Use or reuse without prior treatment.

Disposition – The final method by which a waste is managed (e.g., treatment, disposal, recycling, reuse).

Hazardous / Special Waste – Waste that requires special handling, as defined by a national, state/provincial, or local regulatory agency (e.g. Radioactive, RCRA, special waste, chemical waste, dangerous waste, etc.). This also includes petroleum products, pharmaceutical actives, pharmaceutical intermediates, medical/biological/infectious materials, or any other materials or compounds that, in the site's judgment, may be hazardous to human health and/or the environment. Where available, an MSDS should be used to assess the hazard.

Hazardous Material – Any chemical which presents a health hazard) Under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) or a location- specific standard) or can present significant risk to the environment when improperly stored, treated, transported, disposed of or otherwise managed. ***Waste and Hazardous Waste is also defined in Waste Management Acts (as amended).***

Industrial Emissions (IE) License - A license issued by the Environmental Protection Agency to industrial emissions directive activities specified in the First Schedule to the Environmental Protection Agency Act 1992 as amended. This can also include waste facilities.

Landscaping Debris – natural material associated with routine site landscaping activities, including branches, leaves, grass clippings, trees, and shrubs.

License – A document that provides official regulatory or legal permission to operate a facility, process or equipment.

Manure:

- **Challenged Manure**: Manure from animals that have been internationally exposed to biological agents and regulated toxins for the purposes of either QA/QC studies or research.
- **Non-research Manure**: Manure from animals not being administered experimental drugs. There are two types of non-research manure:
    - **Naïve Animal Manure**: Manure from animals that have not been administered experimental drugs or been involved in QA/QC studies. Approved drugs may be administered to naïve animals as needed to maintain their health and well-being, but not for the purpose of QA/QC testing and observation.
    - **QA/QC Manure**: Manure from animals receiving approved drugs for the purposes of QA/QC testing and observation.
    - **Research Manure**: Manure from animals being administered experimental drugs that have not been approved for use by the governmental Competent Authority regulating drug products.

Mixed Waste – Radioactive waste that is also hazardous waste and/or biological waste. **Radioactive Waste** – Any waste, solid, liquid, or gas which spontaneously emits ionizing radiation. **Release** – An environmental event**.**

Shipping Documentation/Shipping Papers – A shipping order, bill of lading, manifest or other shipping documents serving a similar purpose and containing information required by applicable regulations.

Site Infrastructure – Equipment and operations at the site (e.g., incinerator).

Storage Container – A container that has been filled and that may be used to transport or to hold a material for a period of time.

Total Waste Management (TWM) Contractor - The appointed waste contractor responsible for onsite advice, management and preparation of all wastes at MSD Brinny. The TWM contractor must ensure waste at MSD Brinny is managed in accordance with regulatory, IE Licence and MSD requirements.

Transfrontier Shipments (TFS) - All transfrontier shipments of hazardous waste originating in any local authority area in the State that are subject to the prior written notification procedures must be notified to and through Dublin City Council at the National TFS Office.

Treatment – A process that changes the physical or chemical characteristics of a material to make it less harmful to human health and the environment.

TSDRF- A Treatment, Storage, Disposal and Recycling Facility

Variance Request – A request for temporary (<= 1 year) relief from a requirement outlined in this Standard. The requesting facility/site completes the variance document. The requesting facility then sends the variance document to the Waste and Dangerous Goods (DG) COE for review. After review and approval by the Waste and DG COE, the variance is submitted for approval to the Vice President and leadership team of GSE. ***See attachment 3.0 Page 7 of 9.***

Waste – Material, productor item that will no longer be used by ***MSD*** or that is categorized as waste by regulation.

Waste Classification – A regulatory description of a waste often involving a code or specific name that might trigger handling or treatment requirements.

Waste Management – Handling, storage, treatment, disposal, recycling and reuse of waste.

Waste Management (Brokers and Dealers) – Waste contractor acting as brokers and dealers must maintain all required registrations

Waste Management (Collection Permit) – Waste transporters must hold a relevant and current waste collection permit. The National Waste Collection Permit Office (operated by Offaly County Council) has responsibility for the issuing of collection permits.

Waste Management (Facility Permit and Registration) – Waste management facilities must have appropriate and current waste permits or registrations (or both as the case may be).

Waste Transfer Form - A Waste Transfer Form, is an identification document that must be used whenever hazardous waste is shipped or transferred within the Republic of Ireland.

ATTACHMENT 2.0 – Global On-Site Waste Management Requirements General

Requirements:

1. All on-site waste management practices must be in compliance with all applicable regulatory requirements and permits.
2. Waste must be removed from the site as soon as practicable.
3. Unless a shorter time frame is required by regulation or permit, materials that will not be used must be either disposed or managed in another appropriate way within five (5) years of receipt. Hazardous materials that will not be used, excluding radioactive, will be removed from the site within one (1) year
4. Wastes that are suspected to be regulated wastes must be managed as such until properly characterized and classified or profile determinations have been made.
5. Wastes are collected and stored in appropriate and chemically compatible containers.
6. All waste tanks and containers must be kept closed except when being filled or emptied. (Note: This requirement does not apply to containers inside buildings used for office, cafeteria or kitchenette waste).
7. Waste containers, including those in lab hoods and cabinets, must be managed in areas with a non-permeable surface and adequate secondary containment or diversion systems to handle spills.
8. Wastes that are incompatible must be stored separately and are provided with separate secondary containment to prevent hazard upon concurrent release.
9. Waste shall not come into contact with rain.
10. Steel containers of waste are stored in locations that protect the container from corrosion if the container is not designed for outdoor use.
11. A regulatory waste classification or transportation hazard classification assigned by a contractor or disposal facility shall not be used for compliance purposes until after it has been checked by ***MSD*** personnel familiar with those requirements. If the frequency or site management structure of this activity makes approval by ***MSD*** personnel impractical, the site has a documented procedure that minimizes the risk of an improper classification.
12. Wastes must be securely stored at designated locations to prevent accidental release, unauthorized access, and theft.
13. On-site disposal of waste onto or into land is prohibited unless specifically authorized by GSE. (e.g. via a variance). Except for manure disposal, GSE approval is not needed for on-site waste disposal when such disposal is permitted by a site operating permit. (Note: this restriction does not apply to soil and landscaping debris nor does it prohibit the temporary storage of equipment or building materials intended for future use).
14. Each facility will maintain records (Waste Inventory) of the type or category and amount of wastes generated and how this waste was either treated or disposed. The records are to be kept for the period specified in the Records Retention Schedule.
15. Waste tanks and containers should be labelled per regulatory requirements for identifying contents and hazards.
16. Animal Manure shall be managed in a way to ensure compliance with regulatory requirements and minimize the present and future liability resulting from land application of animal manure waste

    - Prior to being land applied on site, animal manure must be treated/inactivated if required by permit, regulatory and/or SN13 Biorisk Management requirements.
    - Manure must be managed as per GSE EHS Guideline GDL18.03 Manure Management Guidance.
    - A variance is required for all animal manure that is land applied on site. Please use the following to complete the Variance: GSE Standard Attachment No. SA18.08, Request for Variance to Land Apply Manure.

ATTACHMENT 3.0 – Off-Site Waste Management

Summary

In many countries, Environmental Liability laws impact ***MSD*** 's waste management. Under these laws, ***MSD*** keeps liability for proper waste disposal, even after its management passes to a disposal facility for final disposal. Therefore, ***MSD*** must complete 'due diligence' to ensure waste is properly handled. Due diligence proof includes contracts outlining responsibilities and disposal Facility audits verifying environmental compliance and waste handling abilities.

Definitions

The following waste definitions are unique in understanding this attachment:

CEBR Request – "Chemicals for External Beneficial Reuse" or CEBR request is an approval for the sale or donation, as is, of any virgin chemicals or waste materials that are no longer needed by ***MSD***. The requesting facility completes the CEBR request for approval by the GSE leadership team and Vice President. Material that is sent out to be recycled or recovered and raw materials transferred between ***MSD*** owned facilities do not need a CEBR request.

Consortium Audits – Organizations contracted by the Waste and DG COE to provide disposal facility audit reports and financial assessments. Examples of consortiums include CHWMEG and Waste Facilities Audit Association (WFAA).

GSE- Global Safety and Environment.

Primary Container – The layer in direct contact with the material being contained. If a primary container fails or the mechanism for filling, emptying, or managing the container contaminates other layers, those contaminated layers shall also be managed as primary.

Tracking Report – Waste Vendor supplied summary of waste shipments, usually supplied quarterly or annually. Disposal Facilities can often supply this as a service and can track ***MSD*** 's waste via bar coding or other electronic means.

Waste Disposal Facility Checklist – The internal forms for completing a treatment, storage, disposal or recycling facility audit, which can be accessed here: Waste Management Facility Inspection Checklist.

Waste Profile – Documentation of waste stream characteristics supplied to a disposal facility. Disposal Facilities often supply the forms necessary for this documentation and require it to ensure proper disposal.

Responsibilities

Waste and DG COE Staff

- Maintain the Approved Waste Management Facility List.
- Manage consortium vendor contract and obtain reports as needed

  On an annual basis, notify each Company site which of the disposal facilities used by their location will need to be audited in the upcoming year.
- Determine if a required facility audit can be done through a GSE audit consortium or if it will remain the responsibility of ***MSD*** site that uses it.
- Coordinate auditing for disposal facilities by site EHS and audit consortiums.
- Assist sites in resolving disposal facility issues.
- Provide SME guidance for CEBR and Variance documents, if requested. Assist with GSE leadership approvals for these requests.
- Work with procurement in the contracting of disposal facilities as needed.
- Participate in review meetings with waste vendors and disposal facilities as needed.

Site EHS

- Ensure compliance with all regulatory requirements including those at the local, site specific level
- Conduct audits of disposal facilities as required. Prior to the audit, sites must contact Waste and DG COE to confirm the need for the audit and verify the competencies of the person designated to perform the audit. While GSE will work to provide as many audit consortiums, each site is ultimately responsible for ensuring that all required audits are done as needed.
- Coordinate site requests for addition of disposal facilities to the Approved Waste Management Facility List. and submit to GSE for approval
- Develop variance requests, as required, and submit to GSE for approval
- Develop and coordinate site CEBR requests and submit to GSE for approval
- Maintain site CEBR log
- Participate in review meetings with waste vendors and disposal facilities as necessary
- Review disposal facility waste tracking reports.
- Notify GSE about any known changes in ownership, financial problems, or the concurrence of a significant environmental or safety incident at a disposal facility.

Global Procurement/Integrated Facilities Management Including Contracted Facility Management

- Procure waste contracts and manage per requirements below
- Assist ***MSD*** locations in resolving waste vendor issues
- Review financials of disposal facilities.
- Schedule review meetings as necessary with vendors and required stakeholders

MSD Facility Personnel and Contracted Facility Personnel Managing Waste

- Complete Waste Profiles for vendors and review annually
- Use company contracted vendors and approved disposal facilities
- Raise concerns as needed to Procurement and GSE regarding disposal facility issues
- Participate in review meeting with disposal facilities or IFM partners as necessary to address identified issues.

General Requirements

Waste Contracts

- Contracts must be in place with disposal facilities before sending waste.
- Contracts and disposal facilities must be consolidated at the national and regional level as much as possible to avoid spreading liability over multiple disposal facilities.
- The financial status of disposal facilities must be reviewed to ensure assets can cover environmental liabilities.
- Disposal facilities must be approved per ***MSD*** 's "Disposal Facility Audit" requirements.
- Contracts must list the disposal facilities that are approved to be used for ***MSD*** waste.
- Contracts must allow MSD to audit disposal facilities as required.
- Contracts must require annual vendor meetings to review service and any issues.

Waste Disposal

- Except as specifically provided in the Exclusion section (SA18.05, page 5 of 7), all MSD waste must eb shipped to a disposal facility on the Approved Waste Management Facility List.
- Gas cylinders may not be vented for disposal. Estimated volume remaining should be identified and arrangements made for vendor return or shipment to a facility on the Approved Waste Management Facility List. If all the conditions in the Exclusion section (SA18.05, page 5 of 7) are met, empty cylinders can be managed as a scrap metal.
- To help in meeting ***MSD's*** Sustainability Goals, Landfill disposal of waste must be minimized.
- Product Waste (off specification product, returned products, drug actives, material contaminated with drug actives at levels exceeding human and environmental exposure concerns, and hazardous chemical ingredients used in the formulation of products) must be incinerated unless an alternate disposal method has been approved by GSE. For returned products, Management of Returned Goods (Formerly Corporate Policy 38) must also be followed.
- Animal carcasses must be incinerated unless an alternate disposal method has been approved by GSE variance.
- Soil shall be managed in a way to ensure compliance with regulatory requirements and to minimize the present and future liability resulting from excavation and disposal. Many regulatory authorities around the world have established criteria for managing, characterizing and disposing of excess soil. It is important to understand these requirements prior to initiating any activity that will result in the disturbance of soil. At a minimum:

  - All applicable Local, state and country regulations concerning the management of contaminated soil shall be identified prior to excavation.
  - Company Standard GDL 18.02 Soil Handling provides specific guidance for soil management.

- Manure Management
  - Manure shall be managed in a way to ensure compliance with regulatory requirements and minimize the present and future liability resulting from land application of animal manure waste.
  - Prior to being shipped off site, animal manure must be treated/inactivated if required by permit, regulatory and/or SN13 Biorisk Management requirements.
- Manure Must be managed as per **GSE EHS Guidance GDL18.03, Manure Management Guidance**.
  - A variance is required for all animal manure that is land applied off-site. Please use the following to complete the Variance: **GSE Standard Attachment No: SA18.08, Request for Variance to Land Apply Manure**. (A Variance is not required for manure waste being disposed off-site in a landfill, provided the landfill is on the Approved Waste Management Facility List)
  - All off-site locations where animal manure will be land applied (both ***MSD*** and third-party locations) must be on the Animal Health Land Application Approved Facility (AHLAF) tab of the Approved Waste Management Facility List. To get a land application Facility added to the list, please submit the **Land Application Facility Checklist** when submitting **GSE Standard Attachment No. SA18.08, Request for Variance to Land Apply Manure.**
- Empty containers shall be managed in an environmentally protective manner:
  - Unless being returned to the original product supplier for refurbishment and reuse, primary containers must be sent to an Approved Waste Management Facility List site.
  - Do not remove chemical residues from containers using evaporation to the atmosphere
  - Do not give or sell containers to employees, individuals or community groups.
  - Empty containers to the maximum extent possible before washing or shipping off-site.
  - Remove or black out the ***MSD*** identity and ***MSD*** compound or product names on all empty containers before they leave the site unless the receiving facility has been specifically designated on the Approved Waste Management Facility List as approved for receiving drums with identity intact.

    Sites that have determined that primary containers can leave ***MSD*** 's control unwashed will retain supporting documentation that identify the potential hazards associated with previous contents and provide to the site safety or environmental manager

Disposal Facility Audits

- Except as provided in the facility exclusion section, all disposal facilities must be audited prior to use and re-audited as required below.
- Audits must be completed using ***MSD's*** 'Waste Disposal Facility Checklist' unless substituted by a consortium audit.
- Audits must be reviewed by the Waste and DG COE staff for acceptance onto the Approved Waste Management Facility List. While GSE will work to provide as many audits as possible through the audit consortiums, each site is ultimately responsible for ensuring that audits of disposal sites they use are done as needed, and should not assume that an audit will be done by the Waste and DG COE using the audit consortium.
- Audits not completed in English must be typed, and copies of support documentation such as permits that are not in English must be machine readable to allow the use of document translation software.
- The audit trail ends when the waste is combined with waste not generated by MSD or otherwise loses its ***MSD*** identity.

Disposal Facility Audit Frequency

- The audit frequency is based on potential for environmental and liability risk associated with the categories of disposal facility operation
- Audits are to be conducted at the following frequencies:
  - Hazardous waste landfills – every 3 years
  - Radioactive or mixed (hazardous and radioactive) waste facilities – every 4 years
  - All other hazardous waste facilities, except transfer facilities – every 4 years
  - Non-hazardous waste landfills – every 4 years
  - Other non-hazardous waste facilities and hazardous waste transfer facilities – every 5 years
- The frequency may be changed by GSE, by evaluating the risk a facility presents, and due to any of the following: a change in ownership, financial problems, or the occurrence of a significant environmental or safety incident at the facility.

Exclusions from the Requirement to Use Approved Facilities

- These facilities are not subject to the inspection and evaluation requirements of this Standard., are not required to be placed on the Approved Waste Management Facility List:
  - Publicly Owned Treatment Works (POTWs) or other municipal/private wastewater treatment facilities that accept wastewater from a company facility discharging through a sewer system that is directly connected to the POTW.

- Transporters
- Disposal facilities that receive MSD waste from an initial or intermediate disposal facility (e.g., transfer facility), excluding off-spec, expired or returned products and subject to these conditions:
    1. Material must be re-manifested from the first disposal facility to the next disposal facility, with the initial receiving facility assuming generator status
    2. All MSD labels and markings on the external container must be removed
    3. Lab-packs must not be landfilled
    4. Any requirements in the Standard to incinerate a waste must be maintained

- The following waste types are not required to be sent to a facility on the TSDF tab of the Approved Waste Management Facility List unless they are regulated or a hazardous waste, as defined in SN18 or by regulation:

    - Office trash (paper, newspaper, cardboard, magazines, computer disks, alkaline batteries, printer cartridges, etc.)
    - Cafeteria waste (food, food packaging and containers, grease from traps, etc.)
    - Animal (non-research) related waste (eggs, bedding, manure, etc.) with the approval of GSE and Site Safety/Environmental through a variance.
    - Cardboard and wood that is uncontaminated (visibly clean)
    - Glass, metal and plastic that are uncontaminated (visibly clean) and are not primary containers.
    - Glassware and empty chemical reagent bottles that have been triple-rinsed, are visibly clean and are being sent for recycling.
    - Empty drums, IBC's and cylinders being returned to the original vendor for reconditioning and reuse.
    - Secondary containers or outer packaging that had no contact with the material held in a primary container.
    - Gas cylinders emptied to atmospheric pressure that are being managed as scrap metal, subject to the following conditions:
        1. Cylinders must not have previously contained corrosive, flammable or toxic material
        2. Intentional venting of cylinder contents is not permitted
    - Office Furniture
    - Tires/***Tyres***
    - Permitted wastewater discharged through a plant process waste or sanitary sewer system.
    - Spent refrigerant that is sent back to a certified handler/recycler or supplier for recycling, recovery, or reclamation.

- Used oil, spent parts-washing fluid or spent refrigerant from equipment that is served by an outside vendor, when the vendor removes the material from the site.
- Used oil, provided that all the following are met:
    1. The amount of used oil (from the entire ***MSD*** site) sent to the collection, recycling or disposal facility each year is less than 55 gallons (208 litters)
    2. It is sent to a waste oil collection/recycling/disposal facility that is approved for this activity by a national, state/provincial, or local government.
    3. Records of the quantity of oil transferred are retained at ***MSD*** site.
- Uncontaminated construction and demolition debris, rubble, and landscaping material (excluding soil). This debris must either have been from an area which has not been exposed to chemicals and visibly clean, and free of odors or has been tested or decontaminated and demonstrated to be free of chemical contamination [management of this material must be approved by a site environmental professional. Records listing the amount and location where debris is reused or disposed of should be maintained by the site].
- Electronics and appliances that do not contain mercury switches, ozone0depleting substances, toxic compounds (e.g. lead in CRTs), or printed circuit boards. [Note: equipment containing Ozone-Depleting Compounds (ODCs) must be managed to minimize losses of ODCs to the atmosphere in accordance with the Ozone-Depleting Compound Policy (ODS management system) and local regulations].

Radioactive sources that are exempted from the disposal regulations and generally licensed radioactive devices

- Residues generated at TSDRF from recycling, treatment, or disposal of ***MSD*** waste.
- Consumer packaged finished goods (pharmaceutical and biological products), provided that all of the following are met:
    1. The products are generated in a country where there is no MMD manufacturing or MRL Research site (For Reference, a list of these countries is maintained as part of the Approved Waste Management Facilities List).
    2. The waste is disposed of in accordance with all applicable regulations;
    3. The material will be disposed only by incineration, thus rendering the product unusable and MSD identify unrecognizable.
    4. Management of Returned Goods (formerly Corporate Policy 38) must also be followed.

Request for Temporary Variance

Site/Operation:	**Date:**
S&E Document Name:	

Specific S&E Document Reference(s):

Proposed Alternative Approach:

Rationale and / or Mitigating Circumstances:

Additional Planned Actions to Support Planned Variance:

Variance Duration (Not to exceed one year): _____

	Signature	**Date**
Site Manager or IFM Manager ☐ **The alternative approach described in this Request for Variance is in compliance with all applicable laws and regulatory requirements.**		
Site EHS Lead		
GSE Regional Executive Director		
GSE Subject Matter Expert		
GSE Env/Safety COE Executive Director		
GSE VP		

Chemicals for External Beneficial Reuse Request Form

1.	Name or Description of Material:
2.	Activity or Process Generating Material:
3.	Composition Information:
4.	Does the material contain any ***MSD*** intermediates or final product, and if so, at what levels? Do these compounds pose any unique environmental or health hazards?
5.	Has the material been treated or recovered in any way before it has left the process?
6.	Annual Generation Rate
7.	Transportation: Drums ☐ Bulk ☐
8.	How is the material currently being disposed of?
9.	Total Projected Savings (include volume/mass and time basis for projection) a) Projected net income (revenue minus transportation cost if paid by ***MSD***) b) Avoided disposal cost (including transportation)
10.	Is the purchaser the end-user or a broker? If broker, all end-users must be identified if the material is sent directly to them without any prior blending or repackaging by the broker.
11.	How will the material be beneficially reused?
12.	Will the broker or ultimate users treat this material in any way prior to reuse?

13.	If applicable, does the purchaser have a permit to receive this type of material or waste?
14.	Please list the following information for proposed purchasers / end-users: Name of Company Location Size (Annual Sales - if available) Type of Business Organization (Corporation, Partnership, etc.) Publicly versus privately held
15.	Record observations made during the site visit (e.g., housekeeping, integrity of designated storage areas). If purchasing facility has not been visited, explain why.
16.	What specifications for this material have been developed?

CEBR Duration (Not to exceed one year): _____

	Signature	**Date**
Site Manager or IFM Manager		
Site EHS Lead		
GSE Regional Executive Director		
GSE Subject Matter Expert		
GSE Env/Safety COE Executive Director		
GSE VP		

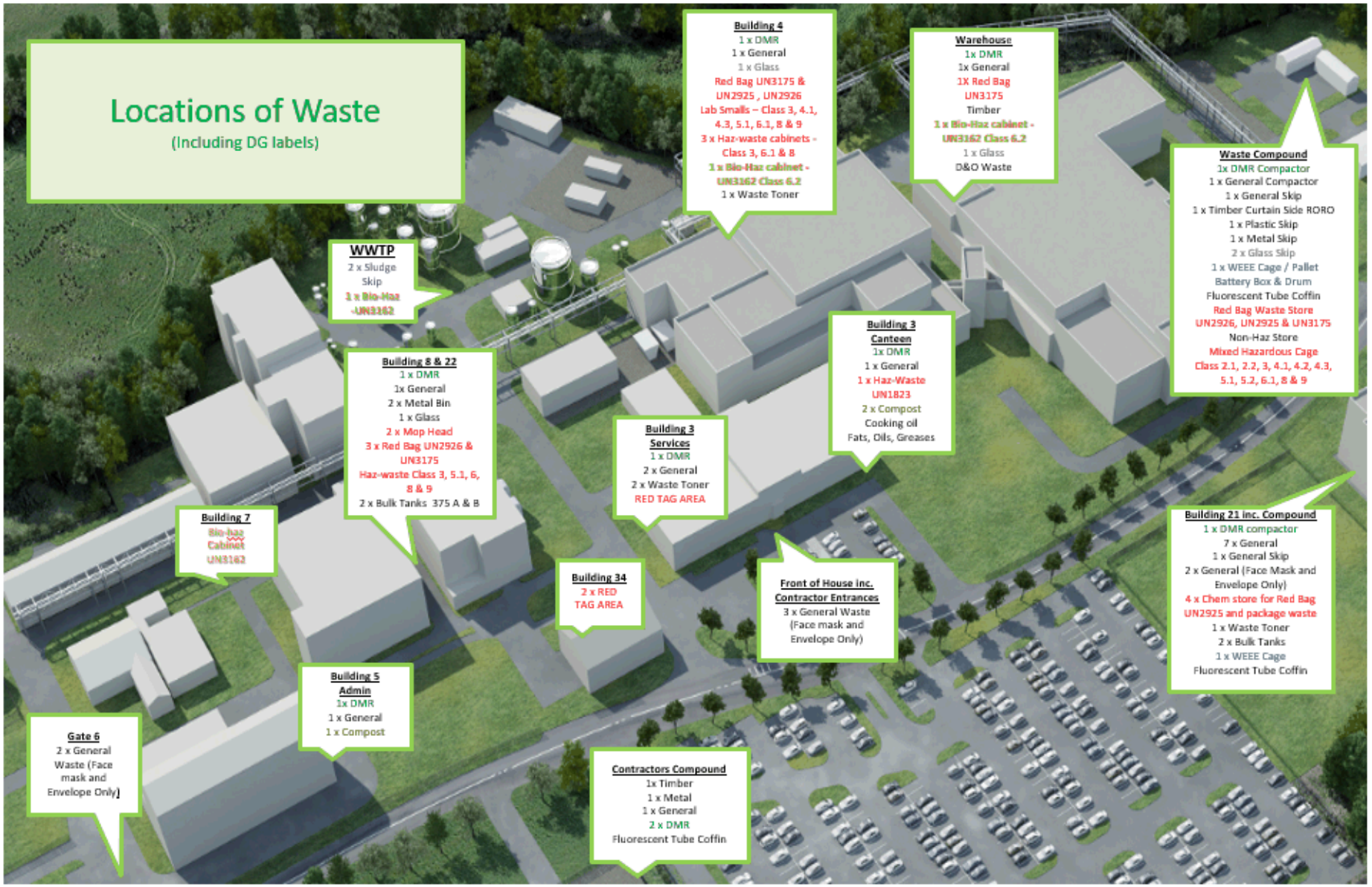
ATTACHMENT 4.0 – Waste Label

MSD BRINNY - WASTE LABEL

WASTE GENERATION AREA/DEPARTMENT:
WASTE COLLECTION LOCATION:
STATE OF WASTE MATTER: (tick) **SOLID:** ☐ **LIQUID:** ☐ **GAS:** ☐ **OTHER:** ☐
WASTE NAME/IDENTIFICATION
WASTE COMPOSITION:
APPROXIMATE QUANTITY VOLUME:
DATE OF WASTE GENERATION:
PACKED BY:
CIRCLE THE APPROPRIATE HAZARD SYMBOL AND EFFACE NON-APPLICABLE SYMBOLS

Note 1: All wastes to be managed as per SAFTY76
Note 2: TWM contractor to apply shipping label and efface/ remove Brinny waste label prior to shipment

ATTACHMENT 5.0 – Waste Collection Point Locations



ATTACHMENT 6.0 Laboratory/Waste Smalls Packing Sheet

MSD Brinny Request form for Lab Smalls Collection

Waste Collection Location	

***** No form = No Collection*****

To be completed by Waste Generator						**To be completed by Waste Vendor**		
Substance / Description **example Klericide IPA (60/40)**	**Form (e.g. Liquid/ Solid/Etc)**	**Mixture? Detail Composition**	**Confirm SDS on Chemdoc (Yes/No)**	**Initial and Date of Waste Generator (Placed into container)**	**Other Comments**	**Reason for rejection example request does not match items to be collected; leaking container, illegible labels, etc**	**Date of Rejection example 20 Mar 2017**	**Date Requestor Notified example 20 Mar 2018**

Note 1: Hard copy to be protected from damage (e.g. weather) with plastic pocket and to accompany consignment/container.

Note 2: For chemicals under 5L / 5kg.

ATTACHMENT 7.0 – New Waste Generation Form

Part A (to be completed by Waste Generator)	
Waste Detail	**Issue Date:**
Waste name/identification:	
Waste Description:	
Frequency of Waste:	
Location of waste (area, department, building, floor, room)	
Hazard(s) associated with the waste (e.g. Corrosive):	
Chemdoc Reference No:	
Name of process/activity producing the waste stream:	
Method of on-site storage/treatment (tank, drums, boxes):	
Name of on-site waste collection/storage point:	
Maximum quantity/volume at each storage location (A) and maximum amount produced annually (B).	(A) (B)
Confirm if WAC test is required for ground derived waste (soil, stones, tarmac)	Yes ☐ No ☐
Is a decontamination cert required for waste items?	Yes ☐ No ☐
Has a bulk tanker sample been requested if required?	
New Waste request (completed by):	
Date submitted for characterisation:	
Signature (Waste Generator)	Date:
Part B (to be completed by EHS)	
Any specific direction on handling disposal/ treatment or handling	
Proposed method of disposition (recycling, reuse, treatment, disposal)	
MOC completed by Waste Generator (MOC Reference No.)	
Does Waste stream posters need to be updated to reflect this new Stream (Enablon Number)	
Signature (EHS)	Date:
Part C (to be completed by TWM contractor)	
Regulation Name	
Regulatory characterization / classification and type of supporting information (e.g. Pharma Solids):	
Is the waste regulated for transport (I.e. a Dangerous Goods)? If yes, detail UN No.	
Rationale for any exemption determinations	
Confirm waste inventory is updated	
Confirm packaging and labelling is available	
Is the waste classified as a Dangerous Goods? If yes ensure specific instructions are created for personnel completing labelling, loading, filling or unloading.	Yes ☐ No ☐
Date characterisation/classification:	
Signature (Waste Generator)	Date:

*Note1: Must be completed at least **1 month** in advance of a new waste stream.

ATTACHMENT 8.0 – Solvent Waste Canister Sheet

Page___of____

Issue Date:		
Start Date:		
Date Full:		
Canister No.:		
	Room No.	**Canister/Container No.**

Note 1: Form must accompany consignment/container when in use.
Note 2: Form must be legible.
Note 3: Hard copy to be protected from damage with plastic pocket.

Date	Waste Description (Block Letters)	Volume	Signature

ATTACHMENT 9.0 – Waste Vials Record

Issue Date:	
Start Date:	
Date Full:	
UN Number:	
Drum No.:	**TH**

Date	Batch No./Lot No./D+O No.	No. of Vials	Signature/Date

ATTACHMENT 10.0 – Principles for Characterizing, Classifying and Combining Wastes

Principles for Characterizing, Classifying Wastes

Regulatory characterization and classification can only be performed accurately when the appropriate information is available. The principles below must be followed when determining your information needs.

Principle 1: Clearly identify the scope of the regulation
The first step in any waste characterization or classification is to understand the scope of the regulation (what's included and what's not included). In many regulations this is defined by two parts of the rule: a section describing what the rule applies to and a section defining terms used in the rule. Determine the following information in preparation for evaluating these sections of the rule:

- Whether the waste in question is a raw material being discarded or a used material
- The physical characteristics of the waste
- The type of process or activity that used the waste
- Exemptions from the waste regulations may either be found in the applicability and definition sections or in a separate section of the rule. All exemption determinations must be documented.

Principle 2: Clearly identify the criteria used for characterization / classification
Regulations may characterize / classify wastes based on one or more of the following factors: 1) a list of specific wastes; 2) the type of activity, process or industry producing the waste; or 3) the chemical, physical or biological characteristic of the waste. The characterization / classification of the waste will often dictate the collection, storage, treatment and disposal requirements for the waste. In some cases, the regulation will require a code be assigned based on this classification.

Principle 3: Understand the types of information that are allowed to be used for characterization / classification of wastes.
Regulations may specify that certain types of information, such as analytical results, be used to make the waste characterization / classification. In these cases, it is important that the information meets all the requirements specified in the rule. When the regulation doesn't specify the type of information that must be relied on for making the regulatory characterization / classification other factors can be taken into account, but they must have a technical basis.

One of these factors is process knowledge. Process Knowledge may include information on the raw materials used, the process producing the waste as well as treatment technologies applied to the waste. This type of knowledge can be relied on when the regulatory characterization / classification is based on a list of wastes or a list of activities producing wastes.

Process Knowledge can sometimes be relied on to determine physical characteristics of a waste. For instance, a solvent that has the characteristic of flammability when entering a process will likely have that same characteristic as a waste from that process if it has not mixed with any other liquids in the process. Process knowledge should generally not be used if the regulatory classification of a waste is based on a concentration of a particular compound in that waste.

Caution should be taken when relying solely on a SDS for a waste classification, as the purpose of a SDS is to provide chemical hazard information, not to provide waste classification information. A finished product could have levels of a chemical below the threshold that would trigger reporting on a SDS, but still be high enough to make it hazardous waste. For example, thimerosal is still used in some animal health products at levels high enough to make it a hazardous waste for mercury, but below the level that would require it to be disclosed as a hazard on a SDS. In addition to a SDS, product labels and package inserts are other sources of information that will aid in making a waste classification for finished products.

Principle 4: Where sampling and analysis is required samples must be representative of the waste.

Sampling strategies must ensure that variability in a waste that can occur due to sampling location or due to changes that occur over time are fully addressed. Sampling locations must be carefully chosen for wastes that can undergo stratification or for wastes cover a large area such as a pile. For wastes that can vary over time, sampling of a waste should be conducted over at least three batches to understand potential variability in the concentrations of a parameter. Where there is large variation in concentrations of a parameter between batches, sampling of a larger number of batches should be considered. In those cases where there is large variability between the batches, but all concentrations are significantly below any regulatory classifications level three batches or three independent sample sets should be adequate.

Principle 5: Ensure that analytical results have the sensitivity necessary to answer the regulatory question.

Existing analytical information may be relied on for waste characterization / classification. However, the detection limits of the analytical methods must be appropriate for the determination being made. It is not appropriate to rely on an analytical method with a detection limit of 10,000 ppm when determining whether a compound with a regulatory threshold of 1ppm is present. Similarly, certain matrices can make it difficult to achieve the required sensitivity due to interferences in the matrix. For instance, the detection limit of an analytical test for organics in groundwater will often be much lower than in wastewater due to the other compounds in wastewater that can interfere with the analysis. The analytical chosen must take into account both the detection limit of the method and any potential interference due to the matrix.

Principles for Combining Wastes

At some sites, there may be a number of waste streams produced by manufacturing, laboratory operations, HPLC, process samples and other diverse activities at the site. The large number of wastes and the small volumes of the individual waste streams may make efficient management on an individual basis difficult. Combining these streams into a common stream for identification, on-site management and/or treatment, and off-site disposal/treatment should be evaluated on a constituent basis with reduction and recycling activities in mind. Combining wastes will be allowed as long as the following principles are adhered to:

1. **Ensure that combining wastes is compliant with all applicable local, state and national regulations and permits**
   Some countries limit or prohibit the combining of wastes or may require a permit for this activity.

2. **Safe (compatible for storage and treatment together)**
   Incompatible wastes must not be combined. This includes wastes that may generate heat, dangerous gases, fire or other similar adverse events upon mixing. For instance, strong acids should not be combined with strong bases, oxidizers should not be mixed with solvents, and water reactive compounds should not be combined with aqueous wastes.

3. **Management and treatment**
   Combining wastes should be considered when it allows more efficient management or treatment on or off-site. It should be avoided if combining the wastes will complicate the management or treatment of the waste. This includes the following:

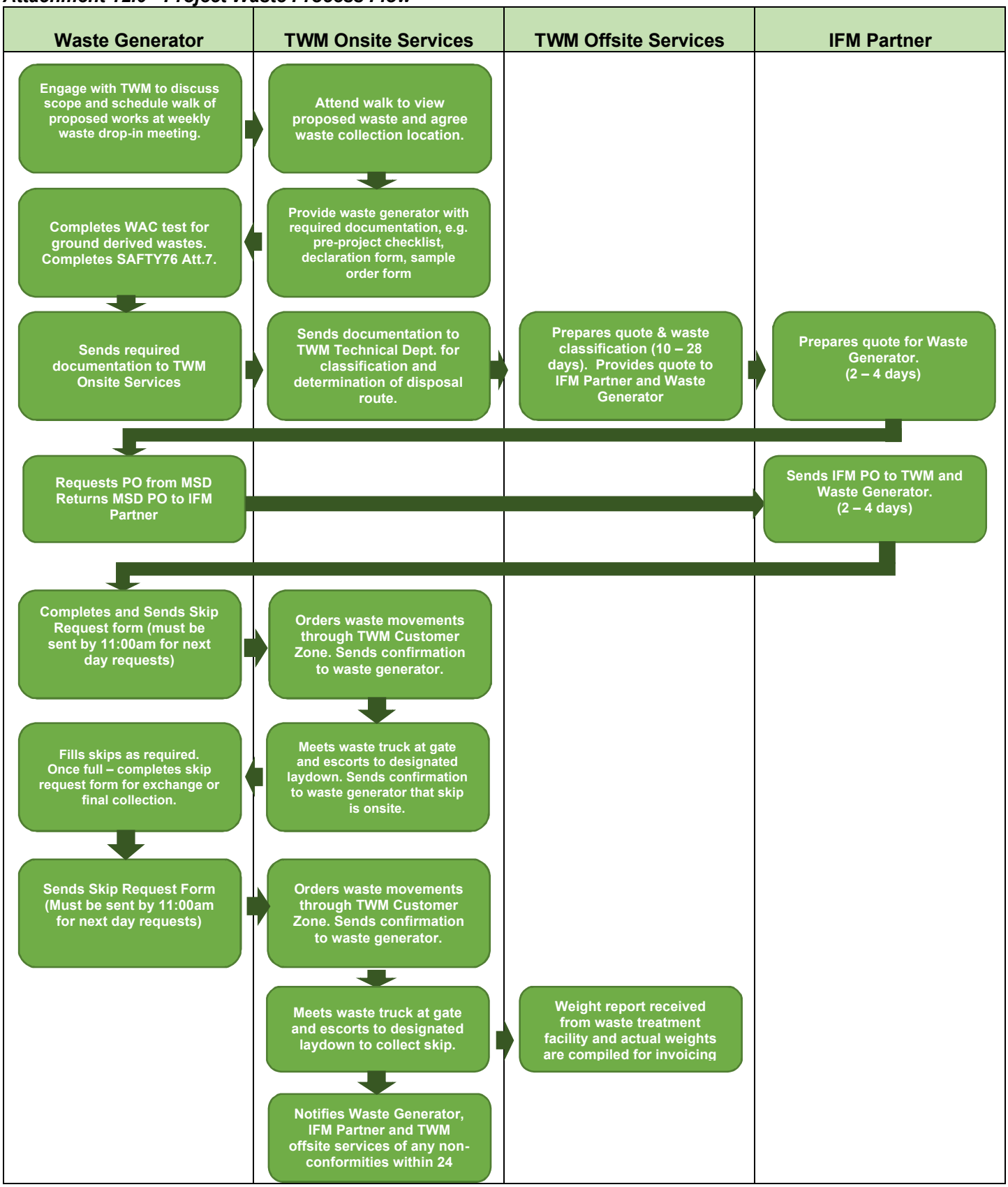
   - Inability to recycle or recover / reclaim portions of a combined waste stream
   - Additional handling requirements or handling steps as a result of the physical characteristics of the combined stream
   - A large increase in the volume of wastes subject to very stringent handling and regulatory requirements
   - The combining of wastes will result in materials being sent to a treatment facility that is not appropriate for the wastes. An example includes combining metal wastes with organic wastes into a waste stream that will be sent for incineration. Incineration will not treat the metals unless it is designed with pollution control devices specifically designed to capture metal emissions.

ATTACHMENT 11.0 – Waste Drum Record

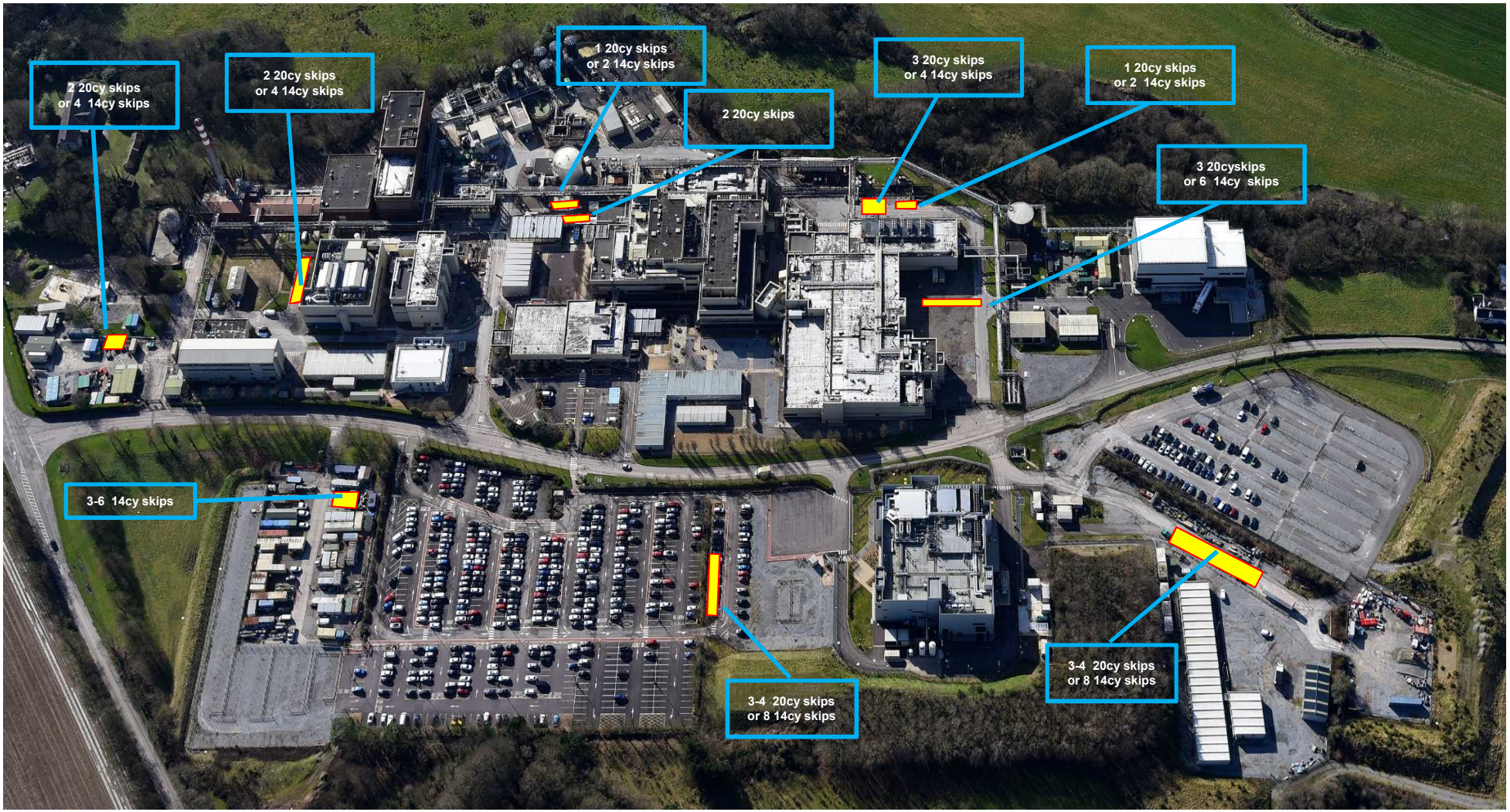
Issue Date:	
Start Date:	
Date Full:	
Drum Size:	

Date	Details	No. of Vials	Signature/Date

Attachment 12.0 - Project Waste Process Flow



Attachment 13: Designated project waste skip locations



Note- Size of Skips is in Cubic Yard.

Examples of Non-Hazardous Wastes

The following table outlines in general the main categories of non-hazardous waste generated onsite:

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Dry Mixed Recyclables *Visually Clean Packaging, such as:* • *Plastics* • *Paper* • *Metals* 	- Onsite waste is placed locally into bags/recyclable bins and removed to external 1100 ltr Green bins. - TWM contractor repackages waste, prior to offsite treatment i.e. Recycling.	- Visually Clean Packaging **only**, such as: • Plastics • Paper • Metals - No contaminated/Hazardous packaging. - No glass. - No liquids.
General Waste *Mixed General Wastes, such as contaminated packaging.*	- Onsite waste is placed locally into bags/ General Waste bins and removed to external 1100 ltr black bins. - TWM contractor packages waste, prior to offsite treatment e.g. Recycling Energy recovery. No waste is landfilled.	- Non-hazardous Contaminated Packaging only. - No clean recyclables. - No Batteries/Chemicals. - No API/No Product contamination.
Food Wastes *Organics only* 	- Onsite waste is placed locally into bags/ bins and removed from collection locations directly to onsite point of covered holding area.	- Organics food wastes only. - No cardboard, plastics, paper, glass. - No chemicals. - No API/No Product contamination. - No animal products (meats).

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Shredded Paper - Paper only 	- Onsite waste is placed locally into shredder/confidential (secure locking) paper bins. - TWM contractor collects waste and consigns for treatment e.g. recycling.	- Paper wastes only. - No non-paper wastes (e.g. metals). - Do not place hand(s) close to shredder.
Glass (Uncontaminated) *Uncontaminated glass such as empty unused vials or vials containing water.* 	- Onsite waste is placed locally into non-contaminated glass waste containers/bins and removed to waste collection locations. TWM contractor collects and accumulates glass into skips. - TWM contractor requests glass skips offsite for recycling.	- Store in rigid containers suitable for handling/ transport (based on JSA/Ergonomic assessment) - Do not handle without appropriate PPE. - Deface labels of decontaminated/ uncleaned glass i.e. clear lines (mark x through label), sign and date. - Do not add contaminated glass. - Do not add/mix glass contaminated with MSD drug substance/product. Such waste must be sent for no treatment other than incineration at an approved MSD outlet. - Do not accumulate/store glass in flexible packages (e.g. bags/liners).

Examples of hazardous waste generated onsite:

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Drummed Waste *Hazardous waste such as IPA, sanitizing agents, paints, filter contaminated with IPA.*	- Treatment at an approved MSD outlet.	- Package: Packaged into approved containers e.g. UN approved drums - Label: Label waste as per Attachment 4. - Add Hazard symbols e.g. IPA is flammable; Nickel Chloride is Toxic, etc.
Hazardous Bagged Waste *Contents as per Waste inventory* 	- Treatment at an approved MSD outlet.	- Packaged as per Roles and Responsibilities document. - - This stream is not to be used for: • Liquids • Part full or full containers of chemicals in solid or liquid form. • Note: Empty containers which have not been triple rinsed and have not had their hazard label defaced are treated as full containers - Bag must be identified with waste type (label/ pre-printed markings/ Attachment 4.0 label) - Bag must be sealed/securely tied. - Place bag into designated wheelie with matching name as above/waste inventory. - ***Note:*** *Different Areas/Departments are using Red coloured Bags for different Hazardous Waste Streams.*

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Non-Halogenated Streams *Must be compatible streams and agreed with TWM Contractor* 	- Decanted onsite by TWM contractor and consign offsite for Treatment at an approved MSD outlet.	- Packaged as per Roles and Responsibilities document. - Label the contents appropriately e.g. “Halogenated Waste” or ‘Non-Halogenated Waste. Also add hazard symbols. - Document each New waste stream via Attachment 7.0. - A copy of Attachment 8.0 must accompany the Halogenated/Non-Halogenated waste containers when in use. - Attachment 8.0 must be completed for each instance of disposal. - Use approved quick-connects for all instruments. - Containers must be Non-fragile and durable design, wide fill opening for pouring and the self-closing lid with pressure relieving features. - For non-flammable/combustible waste liquids the tubing connection may be made through a hole provided in the approved container's cap or lid. - For flammable/combustible waste liquids discharged to a safety disposal can the connection must be made by a direct attachment to the side wall or shell of the container using an approved side wall connection port and tubing manifold device. - ***Note 1:*** *This practice cannot be performed without appropriate IH assessments.* - ***Note 2:*** *This practice cannot be used for OEB 4 or OEB 5.*
Halogenated Streams *Must be compatible streams and agreed with TWM Contractor* 	- Decanted onsite by TWM contractor and consign offsite for treatment at an approved MSD outlet.	

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Empty Containers *Empty Containers not sufficiently cleaned (see Attachment 1) of residue to eliminate hazards present* 	- Treatment at an approved MSD outlet	- Packaged as per Roles and Responsibilities document. - Label contents appropriately – Attachment 4.0. - Until an empty container (e.g. adrum, jerrican, etc.) is appropriately cleaned, it must be managed in the same manner as a full container, as it still holds a small amount of the original contents. - If the original contents are classified as dangerous goods and regulated for transport, then the empty, uncleaned container must be shipped as dangerous goods. The dangerous goods transportation regulations apply. - Cleaning refers to the use of suitable cleaning agents and cleaning methodology which will remove the hazard. - Cleaning should be accompanied by appropriate documentation. - Labels on containers marked cleaned must be defaced/blackened/removed and replaced with accurate label e.g. 'empty cleaned container' which previously contained Isopropanol.
Lab (Waste) Smalls *chemicals, glassware, containers, and equipment used in the laboratory.* 	- Treatment at an approved MSD outlet.	- Packaged as per Roles and Responsibilities document. - Use sealed containers (no. open containers). - Volume < 5 ltrs or 5 weight kgs. - May be full/part full or empty. - May be Solid or Liquids. - Must be labelled (this may label on parent container e.g. CLP label). - Return Attachment 6.0 of SAFTY76 to TWM. Ensure to Attach hardcopy to collection container. - TWM contractor to review and collect if appropriately labelled & presented. Lab smalls waste **will not be** collected if the attachment in the container is not accurate as to the contents.

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Product Waste *All Product containing Wastes must be incinerated, such as:* • *Off specification product,* • *Empty packaging's (drug substance)* • *Returned products,* • *Clinical material,* • *Drug actives,* • *Material contaminated with drug actives at levels exceeding human and environmental exposure concerns, and chemical ingredients used in the formulation of products)* 	- Treatment at an approved MSD outlet ***Note:*** *All product/product containing (including packages previously containing product) must be incinerated at a MSD approved outlet.*	- Packaged as per Roles and Responsibilities document. - Label contents appropriately – Attachment 4.0. - **Note:** *Before consigning Product containing waste offsite remove or black out the MSD identity and MSD compound or product names on all empty containers before they leave the site.*
Waste Product vials *Vials containing product Wastes must be incinerated, such as:* • *Off specification product,* • *Returned products,* • *Clinical material,* 	- Incineration at an approved MSD outlet.	- Packaged as per Roles and Responsibilities document. - Label contents appropriately – Attachment 4.0. - Keep drum closed when not in use - Drum to be sheltered from rain. - ***Note:*** *Before consigning waste vials offsite containing Product:* - Remove or black out the MSD identity and MSD compound or product names on all empty containers before they leave the site. - Complete Attachment 9.0 of SAFTY76 and Attach to side of drum.

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Biohazardous Waste *Biological agents and cells, bodily fluids or tissues of human, animal, insect or plant origin.*	- Treatment at an approved MSD outlet.	- Packaged as per and Roles and Responsibilities document. - Ensure bags are correctly labelled as per SAFTY76 and Roles and responsibilities document. - Handle as per SAFTY97.
Bulk Waste	- Treatment at an approved MSD outlet.	- Packaged as per Roles and Responsibilities document. - Inspect tank on arrival. - Fill to specification. - Consult EHS and confirm waste is not a Dangerous Goods. If Dangerous Goods, confirm with EHS, site DGSA & TWM contractor. • Roles and responsibilities • Training - ***Note 1**: MSD Brinny does have arrangements in place with the TWM contractor for movement of tankers of DG wastes.*
Gas Cylinders *Empty gas cylinders* 	- Treatment at an approved MSD outlet.	- **Gas Cylinders no longer required** - **must be either:** - - Returned to Vendor for reuse – Vendor to provide documentation for receipt of cylinders. - F-Gases/Spent Refrigerant are reclaimed by refrigeration vendors refer to (ADMIN869). - If cylinder cannot be reused – the cylinder must be consigned to licensed waste vendor. manage all waste streams including gas cylinders if required. - Gas cylinders should not be vented for disposal. Estimated volume remaining should be identified and arrangements made for vendor return or Master List disposal. - Consult EHS and confirm waste is not a Dangerous Goods. If Dangerous Goods, confirm with EHS, site DGSA & TWM contractor: - Roles and responsibilities - Training

WASTE NAME	TREATMENT	GENERAL REQUIREMENTS
Contaminated Soil &Sludge *Examples of areas where contamination may exist include:* • *Solvent and raw material tank farms,* • *Drum storage areas and loading/unloading areas,* • *Known spill areas,* • *Production areas where there has been a likelihood or knowledge of spills,* • *Areas along chemical sewers or combined chemical/sanitary sewers,* • *Areas with underground storage of hazardous materials and along ancillary piping* 	- Treatment at an approved MSD outlet.	- Complete sampling as per SAFTY73. - Follow TWM Contractor advice for storage/collection and labelling. - Consult EHS and confirm waste is not a Dangerous Goods. If Dangerous Goods, confirm with EHS, site DGSA & TWM contractor • Roles and responsibilities • Training - Refer to SAFTY73

Attachment 16.0 Training Matrix

	SN18 Waste Prevention and Management		
	SAFTY76 Waste Prevention and Management		
Course Type →	**Global Course**	**Site Procedure**	**Site Procedure**
Course Code→	GCO-GSE-0734	GCO-GSE-IEBI-SAFTY76	GCO-GSE-IEBI-SAFTY 73
Course Title→	Waste Management - Core - Version B	Waste Management and Prevention Procedure	MSD Brinny Soil Management Procedure
ILT / E-Learning / Self-paced KT-	**E-Learning**	**Self-paced KT**	**Self-paced KT**
OJT: SDA / TC Required→	N	N	N
Guided Tour (ILT Tour) →	N	N	N
Training Frequency→	I3	I3	I3
Sitewide Course→	N	Y	N

	↓↓Applicable Roles Training Frequency↓↓			Curricula Code
All Employees	N	I3	N	GCO-GSE-IEBI-CU-SITE EHS
Standard Owner/ Deputy	I3	I3	I3	MMD-C-IEBI-021119
EHS	I3	I3	I3	IEBI-CU-EHS-SPECIALIST
Area/ Line Management	N	I3	N	GCO-GSE-IEBI-CU-SITE EHS
Task Supervisior	N	I3	I3	GCO-GSE-IEBI-CU-PermittoWork
CBRE	I3	I3	I3	MMD-C-IEBI-022627
TWM	I3	I3	I3	MMD-C-IEBI-022627
Noonan's	N	I3	N	GCO-GSE-IEBI-CU-SITE EHS
Projects	N	I3	I3	GCO-GSE-IEBI-CU-SOILMANAGEMENT

Training Freqency	
I	Initial training
IA	Initial+ annual
I2	Initial +2yearly
I3	Initial +3yearly

NOT RIGHT FIRST TIME REPORT			
REPORT NUMBER		RAISED BY	
DATE OF ISSUE		TIME OF ISSUE	
BUILDING NUMBER		ROOM NUMBER	

DESCRIPTION

CORRECTIVE ACTIONS REQUIRED

ADVICE TO AREA TO PREVENT RECURRANCE

INSERT PHOTO/S

DOCUMENT APPROVALS

Document ID: 0901435089d81e09
Document Name: SAFTY76

Server Date	Signed by	Outcome
08-Sep-2022 07:44 GMT-0400	Smyth,Caroline	Approve
Reason for Signature	Author	

08-Sep-2022 07:53 GMT-0400	Murphy,Denis	Approve
Reason for Signature	Approval, Authorization	

08-Sep-2022 11:33 GMT-0400	MacGrath,Christine	Approve
Reason for Signature	Approval, Authorization	

12-Sep-2022 09:59 GMT-0400	Giese,Thomas Heimlich	Approve
Reason for Signature	Approval, Authorization	

Reason for Signature		

Reason for Signature		

Reason for Signature		

Reason for Signature		

Reason for Signature		

Reason for Signature		

Reason for Signature		

Reason for Signature		

Reason for Signature		