PREFACE

Dear Reader,

Pursuant to Sections 28 and 55 to 58 of the Environmental Management Act, Chapter 35:05 ("the Act"), the Environmental Management Authority (EMA), hereby submits the draft Waste Management (Registration and Permitting) Rules 2018 (Draft Waste Rules, 2018) for public comment. This Administrative Record provides a written description of the proposed action, an understanding of the major environmental issues under consideration, and includes a copy of the Draft Waste Rules, 2018.

Copies of the Administrative Record will be available from Wednesday January 02, 2019 to Thursday February 28, 2019 on the EMA’s website at www.ema.co.tt and at the following locations from 8:00 a.m. to 4:00 p.m.

a) Environmental Management Authority, #8 Elizabeth Street, St. Clair, Port-of-Spain;
b) Environmental Management Authority, 3rd Floor, Agate Building, 2 Adesh Drive, S.S. Erin Road, Duncan Village, San Fernando;
c) Environmental Management Authority, Unit 1, Tobago Water and General Supplies Building, Carmbee, Tobago;
d) Couva/Tabaquite/Talparo Regional Corporation, Railway Road, Couva;
e) Diego Martin Regional Corporation, Diego Martin Main Road, Diego Martin;
f) Mayaro/Rio Claro Regional Corporation, Rann’s Plaza, High Street, Rio Claro;
g) Penal/Debe Regional Corporation, S.S. Erin Road, Debe;
h) Princes Town Regional Corporation, High Street, Princes Town;
i) San Juan/Laventille Regional Corporation, Aranguez Main Road, San Juan;
j) Sangre Grande Regional Corporation, Ramdass Street, Sangre Grande;
k) Siparia Regional Corporation, High Street, Siparia;
l) Tunapuna/Piarco Regional Corporation, Centenary Street, Tunapuna;
m) Arima Borough Corporation, Corner O'Meara Road and O’Connor Drive, Arima.
n) Chaguanas Borough Corporation, Cumberbatch Street, Chaguanas;

o) Point Fortin Borough Corporation, George Road, Point Fortin;

p) Port-of-Spain City Corporation, Knox Street, Port-of-Spain;

q) San Fernando City Corporation, Harris Promenade, San Fernando;

r) Department of Environment, Old Milford Road, Shaw Park, Tobago;

s) Environment Tobago, Cuyler Street, Scarborough, Tobago;

t) Scarborough Library, Garden Side Street, Scarborough, Tobago;

u) Roxborough Branch Library, Roxborough, Tobago;

v) Charlotteville Branch Library, Charlotteville, Tobago;

w) The website of the Authority at www.ema.co.tt.

Your written comments on the Draft Waste Rules, 2018, are invited during the aforementioned period. In this regard, please address your comments to the Corporate Secretary via electronic mail to corpsec@ema.co.tt or mail to:

The Corporate Secretary  
Environmental Management Authority  
8 Elizabeth Street  
St. Clair  
PORT-OF-SPAIN

Yours sincerely,
ENVIRONMENTAL MANAGEMENT AUTHORITY

Ms. Jenell Partap  
CORPORATE SECRETARY
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<th>Description</th>
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</thead>
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<td>CEC</td>
<td>Certificate of Environmental Clearance</td>
</tr>
<tr>
<td>CPC</td>
<td>Chief Parliamentary Counsel</td>
</tr>
<tr>
<td>EEE</td>
<td>Electrical and Electronic Equipment</td>
</tr>
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<td>EMA</td>
<td>Environmental Management Authority</td>
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<tr>
<td>GORTT</td>
<td>Government of the Republic of Trinidad and Tobago</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MRDLG</td>
<td>Ministry of Rural Development and Local Government</td>
</tr>
<tr>
<td>MPD</td>
<td>Ministry of Planning and Development</td>
</tr>
<tr>
<td>MSW</td>
<td>Municipal Solid Waste</td>
</tr>
<tr>
<td>MTI</td>
<td>Ministry of Trade and Industry</td>
</tr>
<tr>
<td>NEP</td>
<td>National Environmental Policy</td>
</tr>
<tr>
<td>PTCCB</td>
<td>Pesticides and Toxic Chemicals Control Board</td>
</tr>
<tr>
<td>PTCI</td>
<td>Pesticides and Toxic Chemicals Inspectorate</td>
</tr>
<tr>
<td>RHA</td>
<td>Regional Health Authority</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
</tr>
<tr>
<td>SWMCOL</td>
<td>Solid Waste Management Company Limited</td>
</tr>
<tr>
<td>THA</td>
<td>Tobago House of Assembly</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UN Environment</td>
<td>United Nations Environment</td>
</tr>
<tr>
<td>WASA</td>
<td>Water and Sewerage Authority</td>
</tr>
<tr>
<td>WEEE</td>
<td>Waste Electrical and Electronic Equipment</td>
</tr>
</tbody>
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1.0 EXECUTIVE SUMMARY

Sections 55 to 58 of the Environmental Management Act, Chap. 35:05 (the Act) outline the responsibilities of the Environmental Management Authority (EMA) in the regulation of waste management in Trinidad and Tobago. Several iterations of legislation were developed with the most recent being the:

- Draft Waste Management Rules, 2008;
- Draft Waste Management (Hazardous Waste) Rules, 2014 (the draft Hazardous Waste Rules); and,

The draft Hazardous Waste Rules was lodged for public comment in 2014. In 2016, the EMA began its review of the aforementioned drafts and the recommendations from previous national waste inventory reports, and decided to return to a single and simple piece of legislation to regulate waste management. This resulted in the development of the Draft Waste Management (Registration and Permitting) Rules, 2018 (Draft Waste Rules, 2018). It should be noted that unlike the previous versions of the Rules, this version has removed the regulation of transboundary movement of hazardous wastes as this will be addressed under separate primary legislation.

The intent of the Draft Waste Rules, 2018, is to support the current waste management system in Trinidad and Tobago and the objectives defined in national policies on waste management. This Administrative Record will elaborate on the major environmental concerns related to the generation and handling of wastes in Trinidad and Tobago and will provide justification for the introduction of the Draft Waste Rules, 2018. The EMA recognises the importance of the public’s contribution towards its development and so invites members of the public to submit comments following their review.
2.0 INTRODUCTION

The duties of the Environmental Management Authority (EMA) are guided by the Environmental Management Act, Chapter 35:05 (the Act). Sections 55 to 58 of the Act outline responsibilities for the EMA to regulate waste generation and its handling. The development of such regulations are also shaped by international principles on environmental management, including but not limited to:

- **The Precautionary Principle**
  This principle states that “where there are threats of serious or irreversible environmental damage, the lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures for preventing environmental degradation”.

- **The Polluter Pays Principle**
  The party/entity/person responsible for creating the pollution shall bear the cost of preventing, minimising or compensating for any damages caused to the environment by the pollution.

- **Waste Management Hierarchy**
  A waste management hierarchy depicts the preference for waste management operations in ascending order and can be used as a guide for businesses for implementing cleaner technologies for waste management (refer to Figure 1).

- **Life Cycle Approach**
  This approach encourages persons to consider the impacts that their creation, usage and disposal of a product would have on the environment and human health and is commonly referred to the “cradle to grave” approach to waste (refer to Figure 2). Emphasis is placed on the design stage so that the generation of waste, especially hazardous waste, is prevented or at best, minimised.
Figure 1: Waste Management Hierarchy
(Source: UN Environment)¹

Figure 2: A Typical Product Life Cycle Diagram
(Source: UN Environment)²


The development of the Draft Waste Rules, 2018, has also been guided by the Sustainable Development Goals (SDGs) which were developed by the United Nations Development Programme (UNDP). The fulfilment of some SDGs are directly linked to or depend on good waste management practices, for example:

- SDG 3, which relates to good health and well-being, seeks to improve water quality by eliminating dumping and minimising the release of hazardous chemicals and materials, as well as to substantially reduce the number of deaths and illnesses resulting from contamination caused by hazardous chemicals;

- SDG 11, which relates to sustainable cities and communities, aims to reduce the environmental impact of cities by paying special attention to municipal and other waste management;

- SDG 12, which relates to responsible consumption and production, contains several targets related to waste reduction, including the reduction of food waste globally, the environmentally sound management of all wastes throughout their life cycle so that their adverse impacts on human health and the environment are minimised, and the substantial reduction of waste generation through prevention, reduction, recycling and reuse by 2030; and,

- SDG 14, which relates to the world’s oceans and management of this global resource contains the target related to prevention and significant reduction of marine pollution of all kinds, in particular from land-based activities by 2025.

The aforementioned principles and SDGs are also embodied in local policies, namely the:

- National Environmental Policy (NEP) (2006)³;
- Draft NEP (2018)⁴;
- National Waste Recycling Policy, 2015⁵; and the,

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A common objective among the policies is the implementation or revision of national laws and regulations governing waste management. With respect to hazardous wastes, Vision 2030 calls for the strengthening of regulatory, infrastructural and legislative frameworks to address the management of toxic chemicals. The NEP (2006) and the draft NEP (2018) also state that new legislation should be developed in order to ensure the proper handling, transport, treatment, storage and disposal of hazardous substances and hazardous wastes through permitting and licencing systems. The Draft Waste Rules, 2018, intends to support these policy objectives.
3.0 MAJOR ENVIRONMENTAL ISSUES

Trinidad and Tobago’s economy is mainly driven by its energy sector (petroleum, natural gas and downstream industries), manufacturing sector and services sector\(^7\). Oil, gas and petrochemical products account for over 70 percent of the country’s exports of goods and services, and depends on imports to support its consumption, infrastructure and development needs.\(^8\) The economic development over the years did not occur without environmental concerns. Environmental issues such as water pollution (from agricultural chemicals, industrial wastes and sewage), illegal dumping, marine pollution, and deforestation, fisheries and wildlife depletion are of concern\(^9\). This chapter will explore the nature of wastes generated in Trinidad and Tobago and the major environmental issues which are associated with waste management.

3.1 Nature of Wastes Generated in Trinidad and Tobago

The EMA presently differentiates wastes into two (2) major categories when defining conditions for waste management within Certificates of Environmental Clearance (CECs) issued under the CEC Rules (2001):

- **Hazardous Waste:** Any waste which represent a risk to human health, property or the environment due to their physical, biological or chemical characteristics. The characteristics refers to hazardous substances which includes explosives; compressed gases including toxic or flammable gases; flammable liquids; flammable solids; oxidizing substances; toxic materials including carcinogens, pathogens, teratogens and mutagens; corrosive substances; and radioactive materials.

- **Non-Hazardous Waste:** Any waste not limited to general garbage, inert construction materials and refuse including metal scrap and empty containers which are not contaminated with a hazardous substance.

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This section will consolidate the information from multiple inventories on waste management to define the types and quantities of wastes generated in Trinidad and Tobago. Table 1 summarizes the findings from recent inventories of wastes generated in Trinidad and Tobago. These studies can be found at the EMA’s Information Centre located at the EMA’s Office in Port-of-Spain.

Table 1: Summary of Findings from Recent Waste Inventories conducted for Trinidad and Tobago.

<table>
<thead>
<tr>
<th>Title of Study</th>
<th>Reporting Year</th>
<th>Summary of Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Hazardous Waste Inventory: Inventory Years 2004-2008.</td>
<td>2004 to 2008</td>
<td>This study informed national reports required under the Basel Convention of which Trinidad and Tobago is a Party. The inventory examined hazardous wastes generated from the institutional, commercial and industrial (ICI) economic sectors generated from 2004 to 2008. The study found that waste oils, waste lead-acid batteries and waste organic solvents were the significant streams in terms of quantity generation (96.5% of the total quantity of all reported wastes). The economic sectors which were the major generators were the petrochemical industry, hotels and restaurants, and the automotive industry.</td>
</tr>
<tr>
<td>Coordinated by the EMA. Contracted to the Caribbean Environmental Health Institute (now the Caribbean Public Health Agency)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trinidad Solid Waste Management Program Waste Characterisation and Centroid Study: Final Report.</td>
<td>2010</td>
<td>This study informed policy-making initiatives on municipal waste recycling. It focused on the types and quantities of wastes delivered to the four (4) public land disposal sites in Trinidad (Beetham, Forres Park, Guanapo and Guapo). Tobago was not included in the scope of work for the study. The study found that approximately 700,000 tonnes of waste were reported to have entered the four (4) sites, two-thirds of which were derived from households. Organic waste (27.15%), paper (18.77%), plastics (19.17%) and glass (10.15%) accounted for the majority of waste being landfilled, while household hazardous waste and construction and demolition waste comprised a smaller portion.</td>
</tr>
<tr>
<td>Coordinated by the Ministry of Local Government. Contracted to the CBCL Limited.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


An Inventory of Wastes Generated in Trinidad and Tobago from 2013 to 2015.

Coordinated by the EMA. Conducted in-house.

This study informed the revision of requirements for waste generators under the draft Waste Management (Hazardous Waste) Rules, 2014 and the draft Solid Waste (Non-Hazardous) Management Rules, 2014.

The majority of the respondents reported that they generated waste electrical and electronic equipment in each year, especially lighting waste and waste batteries. With respect to non-hazardous wastes, most respondents indicated that they generated organics, paper and beverage containers in each year. The majority of respondents normally generated wastes in the 0-50 (kg or litres) range per year. However, some respondents reported that they generated waste oils and oily wastes in ranges of 501 to 1000 litres and more than 5000 litres per year. The manufacturing sector was found to be the major contributor of waste, followed by the mining and quarrying sector.

It should be noted that while waste oil and oily wastes were found to be the major types of hazardous waste generated over the years, the inventory for the period 2013 to 2015 also found that waste electrical and electronic equipment [WEEE or electronic waste (e-waste)] is another major contributor to Trinidad and Tobago’s waste stream. The improper disposal of e-waste poses a threat to the environment because of the release or emissions of hazardous constituents used in their manufacture, including heavy metals such as lead, mercury, and cadmium, flame retardants and furans, which can negatively impact our ecosystem.

Table 2 provides estimated total quantities of waste received by the Solid Waste Management Company Limited (SWMCOL) at its three (3) disposal sites in Trinidad from 2014 to 2017. Based on the results of the Waste Characterisation and Centroid Study conducted in 2010, it may be presumed that the estimated quantities of wastes generally increased from 2010 to 2014 and onwards.

Table 2: Estimated Quantities of Waste Received by Disposal Sites Operated by SWMCOL.

<table>
<thead>
<tr>
<th>Disposal Site</th>
<th>Estimated Quantity of Waste Received ( tonnes )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>Beetham</td>
<td>260,302</td>
</tr>
<tr>
<td>Forres Park</td>
<td>218,804</td>
</tr>
<tr>
<td>Guanapo</td>
<td>79,511</td>
</tr>
<tr>
<td>Total (All Sites)</td>
<td>558,617</td>
</tr>
</tbody>
</table>

The THA commissioned a number of studies (in September 2010, March 2012 and December 2012) to inform the development of an integrated waste management system. The findings revealed that the highest wastage came from paper wastes (28%), followed by plastics (22.2%) and textiles (17.6%). It should be noted that it is projected that by 2020, Trinidad and Tobago may generate 1.4 million tonnes of municipal solid waste per year unless decisive action is taken by all citizens to reduce the waste generation. In this regard, by 2020, the GORTT has set out to reduce the quantity of waste requiring final disposal by 50 percent.

3.2 Current Waste Management Strategies Employed in Trinidad and Tobago

The responsibilities for waste management are shared among the EMA, the Municipal Corporations, the SWMCOL and the Tobago House of Assembly (THA).

- The EMA is responsible for developing and implementing legislation for the management of wastes as described in the Act.
- The Municipal Corporations are responsible for the curbside collection and transport of household wastes. The Corporations also manages public land disposal sites in Guapo, San Fernando and other locations.
- The SWMCOL is responsible for management of three (3) public land disposal sites in Trinidad (Beetham, Guanapo and Forres Park) and also provides waste management services to the public and private sector such as the provision of waste bins and the collection of special wastes.
- The THA is responsible for the curbside collection and transport of household wastes to the Studley Park Waste Integrated Facility which is also operated by the THA. The Studley Park site was developed and commissioned by the SWMCOL in the 1980s and handed over to the THA in 1989.

The following sections summarize the movement of waste from generation and storage to disposal.

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https://www.planning.gov.tt/content/government-working-shut-down-landfills-0  


http://www.swmcol.co.tt/services/293-notice-to-waste-haulers-special-waste-disposal.html  

3.2.1 Generation and Storage
Household wastes, including household hazardous wastes, are typically commingled at source – there is presently no regulatory requirement to segregate wastes, but there are public programmes, private entities, non-governmental organizations and community-based organizations who encourage the public to segregate waste beverage containers, paper wastes and hazardous wastes. Hazardous waste generators, especially private entities in the ICI sectors, may store such wastes in specially designated areas, and/or in specially marked or coloured bags, bins or other containers. There is no national legislation, guideline or code of practice specific to the storage and labelling of wastes. Generators are often advised to refer to internationally accepted standards or guidelines. However, the EMA presently outlines general requirements for the proper storage and labelling of wastes in its CECs for designated activities.

3.2.2 Collection/Transportation
Household wastes, including household hazardous wastes, tend to be commingled and transported by the Municipal Corporations, the SWMCOL and the THA. The entities may also hire private contractors for this service. However, hazardous waste collection and transport are largely managed by private entities who are contracted by persons from the public and private sectors. The types of vehicles typically used for the collection of household wastes are mainly compactor trucks as well as skip loaders and flatbed trucks. Vehicles equipped to hold specially-designed or engineered tanks or containers are used to transport hazardous solid and liquid wastes.

The most common means of transportation is by road. Wastes generated by offshore installations are transported by sea through supply vessels. Some establishments in Tobago may ship hazardous wastes to Trinidad for treatment and disposal as there are limited hazardous waste disposal service providers in the island. Some haulers may use a consignment form or manifest system to document and track the collection and transport of the waste to the intended treatment and disposal facility. There is no national legislation, guideline or code of practice to standardize the use and format of a manifest. However, the EMA presently outlines general requirements for the maintenance of such records in its CECs for designated activities.

3.2.3 Treatment and Disposal
The most common method used for the final disposal of treated and untreated wastes, especially household wastes, is to deposit at the public land disposal sites managed by the SWMCOL, the Municipal Corporations and the THA. Please refer to Figure 3 which shows the locations of the major sites.
The sites operated by the Municipal Corporations have similar challenges to the major sites including limited cover material, open burning and unregulated salvaging. Site drainage is not controlled and leachate generated from the sites may enter the surrounding environment. The sites may be considered a combination of open dumpsites and controlled dumpsites as shown in Table 3\textsuperscript{19}.

Table 3: A Summary of the General Characteristics of Land Disposal Facilities

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Open Dump</th>
<th>Controlled Dump</th>
<th>Sanitary Landfill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siting of facility</td>
<td>Unplanned and often improperly sited.</td>
<td>Hydrogeological conditions considered.</td>
<td>Site chosen is based on environmental, community and cost factors.</td>
</tr>
<tr>
<td>Capacity</td>
<td>Site capacity is not known.</td>
<td>Planned capacity.</td>
<td>Planned capacity.</td>
</tr>
<tr>
<td>Cell planning</td>
<td>• There is no cell planning.</td>
<td>• There is no cell planning but the working face/area is minimized.</td>
<td>• Designed cell by cell development.</td>
</tr>
</tbody>
</table>

\textsuperscript{18} SWMCOL, date unknown, adapted from the National Waste Inventory for Trinidad and Tobago: Inventory Years 2004-2008\textsuperscript{8}, March 2010.


<table>
<thead>
<tr>
<th>Criteria</th>
<th>Open Dump</th>
<th>Controlled Dump</th>
<th>Sanitary Landfill</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• The waste is indiscriminately dumped.</td>
<td>• Disposal is only at designated areas.</td>
<td>• The working face/area is confined to the smallest area practical.</td>
</tr>
<tr>
<td></td>
<td>• The working face/area is not controlled.</td>
<td></td>
<td>• Disposal is only at designated cells.</td>
</tr>
<tr>
<td>Site preparation</td>
<td>Little or no site preparation.</td>
<td>• Grading of the bottom of the disposal site.</td>
<td>Extensive site preparation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drainage and surface water control along periphery of the site.</td>
<td></td>
</tr>
<tr>
<td>Leachate management</td>
<td>No leachate management.</td>
<td>Partial leachate management.</td>
<td>Full leachate management.</td>
</tr>
<tr>
<td>Gas management</td>
<td>No gas management.</td>
<td>Partial or no gas management.</td>
<td>Full gas management.</td>
</tr>
<tr>
<td>Application of soil cover</td>
<td>Occasional or no covering of waste.</td>
<td>Covering of waste implemented regularly but not necessarily daily.</td>
<td>Daily, intermediate and final soil cover applied.</td>
</tr>
<tr>
<td>Access road maintenance</td>
<td>No proper maintenance of access road.</td>
<td>Limited maintenance of access road.</td>
<td>Full development and maintenance of access road.</td>
</tr>
<tr>
<td>Fencing</td>
<td>No fence.</td>
<td>With fencing.</td>
<td>Secure fencing with gate.</td>
</tr>
<tr>
<td>Waste inputs</td>
<td>No control over quantity and/or composition of incoming waste.</td>
<td>Partial or no control of waste quantity, but waste accepted for disposal is limited to municipal solid waste.</td>
<td>Full control over quantity and composition of incoming waste.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Full control over quantity and composition of incoming waste.</td>
<td>• Special provisions for special types of wastes.</td>
</tr>
<tr>
<td>Record keeping</td>
<td>No record keeping.</td>
<td>Basic record keeping.</td>
<td>Complete record of waste volumes, types, sources and site activities/events.</td>
</tr>
<tr>
<td>Closure</td>
<td>No proper closure of site after cease of operations.</td>
<td>Closure activities limited to covering with loose or partially compacted soil and replanting of vegetation.</td>
<td>Full closure and post-closure management.</td>
</tr>
<tr>
<td>Cost</td>
<td>Low initial cost, high long term cost.</td>
<td>Low to moderate initial cost, high long term cost.</td>
<td>Increased initial, operational and maintenance costs, moderate long term cost.</td>
</tr>
<tr>
<td>Environmental and health</td>
<td>High potential for fires and adverse environmental and health impacts.</td>
<td>Lesser risk of adverse environmental and health impacts compared to an open dumpsite.</td>
<td>Minimum risk of adverse environmental and health impacts.</td>
</tr>
<tr>
<td>impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conceptual designs for a new landfill at Forres Park were completed in 2016 as well as a pilot project for leachate treatment and identification of parameters for full treatment at the Guanapo Landfill so as to reduce surface water pollutants attributed to the site. The GORTT intends to improve its sites and it is expected that one (1) site will meet internationally recognized standards by 2020\textsuperscript{20}.

Based on the results of the Waste Characterization and Centroid Study (2010) as shown in Table 1, there is potential for significant recycling and recovery of waste as most of the waste disposed comprised of recyclable material such as paper, glass, metals, plastic and organic wastes. Figure 4 shows the national average recycling rates for eleven countries representative of the Latin American and Caribbean region.

\textbf{Figure 4:} Recycling rates of some countries within the Latin American and Caribbean Region

The GORTT implemented recycling initiatives to address challenges related to waste recycling and disposal including:

- A Material Recovery Facility commissioned at the Guanapo site for sorting recyclable wastes;
- A pilot recycling programme at eight governmental entities; and,
- Curbside Collection Programmes which was launched in the Couva/Tabaquite/Talparo Regional Corporation and the San Fernando City Corporation.

The Recyclable Solid Waste Collection Project (iCare) was launched in 2015 in order to prepare the country for the passing of waste management legislation and to divert the volume of recyclable wastes discarded at the land disposal sites. The iCare Project has partnered with SWMCOL and several public and private entities for clean-up and collection campaigns. A number of collection sites were established throughout Trinidad and Tobago, and in January 2018, phase two of the project was launched to progress the collection of e-waste and tyres.

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https://wedocs.unep.org/bitstream/handle/20.500.11822/26448/Residuos_LAC_EN.pdf?sequence=2&isAllowed=y


https://www.planning.gov.tt/content/minister-robinson-regis-speech-launch-phase-2-icare-programme
Furthermore, the GORTT approved a ban on the importation of polystyrene scheduled for implementation in 2019\textsuperscript{24}. The phasing out of polystyrene in Tobago has already started after the THA approved a motion for same\textsuperscript{25}. The GORTT also initiated work on a “Waste to Energy Project” to achieve 10 percent renewable power generation by 2021\textsuperscript{26}. Expressions of interest were invited to develop the project at the Beetham site to convert municipal waste to energy\textsuperscript{27}. Therefore, the GORTT recognizes the recommendations from previous waste inventories and has initiated steps towards reducing the volume of wastes destined for land disposal.

As mentioned earlier, hazardous wastes are collected by privately-owned waste handling facilities for treatment followed by recovery or disposal. Most facilities are regulated by CECs issued by the EMA and the EMA conducts compliance monitoring of these facilities. However, facilities established prior to the enactment of the CEC Rules may be exempt unless the facilities were subject to modification, expansion, decommissioning or abandonment after the enactment of the CEC Rules. Nevertheless, all waste handling facilities are expected to seek clarification on whether they are subject to regulatory requirements defined in other legislation implemented by the EMA such as the Water Pollution Rules, 2001 (as amended) or Air Pollution Rules, 2014, since there is no delimitation based on the year of establishment.

The common methods applied for the treatment of hazardous wastes generated in Trinidad and Tobago include: incineration and other thermal treatment, solvent recovery, used oil re-refining, bioremediation, stabilization/solidification, neutralization and precipitation/flocculation. Wastes including waste lead-acid batteries, e-waste, waste oil and spent catalysts are exported for recovery or disposal. However, the EMA is not aware of all the potential waste exporters because there is no national legislation that obligates exporters (who may be generators of the waste or the waste handling facility) to observe the requirements of the Basel Convention, for which the EMA is the designated Competent Authority\textsuperscript{28}. Therefore, it is likely that there are local entities that collect and treat wastes without the necessary approvals from the EMA.


3.3 Existing Legislative and Regulatory Framework

There are several pieces of legislation implemented or are being developed by multiple governmental entities to support waste management in Trinidad and Tobago. The EM Act allows the EMA to have both regulatory and coordinating roles to facilitate cooperation among persons to promote the effective management and use of the environment. Table 4 summarises the present framework for waste management.

Table 4: Summary of the Existing Legislative and Regulatory Framework for Waste Management in Trinidad and Tobago

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Function in National Waste Management</th>
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</thead>
<tbody>
<tr>
<td>Litter Act, Chapter 30:52</td>
<td>The Litter Act states that the deposit of litter in public places and premises is an offence. Under this Act, &quot;litter&quot; is defined as any solid or liquid material or product or combination of solid or liquid materials or products considered as waste, and any other material or product that is designated as litter by notice published in the Gazette. &quot;Waste is defined as: (i) any substance which constitutes a scrap material or any other unwanted surplus substance arising from the application of any process; (ii) any substance or article which requires to be disposed of as being broken down, worn out, contaminated or otherwise spoilt; (iii) domestic waste, industrial waste or commercial waste; …and for the purpose of this Act anything which is discarded or otherwise dealt with as if it were waste shall be presumed to be waste and accordingly litter until the contrary is proved.&quot; Any public authority may appoint Litter Prevention Wardens to enforce the Act. The line minister of the Act is the member of Cabinet assigned with responsibility for health (Ministry of Health).</td>
</tr>
<tr>
<td>Municipal Corporations Act, Chapter 25:04</td>
<td>The Municipal Corporations Act governs the corporations, cities and boroughs in Trinidad. The line minister of the Act is the member of Cabinet assigned with responsibility for local government (Ministry of Rural Development and Local Government). The Act confers responsibility onto the Corporations for the disposal of garbage from public and private property and the development and the maintenance of sanitary landfills. The term “waste” is not used in the Act.</td>
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<tr>
<td>Public Health Ordinance, 1917</td>
<td>The Public Health Ordinance (1917, as amended) allows the member of Cabinet assigned to health (Ministry of Health) to appoint Public Health Inspectors to implement such ordinances. The Inspectors enforce public health laws, regulations and bye-laws. The local authority is responsible, under the Ordinance, for the removal of house refuse and rubbish within its district. The authority maintains the sanitation of the district, including the cleaning of streets and the subsequent disposal of any refuse, rubbish or waste collected in its undertaking. Inspectors assigned to a local authority are authorized to identify and assess risks to human health in the environment and use whatever methods which are reasonably practicable to control or eliminate the risks.</td>
</tr>
<tr>
<td>Pesticides and Toxic Chemicals Act, Chapter 30:03</td>
<td>The objectives of the Pesticides and Toxic Chemicals Act (1979, as amended) are to regulate the importation, exportation, storage, manufacture, sale, use and transportation of pesticides and toxic chemicals, and to provide for the establishment of the Pesticides and Toxic Chemicals Control Board (PTCCB). The line minister of the Act is the member of Cabinet assigned with responsibility for health (Ministry of Health). The Act addresses the disposal of waste in the licensing of premises (for the sale, manufacture or storage of pesticides and toxic chemicals) in relation to the disposal of empty packages and containers, and spilled or waste pesticides and toxic chemicals to avoid contamination of the environment.</td>
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<tr>
<td>Legislation</td>
<td>Function in National Waste Management</td>
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<tr>
<td>The PTCCB, and the associated Pesticides and</td>
<td>The PTCCB, and the associated Pesticides and Toxic Chemicals Inspectorate (PTCI), operate under the provisions of the Act. The PTCCB is responsible for registering chemicals and pesticides that can be imported. The PTCI is responsible for implementing the requirements of the Act as directed by the PTCCB.</td>
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<tr>
<td>Toxic Chemicals Inspectorate (PTCI), operate</td>
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<td>under the provisions of the Act. The PTCCB is</td>
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<td>responsible for implementing the requirements</td>
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<td>of the Act as directed by the PTCCB.</td>
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<tr>
<td>The Old Metal and Marine Stores Act (1904)</td>
<td>The Old Metal and Marine Stores Act (1904) governs the trade of scrap metal. The line ministry assigned for its implementation and update is presently the Ministry of Trade and Industry. However, licences and permits issued under the Act are issued by the police authority of the division or district of operation. “Old Metal” means old metal, used or second-hand metal fittings, scrap metal, broken metal, partly manufactured metal goods, and defaced or old metal goods. “Marine Stores” means second-hand cables, sails, old junk, or other second-hand marine stores of any kind.</td>
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<td>governs the trade of scrap metal. The line</td>
<td>Scoop Metal is also listed under the Export Negative List and therefore an Export Licence must be obtained prior to the export of this commodity.</td>
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<td>ministry assigned for its implementation and</td>
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<td>update is presently the Ministry of Trade and</td>
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<td>of the division or district of operation. “Old</td>
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<td>Metal” means old metal, used or second-hand metal</td>
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<td>fittings, scrap metal, broken metal, partly</td>
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<td>manufactured metal goods, and defaced or old</td>
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<tr>
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<tr>
<td>cables, sails, old junk, or other second-hand</td>
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<tr>
<td>marine stores of any kind.</td>
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<tr>
<td>A Scrap Metal Policy for Trinidad and Tobago</td>
<td>A Scrap Metal Policy for Trinidad and Tobago was developed to provide support to the existing regulatory framework for the scrap metal industry, which has evolved beyond the framework of the Old Metal and Marine Stores Act (1904). The Policy was prepared by the MTI in 2012 and takes into account international best practices and relevant national conditions in order to:</td>
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<tr>
<td>was developed to provide support to the existing</td>
<td>• Provide contemporary guidelines and regulations to facilitate the operations of the scrap metal industry; and</td>
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<tr>
<td>regulatory framework for the scrap metal industry,</td>
<td>• Develop an effective licensing regime for scrap metal dealers; and</td>
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<tr>
<td>which has evolved beyond the framework of the</td>
<td>• Raise operational standards in the scrap metal industry.</td>
</tr>
<tr>
<td>Old Metal and Marine Stores Act (1904)</td>
<td>The Policy states that the licensing of scrap metal dealers will be led by the Trade Licence Unit of the MTI in consultation with other governmental entities including the EMA.</td>
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<tr>
<td>governed the trade of scrap metal. The line</td>
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<td>ministry assigned for its implementation and</td>
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<td></td>
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<tr>
<td>marine stores of any kind.</td>
<td></td>
</tr>
<tr>
<td>The Certificate of Environmental Clearances (CEC)</td>
<td>The Certificate of Environmental Clearance (CEC) Rules (2001) designated activities which may have both positive and negative environmental effects. The Certificate of Environmental Clearance (Designated Activities) Order (2001, as amended), defines activities which require a CEC. During the assessment of CEC applications, the EMA considers foreseeable impacts which may arise out of any new or significantly modified construction, process, works or other activity. Waste management activities are recognized by Designated Activities 35, 36 and 37 of the CEC (DA) Order as follows:</td>
</tr>
<tr>
<td>Rules; Certificate of Environmental Clearance</td>
<td>• 35: Establishment of facility for solid waste disposal - The establishment, modification, expansion, decommissioning or abandonment of a solid waste disposal facility, inclusive of the disposal of industrial waste, aircraft and ship generated waste.</td>
</tr>
<tr>
<td>(Designated Activities) Order</td>
<td>• 36: Establishment of a facility for hazardous or toxic substance handling - The establishment, modification, expansion, decommissioning or abandonment of a facility for handling, storage, treatment or disposal of hazardous substances.</td>
</tr>
<tr>
<td></td>
<td>• 37: Recovery, recycling or incineration of waste - The establishment, modification, expansion, decommissioning or abandonment (inclusive of associated works) of a facility for the recovery or recycling or incineration of waste.</td>
</tr>
<tr>
<td></td>
<td>Issued CECs for the designated activities listed above will outline specific requirements for facilities which receive wastes for treatment and disposal. In addition to these designated activities, the CECs for all other designated activities listed in the CEC (DA)</td>
</tr>
<tr>
<td>Legislation</td>
<td>Function in National Waste Management</td>
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</tr>
<tr>
<td>Beverage Containers Bill</td>
<td>The Bill aims to provide for a deposit to be paid for reusable or recyclable beverage containers and for the deposit to be refunded upon the return of the beverage container. The Bill has been in development since 2000. It was presented to Parliament in May 2015 but lapsed in June 2015. As of November 2018, the Bill was under revision by the Ministry of Public Utilities and is expected to support the waste management legislation proposed by the EMA.</td>
</tr>
<tr>
<td>Ionising Radiation Bill and the draft Ionising Radiation Regulations.</td>
<td>The Bill aims to provide for the safe, secure and peaceful uses of ionizing radiation consistent with the requirements of the International Atomic Energy Agency (IAEA) of which Trinidad and Tobago is a member (and the Ministry of Health is its representative). The Bill and its regulations will set out requirements for the management of ionizing radiation sources and such wastes from import to disposal.</td>
</tr>
<tr>
<td>Code of Practice for Bio-Medical Waste Management</td>
<td>This Code of Practice for Bio-Medical Waste Management was developed by the Ministry of Health in 2004, in association with the Pan American Health Organization (PAHO). The Code of Practice outlines the minimum requirements deemed necessary for the safe collection, storage, transportation, treatment and disposal of bio-medical wastes. The aim of the Code of Practice is to achieve results through the required compliance of the Regional Health Authorities (RHAs) by way of the Annual Services Agreement with the MOH. The Code of Practice states that the document should be revised every three (3) years.</td>
</tr>
<tr>
<td>Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal</td>
<td>The Basel Convention is a multinational environmental agreement to which Trinidad and Tobago is a Party. The Convention seeks to ensure that wastes which are subject to transboundary movements are treated in an environmentally sound manner. The Convention, through its Prior Informed Consent procedure, allows Parties to issue its consent or objection to such movements before such shipments occur. The EMA is currently developing a Bill to give effect to the Convention in Trinidad and Tobago and so the Draft Waste Rules, 2018, do not incorporate the requirements of the Convention.</td>
</tr>
</tbody>
</table>

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4.0 REASONS FOR THE PROPOSED ACTION

The previous chapters indicate that the strengthening of the existing regulatory framework for waste management is needed to achieve the objectives set out in the many policy and regulatory documents proposed or implemented by the GORTT. For example, the Old Metal and Marine Stores Act, Chap. 84:07 seeks to regulate the scrap metal trading through its authorisation of dealership via a licencing process; the Pesticides and Toxic Chemicals Act, Chap. 33:03 generally addresses the disposal of packaging and stockpiles of chemicals registered under the Act; and the Municipal Corporations Act, Chap. 25:04 only mandates the collection of waste and maintenance of landfills by corporations, boroughs and cities. The CEC Rules seeks to regulate the establishment and operation of the activities defined in the CEC (DAs) Order so as to prevent or minimise the negative impacts the operations may have on the environment. However, the CEC Rules and other aforementioned regulations do not provide for the regulation and permitting of waste generators, transporters/haulers/carriers, and all treatment and disposal facilities. The gaps in regulation allow for uncontrolled development of activities which harm the environment and endanger public health. The EMA, in meeting its mandate to establish legislation for waste management, especially hazardous waste management, prepared the Draft Waste Rules, 2018, for this purpose.

The Draft Waste Rules, 2018 (please refer to Figures 5 and 6) intends to:

- Register generators of waste (including non-hazardous waste and special waste) above specific quantities to encourage persons to assess their operations and implement measures to promote resource and waste recovery and recycling so as to minimize the quantities of wastes generated over time;
- Permit persons who receive wastes for transport, treatment, recovery and disposal to ensure that the operations of such persons are conducted in an environmentally sound manner so as to minimize releases and emissions associated with the handling of wastes;
- Establish a National Register which allows the public to identify persons who are registered or permitted under the Rules and so promote an authorized list of generators and waste handlers;
- Collect data on waste generation and handling which will inform national policy- and decision-making efforts to continuously improve integrated waste management; and,
- Overall increase accountability to ensure that consignments of wastes are tracked to its final destination through a waste manifest system, to prevent littering and dumping, and to report on measures implemented to reduce waste generation.

In this regard, the EMA welcomes comments on the Draft Waste Rules, 2018, presented in Chapter 5 to improve areas of the legislation which need clarification or further information.
Figure 5: Summary of Procedures for Registration under the draft Waste Management (Registration and Permitting) Rules, 2018
**Figure 6**: Summary of Procedures for a Waste Handling Permit under the draft Waste Management (Registration and Permitting) Rules, 2018
5.0 DRAFT WASTE MANAGEMENT (REGISTRATION AND PERMITTING) RULES, 2018
DRAFT WASTE MANAGEMENT (REGISTRATION AND PERMITTING) RULES, 2018

ENVIRONMENTAL MANAGEMENT ACT, CHAPTER 35:05

WASTE MANAGEMENT (REGISTRATION AND PERMITTING) RULES, 2018

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10. Changes in particulars
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SCHEDULE I - Hazardous Waste
(Annex VIII – Basel Convention)

SCHEDULE II - Hazardous Characteristics
(Annex III Basel Convention)
ENVIRONMENTAL MANAGEMENT ACT, CHAP. 35:05

DRAFT RULES

Made by the Minister under Sections 26 (1)(d), (i), 56, 57, 96(1) and 96(2)(a) of the Environmental Management Act, Chapter 35:05

WASTE MANAGEMENT (REGISTRATION & PERMITTING) RULES, 2018

PART I
PRELIMINARY

Citation and application

1. (1) These Rules may be cited as the Waste Management (Registration and Permitting) Rules, 2018.

   (2) These Rules apply to the generation, processing, treatment, packaging, storage, transportation, use, collection, disposal, recovery, recycling or other activities related to the management of waste but does not include radioactive wastes.

   .

Interpretation

2. In these Rules -

   “collection” means the physical removal of waste from the premises of the holder of the waste, including preliminary sorting and storage of the waste for the purposes of transport;

   “dilution” means the blending or mixing of hazardous wastes with other waste(s) or substance(s) with the aim of reducing the hazardous characteristics of the waste;

   “disposal” means any operation that is not recovery and occurs even where the operation has a secondary consequence of reclaiming substances or energy;

   “environment” has the meaning assigned to it in the Act;

   “facility” means all contiguous land, structures, other appurtenances, and improvements on land used for treating, storing or disposing of waste and includes landfills and incineration facilities that produce ash from the process of incinerating waste and may consist of treatment, storage, or disposal operational units;
“generator” means a person, who produces waste above the registrable quantities mentioned in Part II of these Rules.

“generation” means the production of waste from a process;

“handling” means the acceptance of waste produced by another person for collection, transport, storage, processing, treatment, recovery, recycling or disposal;

“handler” means a person who collects transports, stores, produces, processes, treats, recovers, recycles or disposes of waste received from another person or generated on his own premises or, as a broker, has control of it;

“hazardous characteristics” means a property of waste which renders it hazardous in accordance with Schedule II;

“hazardous substance” has the meaning assigned to it in the Act;

“hazardous waste” means any waste designated under Schedule I;

“manifest” means a record of the movement of waste from the premises in which it was produced to the premises where it is to be treated for recovery or disposal operations;

“operator” means a person who is responsible for the operation and management of a facility or any part thereof;

“owner” includes a person who owns a facility, part of a facility or has control of the operations used in the handling of waste;

“person” has the meaning assigned to it by the Act;

“packaging” means materials used for the containment and protection of waste from physical damage during handling;

“permit holder” means a person who is in possession of a permit;

“premises” includes a marine vessel;

“process” has the meaning assigned to it by the Act;
“reclamation” means a form of recovery which allows materials to be reused in the same manner as virgin materials;

“recovery” means any operation which has the main result of waste serving a useful purpose, by replacing non-waste materials that would otherwise have been used to fulfil a particular function;

“recycling” means a process by which waste is reprocessed so as to obtain a product or material suitable for use whether for the original or other purposes but does not include energy recovery, reprocessing into materials that are to be used as fuels or backfilling operations;

“reduction” means the action of reducing waste generated through the lifecycle of a process;

“registration” means the duty of an applicant to register in accordance with Rules 4 and 5;

“reuse” means using a waste product or material again for the same purpose as was originally intended;

“storage” means the containment of waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such waste;

“transfer” means a change in legal ownership of a permit;

“transportation” means the movement of waste from one premises to another;

“treatment” means a process designed to change the physical, chemical or biological character or composition of waste in order to reduce the impact of waste on human health and the environment prior to storage, recovery or disposal;

“use” means the repurposing of waste;

"waste" has the meaning assigned to it by the Act and includes any waste listed in the Schedules to the Rules;

Obligations of generators and handlers

3. A person who conducts any activities in relation to the generation and handling of wastes shall take all measures including but not limited to:
(a) complying with the provisions of these Rules, the Act and any other written law concerning the generation and handling of waste;

(b) taking such measures as are technically, environmentally and economically practicable to minimise the quantities of waste generated through reduction, reuse and recycling;

(c) treating or disposing of waste at a facility which is permitted to receive such waste;

(d) ensuring that waste is conveyed to the holder of a permit; and

(e) preventing the dilution of waste as a substitute for treatment.

**PART II**

**REGISTRATION**

**Registration of generators and handlers**

4. **(1)** A person who in a calendar year generates and handles wastes in the amounts or in excess of the amounts mentioned below shall apply to the Authority for a Waste Registration Certificate.

   (a) ≥ 50 kilograms or litres of hazardous waste as per Schedule I;
   (b) ≥ 1000 kilograms or litres of waste oil as per Schedule I; and
   (c) ≥ 100 kilograms or litres of other wastes that do not exhibit hazardous characteristics as per Schedule II.

(2) A person who is the owner of a facility shall within forty (40) working days of the commencement of these Rules apply to the Authority for a Waste Registration Certificate in respect of such facility together with the prescribed fee.

(3) The application must be signed -
   (a) by a duly authorized representative; or
   (b) the owner of the facility.

(4) The Registration Certificate shall be in such form as may be determined by the Authority.

(5) Any fee paid in respect of applications referred to in sub-rules (2) and (3) is not refundable.
(6) The Authority may at any time after the commencement of these Rules, direct a person who normally and regularly transports waste, whether that waste is produced by them or others to obtain a Waste Registration Certificate.

**Waste Registration Certificate**

5. (1) Within twenty (20) working days of the receipt of an application for registration under Rule 4(1) and (6) the Authority shall –

   (a) acknowledge receipt of the application;

   (b) indicate whether any of the information required on the form is incomplete or in need of clarification;

   (c) request any further information that the Authority may require; and

   (d) specify a time for the submission of any such information.

(2) Subject to sub-rule (3), where an application for registration is submitted, the Authority shall within twenty (20) working days issue a Waste Registration Certificate together with an identification number to the applicant.

(3) Where the applicant submits further information pursuant to sub-rule 1(c) the Authority shall within twenty (20) working days of receipt of such information issue a Waste Registration Certificate together with an identification number to the applicant.

(4) A Waste Registration Certificate is valid for a period of three (3) years from the date of issue and is subject to renewal for such period as the Authority may determine.

(5) An application for renewal shall be in a form to be determined by the Authority and accompanied by the prescribed fee and shall be submitted to the Authority within twenty (20) working days prior to the expiration of the Waste Registration Certificate.

**PART III**

**WASTE HANDLING PERMIT**

Application for waste handling permit
6. (1) The Authority may at any time after the commencement of these Rules, notify the holder of a Waste Registration Certificate to submit an application for a Waste Handling Permit within forty-five (45) calendar days of receipt of such notice;

(2) The application for a waste handling permit shall be in such form as may be determined by the Authority and shall be accompanied by the fee specified therefor- in the Schedule;

(3) The application shall be signed by -

(a) a duly authorised person; or

(b) the owner of the facility, the owner of the vehicle or vessel.

Grant or refusal of waste handling permit

7. (1) Within twenty (20) working days of receipt of an application for a waste handling permit, the Authority shall:-

(a) acknowledge receipt of the application; and

(b) indicate such actions as the Authority may wish to take in relation to the application;

(2) Subject to sub-rule (3), the Authority shall issue to the applicant a waste handling permit or refuse to grant the permit;

(3) A waste handling permit shall specify such terms and conditions as the Authority may deem appropriate;

(4) A waste handling permit shall be valid for a period of five (5) years from the date of issue and shall be subject to renewal for such period as the Authority may deem suitable;

(5) Where the Authority refuses to grant a waste handling permit, it shall provide the applicant with reasons in writing for refusal therefor.

Renewal of waste handling permit

8. An application for renewal of a waste handling permit shall be -:
(a) made not less than twenty (20) working days prior to the expiration of the permit.

(b) in such form as the Authority may determine; and

(c) accompanied by the prescribed fee.

**Change in operating conditions**

9. Where a change occurs in the volume, characteristics or process of any waste generated the facility shall notify the Authority in writing within forty-eight (48) hours of such occurrence.

**Changes in particulars**

10. A holder of a waste handling permit shall notify the Authority in writing within thirty (30) working days of the occurrence of changes to-

   (a) the name, ownership of the holder’s facility, or any change affecting the accuracy of any particulars provided in an application for a waste handling permit;

   (b) the design of the facility;

   (c) management practices;

   (d) the types of wastes being handled or generated;

   (e) the method of waste handling or generation;

   (f) the discontinuance of operation of the facility; and

   (g) any other change that is likely have an impact on the ability of the facility to adequately protect human health and the environment.

**Application for variation of permit**

11. (1) A holder of a waste handling permit may make an application to the Authority to vary any provision thereof on submission of supporting particulars together with the prescribed fee.
(2) The application mentioned in sub-rule (1) must describe the exact change to be made to the permit conditions and explain why the change is needed.

(3) The particulars submitted under sub-rule (1) shall be based on supported scientific evidence.

**Grant of variation**

12. (1) The Authority shall within forty-five (45) days of receipt of an application under Rule 11 vary a waste handling permit or refuse to vary the permit giving reasons therefor.

(2) The Authority may approve the application under sub-rule (1) if –

(a) there is no known practicable means to enable compliance with the existing conditions contained in the waste handling permit;

(b) the estimated cost to be incurred for compliance will be prohibitive having regard to the nature and size of the industry, trade or process being carried out; or

(c) the imposition of the conditions as stipulated in the permit are not, having regard to all factors, reasonably practicable or are contrary to the intent and spirit of these Rules.

(d) No person shall vary the provisions of a waste handling permit without an approval therefor from the Authority; or

(e) Where the Authority varies a waste handling permit the Authority shall issue an amended waste handling permit to the permit holder.

**Incomplete application**

13. (1) Where the Authority considers that the applicant for a waste handling permit has omitted to provide any of the required information, the Authority shall notify the applicant in writing of the omission within fifteen (15) working days of receipt of the application and shall request the applicant to furnish the requisite information within such time.

(2) The Authority may at the request of the applicant allow an extension of the time limit fixed under sub-rule (1).

(3) Without prejudice to the generality of Rule 11 where the applicant does not supply the information under sub-rule (1) or (2), the Authority may refuse to grant a variation.
(4) The Authority may at any time vary the terms and conditions of a waste handling permit where the Authority deems it necessary to do so.

Transfer

14. (1) A waste handling permit may not be transferred to any person without the prior written consent of the Authority having been obtained.

(2) A transfer of the waste handling permit may be triggered by, but is not limited to a circumstance where -

(a) a sale or purchase of a company that leads to a transfer or conveyance of ownership occurs;

(b) a merger of companies that leads to a transfer or conveyance of ownership occurs; or

(c) a new lease agreement between the current land owner and a new operator is entered into

(3) A permit holder may apply to the Authority for the transfer of a waste handling permit to another person in a form to be determined by the Authority and shall be accompanied by -

(a) the waste handling permit which is to be transferred.

(b) the prescribed fee; and

(c) such other information as the Authority may require.

(4) An application for a transfer shall contain –

(a) the name and address of the proposed transferee; and

(b) the signatures of the proposed transferee and the applicant.

(5) Where the proposed transferee is a company, an application for a transfer shall be accompanied by a Certificate of Incorporation issued by the Registrar of Companies under section 12 the Companies Act Chap. 81:01 stating that the name of the company is on the Register of Companies.
(6) Within thirty (30) calendar days of the receipt of an application for the transfer of a waste handling permit, the Authority shall grant or refuse to grant the transfer giving reasons therefor.

(7) Where the Authority grants a transfer under sub-rule (6), it shall –

(a) endorse the transfer on the waste handling permit submitted under sub-rule (1);

(b) substitute the name of the transferee on the waste handling permit for that of the holder; and

(c) endorse the date on which the application is approved.

(8) Where the proposed transferee takes possession of the facility before a final consideration of the application is made by the Authority, the conditions and restrictions of the waste handling permit shall be binding on the proposed transferee and shall be observed by him, notwithstanding that he is not yet the holder of the waste handling permit.

(9) The Authority may, on the application to transfer a waste handling permit, modify, revoke or re-issue such permit or incorporate such other requirements as the Authority may consider necessary.

Suspension or cancellation of permit

15. (1) Where the holder of a waste handling permit-

(a) is contravening any material condition of the permit; or

(b) is in violation of any condition of the waste handling permit;

the Authority may take such measures as is in accordance with section 63 of the Act.

(2) Where pursuant to section 25 of the Act it is necessary or expedient to enable the Authority to carry out emergency response activities the Authority may suspend the permit.

(3) Where the holder of a waste handling permit –

(a) dies;

(b) becomes bankrupt;

(c) goes into liquidation or receivership:
(d) becomes a party to an amalgamation;

(e) causes a change in ownership;

(f) proposes to change the process of operation of technology used in the facility and which is likely to cause a change in the nature and composition of the waste; or

(e) requests the Authority to do so;

the Authority shall cancel the permit or if the Authority considers it is contrary to the public interest to cancel the permit, the Authority may suspend the permit instead.

(4) Before the Authority acts under sub-rule (3) it shall –

(a) within twenty (20) days of its intention to do so notify the holder of a waste handling permit in writing of its proposed action specifying the reason for the proposed action; and

(b) allow the holder at least seven (7) days within which to make written submissions to the Authority in relation to its proposed action.

(5) A suspension under this section may be for a specified period or until the fulfilment of specific conditions or until further order of the Authority.

(6) The Authority may suspend a waste handling permit for such time as it deems appropriate where:

(a) this is necessary or expedient to enable the Authority to carry out emergency response activities pursuant to section 25 of the Act;

(b) the permit holder has violated a condition of the waste handling permit; or

(c) the Authority deems it necessary to do so;

and shall notify the permit holder accordingly.

PART IV
TRANSPORT

Vehicle construction and maintenance
16.  (1) Every vehicle or container used for the collection and transportation of wastes or mixtures containing waste on land, shall be—

(a) covered, substantially leak-proof, durable, and of easily cleanable construction;

(b) cleaned frequently and maintained in good repair;

(c) loaded and moved in such manner that the contents will not fall, leak or spill there from and shall be covered when necessary to prevent blowing of material from the vehicle.

(2) Hazardous wastes may not be collected and transported except in accordance with the Act and Rules made thereunder.

(3) All wastewater from the cleaning of vehicles shall be handled in accordance with the Act and Rules made thereunder.

(4) Where the waste is intended for export the waste handler shall obtain consent to the movements of the waste from the Authority.

(5) The requirements set out in sub-rule (1) to (3) shall be supplemented by the provisions of the Motor Vehicle and Road Traffic Act Chap. 48:50 and Regulations made thereunder.

Conditions of transport

17.  A generator or handler of waste shall ensure that the waste is

(a) packaged so as to prevent any leakage under normal transportation conditions or potentially dangerous situations;

(b) properly labelled, marked and bearing an identification number so as to identify the characteristics and dangers associated with its transportation.

PART V
WASTE MANIFEST

Waste Manifest System

18.  (1) Every person that handles waste shall prepare a manifest, in such form as may be prescribed by the Authority.

(2) If there is a significant discrepancy between the manifest, and the quantity and characteristics of waste received by the waste handling facility, the waste handling facility shall attempt to resolve the discrepancy.
(3) Where the discrepancy mentioned in sub-rule (2) is not resolved within fifteen (15) working days of its occurrence, the holder of the waste handling permit shall submit a written report to the Authority together with a copy of the manifest for consideration.

(4) If within forty-five (45) days of the date on which the consignment of waste is collected from the premises of origin, a generator does not receive a signed and dated copy of the manifest from the handler of waste, the generator shall submit an exception report to the Authority together with a legible copy of the waste handling facility manifest and a signed letter from the generator, describing the investigations carried out to locate the consignment of waste together with the findings of those investigations.

(5) No person shall receive waste without a manifest.

PART VI
MISCELLANEOUS

Waste Register

19. (1) The Authority shall establish and maintain a Waste Register and an index to the Register in such form as it thinks fit, including an electronic data storage and retrieval system.

(2) The Authority shall enter in the Register the details and status of every-

(a) application for registration as a generator or handler of waste;
(b) application for a waste handling permit;
(c) application for a variation or transfer of a waste handling permit;
(d) waste handling permit, including the terms and conditions subject to which it was issued;
(e) any decision of the Authority to suspend or cancel a waste handling permit;
(f) refusal to issue a waste handling permit; and
(g) any other documents that the Authority deems necessary.

(3) The Authority shall keep the Waste Register open to inspection by the public at its principal office during ordinary business hours and shall provide members of the public with extracts from the Waste Register on payment of a prescribed fee for the cost of making copies.
Trade secrets and confidential business information

20. (1) In any application for registration or a waste handling permit, made under these Rules, the applicant, upon payment of the prescribed fee, may assert a claim that any of the information to be supplied to the Authority is a trade secret or confidential business information, and request that such information be omitted from the register.

(2) The Authority may reject the claim for the reason that:

(a) the applicant has not disclosed the basis for the claim;

(b) the basis disclosed is invalid; or

(c) the public interest in disclosing the information clearly out-weighs any prejudice to the applicant.

(3) The Authority shall omit from the Waste Register any information which the applicant claims under this rule should be treated as a trade secret or confidential business information, if-

(a) the Authority does not contest the claim; or

(b) the Authority rejects the claim, but the claim is upheld on appeal by the Commission.

Wilful omission

21. Where the holder of a waste handling permit makes a misrepresentation or wilful omission in obtaining the permit or in any report submitted to the Authority or in any other way obtained the waste handling permit in contravention of section 62(c) of the Act the procedures set out in in sections 63 to 68 inclusive and section 71 aforesaid as appropriate shall apply.

Recordkeeping

22. (1) Every holder of a waste handling permit shall make and maintain all records as soon as reasonably practical and shall keep such records in such form as may be prescribed by the Authority, including electronic format, for a period of not less than five (5) years.

(2) A holder of a waste handling permit shall ensure that all records kept under this Rule are available to authorised officers of the Authority at the holder’s facility on request during normal office hours of the facility.
Issuance of Bond

23. In furtherance of section 34(1) (d) of the Act the holder of a waste handling permit may be required to place with the Authority a bond in an amount specified by the Authority which may be forfeited to the Authority where a condition specified in such permit is violated.

Annual Report

24. (1) The Authority may request a generator or handler of waste to submit an annual report concerning the conduct of its operations.

(2) The Annual Report mentioned in sub-rule (1) shall describe actions to recycle, reuse, reclaim or otherwise reduce the generation of waste.

Duties of Authority

25. The Authority shall institute efforts to encourage waste minimisation including-

(a) establishing waste prevention programmes, plans or measures;

(b) encouraging programmes to rethink, reuse, reduce and recycle waste;

(c) providing technical guidance to waste operators and handlers and other interested groups or persons;

(d) establishing cooperation with local authorities and private sector businesses particularly small business on waste management practices including actions that make waste recycling easier;

(e) carrying out research aimed at promoting the use of innovative ideas or technology on recycling and waste collection from households; and

(f) such other measures as the Authority deems appropriate.

Appeals

26. (1) Any person who is aggrieved by a decision of the Authority may at any time within twenty-eight days of the decision, by notice in writing appeal against such decision.
(2) Appeals shall be made to the Environmental Commission, in accordance with rules applicable to appeals under the Act.
# SCHEDULE I

## Hazardous Waste

<table>
<thead>
<tr>
<th>Waste Code</th>
<th>Type of Waste</th>
</tr>
</thead>
</table>
| A1010      | Metal wastes and waste consisting of alloys of any of the following:  
- Antimony  
- Arsenic  
- Beryllium  
- Cadmium  
- Lead  
- Mercury  
- Selenium  
- Tellurium  
- Thallium |
| A1020      | Waste having as constituents or contaminants, excluding metal waste in massive form, any of the following:  
- Antimony; antimony compounds  
- Beryllium; beryllium compounds  
- Cadmium; cadmium compounds  
- Lead; lead compounds  
- Selenium; selenium compounds  
- Tellurium; tellurium compounds |
| A1030      | Wastes having as constituents or contaminants any of the following:  
- Arsenic; arsenic compounds  
- Mercury; mercury compounds  
- Thallium; thallium compounds |
| A1040      | Wastes having as constituents any of the following:  
- Metal carbonyls  
- Hexavalent chromium compounds |
<p>| A1050      | Galvanic sludges |
| A1060      | Waste liquors from the pickling of metals |
| A1070      | Leaching residues from zinc processing, dust and sludges such as jarosite, hematite, etc. |
| A1080      | Waste zinc residues containing lead and cadmium in concentrations sufficient to exhibit Schedule II characteristics |
| A1090      | Ashes from the incineration of insulated copper wire |
| A1100      | Dusts and residues from gas cleaning systems of copper smelters |
| A1110      | Spent electrolytic solutions from copper electrefining and electrowinning operations |
| A1120      | Waste sludges, excluding anode slimes, from electrolyte purification systems in copper electrefining and electrowinning operations |
| A1130      | Spent etching solutions containing dissolved copper |
| A1140      | Waste cupric chloride and copper cyanide catalysts |
| A1150      | Precious metal ash from incineration of printed circuit boards |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1160</td>
<td>Waste lead-acid batteries, whole or crushed</td>
</tr>
<tr>
<td>A1170</td>
<td>Waste batteries which exhibit Schedule II characteristics to an extent to render them hazardous</td>
</tr>
<tr>
<td>A1180</td>
<td>Waste electrical and electronic assemblies or scrap containing components such as accumulators and other batteries included in Schedule 1, mercury-switches, glass from cathode ray tubes and other activated glass and PCB-capacitors, or which exhibit Schedule II characteristics to an extent to render them hazardous.</td>
</tr>
<tr>
<td>A1190</td>
<td>Waste metal cables coated or insulated with plastics containing or contaminated with coal tar, PCB, lead, cadmium, other organohalogen compounds or other Schedule II characteristics to an extent to render them hazardous.</td>
</tr>
<tr>
<td>A2010</td>
<td>Glass waste from cathode-ray tubes and other activated glasses</td>
</tr>
<tr>
<td>A2020</td>
<td>Waste inorganic fluorine compounds in the form of liquids or sludges.</td>
</tr>
<tr>
<td>A2030</td>
<td>Waste catalysts.</td>
</tr>
<tr>
<td>A2040</td>
<td>Waste gypsum arising from chemical industry processes which exhibit Schedule II characteristics to an extent to render them hazardous.</td>
</tr>
<tr>
<td>A2050</td>
<td>Waste asbestos (dusts and fibres)</td>
</tr>
<tr>
<td>A2060</td>
<td>Coal-fired power plant fly-ash which exhibit Schedule II characteristics to an extent to render them hazardous.</td>
</tr>
<tr>
<td>A3010</td>
<td>Waste from the production or processing of petroleum coke and bitumen</td>
</tr>
<tr>
<td>A3020</td>
<td>Waste mineral oils unfit for their originally intended use</td>
</tr>
<tr>
<td>A3030</td>
<td>Wastes that contain, consist of or are contaminated with leaded anti-knock compound sludges</td>
</tr>
<tr>
<td>A3040</td>
<td>Waste thermal (heat transfer) fluids</td>
</tr>
<tr>
<td>A3050</td>
<td>Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives.</td>
</tr>
<tr>
<td>A3060</td>
<td>Waste nitrocellulose</td>
</tr>
<tr>
<td>A3070</td>
<td>Waste phenols, phenol compounds including chlorophenol in the form of liquids or sludges</td>
</tr>
<tr>
<td>A3080</td>
<td>Waste ethers.</td>
</tr>
<tr>
<td>A3090</td>
<td>Waste leather dust, ash, sludges and flours when containing hexavalent chromium compounds or biocides</td>
</tr>
<tr>
<td>A3100</td>
<td>Waste paring and other waste of leather or of composition leather not suitable for the manufacture of leather articles containing hexavalent chromium compounds or biocides</td>
</tr>
<tr>
<td>A3110</td>
<td>Fellmongery wastes containing hexavalent chromium compounds or biocides or infectious substances</td>
</tr>
<tr>
<td>A3120</td>
<td>Fluff - light fraction from shredding</td>
</tr>
<tr>
<td>A3130</td>
<td>Waste organic phosphorous compounds</td>
</tr>
<tr>
<td>A3140</td>
<td>Waste non-halogenated organic solvents</td>
</tr>
<tr>
<td>A3150</td>
<td>Waste halogenated organic solvents</td>
</tr>
<tr>
<td>A3160</td>
<td>Waste halogenated or unhalogenated non-aqueous distillation residues arising from organic solvent recovery operations</td>
</tr>
<tr>
<td>A3170</td>
<td>Wastes arising from the production of aliphatic halogenated hydrocarbons (such as chloromethane, dichloro-ethane, vinyl chloride, vinylidene chloride, allyl chloride and epichlorhydrin)</td>
</tr>
<tr>
<td>A3180</td>
<td>Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyl (PCB), poly-chlorinated terphenyl (PCT), polychlorinated naphthalene (PCN) or polybrominated biphenyl (PBB), or any other polybrominated analogues of these compounds, at a concentration level of 50 mg/kg or more³¹</td>
</tr>
</tbody>
</table>

³⁰ PCBs are at a concentration level of 50 mg/kg or more.
³¹ The 50 mg/kg level is considered to be an internationally practical level for all wastes. However, many individual countries have established lower regulatory levels (e.g., 20 mg/kg) for specific wastes.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3190</td>
<td>Waste tarry residues (excluding asphalt cements) arising from refining, distillation and any pyrolytic treatment of organic materials</td>
</tr>
<tr>
<td>A3200</td>
<td>Bituminous material (asphalt waste) from road construction and maintenance, containing tar</td>
</tr>
<tr>
<td>A4010</td>
<td>Wastes from the production, preparation and use of pharmaceutical products</td>
</tr>
<tr>
<td>A4020</td>
<td>Clinical and related wastes; that is wastes arising from medical, nursing, dental, veterinary, or similar practices, and wastes generated in hospitals or other facilities during the investigation or treatment of patients, or research projects</td>
</tr>
<tr>
<td>A4030</td>
<td>Wastes from the production, formulation and use of biocides and phytopharmaceuticals, including waste pesticides and herbicides which are off specification, outdated, or unfit for their originally intended use</td>
</tr>
<tr>
<td>A4040</td>
<td>Wastes from the manufacture, formulation and use of wood-preserving chemicals</td>
</tr>
<tr>
<td>A4050</td>
<td>Wastes that contain, consist of or are contaminated with any of the following:</td>
</tr>
<tr>
<td></td>
<td>• Inorganic cyanides, excepting precious-metal-bearing residues in solid form containing traces of inorganic cyanides</td>
</tr>
<tr>
<td></td>
<td>• Organic cyanides</td>
</tr>
<tr>
<td>A4060</td>
<td>Waste oils/water, hydrocarbons/water mixtures, emulsions</td>
</tr>
<tr>
<td>A4070</td>
<td>Wastes from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish</td>
</tr>
<tr>
<td>A4080</td>
<td>Wastes of an explosive nature</td>
</tr>
<tr>
<td>A4090</td>
<td>Waste acidic or basic solutions</td>
</tr>
<tr>
<td>A4100</td>
<td>Wastes from industrial pollution control devices for cleaning of industrial off-gases</td>
</tr>
<tr>
<td>A4110</td>
<td>Wastes that contain, consist of or are contaminated with any of the following:</td>
</tr>
<tr>
<td></td>
<td>• Any congenor of polychlorinated dibenzo-furan</td>
</tr>
<tr>
<td></td>
<td>• Any congenor of polychlorinated dibenzo-P-dioxin</td>
</tr>
<tr>
<td>A4120</td>
<td>Wastes that contain, consist of or are contaminated with peroxides</td>
</tr>
<tr>
<td>A4130</td>
<td>Waste packages and containers containing substances in concentrations sufficient to exhibit Schedule II characteristics</td>
</tr>
<tr>
<td>A4140</td>
<td>Waste consisting of or containing off specification or outdated chemicals in concentrations sufficient to exhibit Schedule II characteristics</td>
</tr>
<tr>
<td>A4150</td>
<td>Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on human health and/or the environment are not known</td>
</tr>
<tr>
<td>A4160</td>
<td>Spent activated carbon</td>
</tr>
</tbody>
</table>

---

32 “Outdated” means unused within the period recommended by the manufacturer.
33 This entry does not include wood treated with wood preserving chemicals.
34 “Outdated” means unused within the period recommended by the manufacturer.
### SCHEDULE II

**Hazardous Characteristics**

<table>
<thead>
<tr>
<th>UN CLASS</th>
<th>CODE</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>H1</td>
<td>Explosive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.</td>
</tr>
<tr>
<td>3</td>
<td>H3</td>
<td>Flammable liquids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The word “flammable” has the same meaning as “inflammable”. Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc., but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.5°C, closed-cup test, or not more than 65.6°C, open-cup test. (Since the results of open-cup tests and of closed-cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowance for such differences would be within the spirit of this definition).</td>
</tr>
<tr>
<td>4.1</td>
<td>H4.1</td>
<td>Flammable solids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Solids, or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.</td>
</tr>
<tr>
<td>4.2</td>
<td>H4.2</td>
<td>Substances or wastes liable to spontaneous combustion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.</td>
</tr>
<tr>
<td>4.3</td>
<td>H4.3</td>
<td>Substances or wastes which, in contact with water emit flammable gases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Substances or wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.</td>
</tr>
<tr>
<td>5.1</td>
<td>H5.1</td>
<td>Oxidizing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen cause, or contribute to, the combustion of other materials.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>UN CLASS</th>
<th>CODE</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
</table>
| 5.2      | H5.2 | Organic Peroxides  
Organic substances or wastes which contain the bivalent-o-o-structure are thermally unstable substances which may undergo exothermic self-accelerating decomposition |
| 6.1      | H6.1 | Poisonous (Acute)  
Substances or wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact. |
| 6.2      | H6.2 | Infectious substances  
Substances or wastes containing viable microorganisms or their toxins which are known or suspected to cause disease in animals or humans. |
| 8        | H8   | Corrosives  
Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport; they may also cause other hazards. |
| 9        | H10  | Liberation of toxic gases in contact with air or water  
Substances or wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities. |
| 9        | H11  | Toxic (Delayed or chronic)  
Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity. |
| 9        | H12  | Ecotoxic  
Substances or wastes which if released present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation and/or toxic effects upon biotic systems. |
| 9        | H13  | Capable, by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above. |