COURSE OUTLINE

Program Title:	**Scheduled Waste (SW) management**
OVERVIEW	Scheduled Waste (SW) management in Malaysia is regulated under the Environmental Quality (Scheduled Wastes) Regulations 2005, enforced through the Environmental Quality Act 1974. It requires all waste generators to properly classify, label, store, and transport hazardous waste using licensed service providers, and to notify the Department of Environment (DOE) within 30 days of generating waste. Each type of waste is assigned a specific code (e.g., SW305, SW409), and annual reporting is mandatory. Improper management of SW such as illegal disposal, failure to report, or unsafe handling can lead to severe penalties, including fines up to RM500,000 and imprisonment for up to five years under Section 34B of the Act. Best practices such as source reduction, on-site pre-treatment, use of spill containment, proper record-keeping, and staff training are essential to ensure compliance and protect the environment.
LEARNING OUTCOME	By the end of this module, participants will be able to: • Explain the legal framework governing scheduled waste management in Malaysia. • Identify the classifications and codes of various types of scheduled waste. • Describe the roles and responsibilities of waste generators, transporters, and disposal facilities. • Recognize the consequences and penalties for non-compliance under the Environmental Quality Act 1974. • Apply best practices in handling, storing, transporting, and documenting scheduled waste to ensure safety and regulatory compliance
DURATION (days)	2 Days
Durations:	16 hours
TARGET PARTICIPANTS	This module is designed for: • Environmental, Safety & Health (EHS) officers and executives • Scheduled waste coordinators and compliance personnel • Production or maintenance supervisors handling hazardous materials • Waste management contractors and service providers • Facility managers responsible for environmental compliance • Individuals preparing for CEPSWAM certification or DOE audit

Course Content

Introduction & Ice-breaking

Module 1: Introduction to Scheduled Waste

Time: 9:00 AM – 10:30 AM

Module Content:

1. **Definition & Legal Context of Scheduled Waste**
    - Defined under the *Environmental Quality (Scheduled Wastes) Regulations 2005*
    - Examples of SW Codes (SW409, SW 410, SW 305, SW 306, SW 104)
    - Physical and chemical characteristics that qualify a material as SW (flammability, toxicity, etc.)
2. **Differences Between Scheduled Waste and General Waste**
    - Higher hazard profile: reactive, corrosive, ignitable
    - Potential risks to human health, workplace safety, and the environment
    - Regulatory burden and audit traceability requirements
3. **Consequences of Mismanagement**
    - Real-life incidents involving improper storage or illegal disposal
    - Penalties under Section 34B of the EQA 1974 (fines, imprisonment)
    - Impact on company reputation, sustainability reporting, and license renewal
4. **Interactive Activities**
    - *Icebreaker Quiz:* "Scheduled or Not?" — identify items from real workplace scenarios
    - *Group Discussion:* "What types of SW are typically generated in your facility?"

Module 2: Legislation & Roles of Agencies

Time: 10:45 AM – 1:00 PM

Module Content:

1. **Main Laws & Regulations Governing SW**
    - **Environmental Quality Act 1974 (EQA)**
        - *Section 34B:* Prohibition of unlawful disposal (heavy fines & imprisonment)
        - *Section 51:* Powers of Director General / Authorized Officers (DOE)
    - **Environmental Quality (Scheduled Wastes) Regulations 2005**
        - First and Second Schedules – waste categories & labelling/storage requirements
    - **Supporting Acts:**
        - *OSHA 1994* – Hazard communication, worker safety for chemical hazards
2. **Roles & Responsibilities of Agencies**
    - **Department of Environment (DOE)**
        - Licensing, monitoring, enforcement
        - Oversight of e-consignment system
    - **Licensed Contractors**
        - Examples: Kualiti Alam, Shan Poornam, Tex Cycle
        - Must be registered and comply with approved waste recovery or disposal processes
    - **Waste Generators**

- Must classify, label, record and dispose SW only via licensed parties
- Required to submit e-schedule and retain consignment records

3. **Notification & Consignment Process**
    - Waste notification: when needed, how to notify DOE
    - Introduction to **e-Consignment (e-SW)** system:
        - Generator → Transporter → Final Disposal Facility
        - Ensures traceability and compliance
        - Timeline and document flow overview
4. **Interactive Activities**
    - *Mini Case Study:* Analyze a real non-compliance incident and discuss what went wrong
    - *Matching Exercise:* Match legislation sections with obligations (e.g. Section 34B No illegal dumping)

Module 3: Identification & Risk Assessment of Scheduled Waste

Time: 2:00 PM – 3:30 PM

Module Content:

1. **Introduction to SW Codes & Categories**
    - Using the *First Schedule – SW Regs 2005* for reference
    - Common industrial examples:
        - SW305 – Used organic solvents
        - SW110 – Oily sludge
        - SW409 – Used lead-acid batteries
    - Identifying SW from **Section 13 & 14 of the SDS (Safety Data Sheet)**
2. **Physical & Chemical Hazards of SW**
    - Properties such as flammability, reactivity, corrosiveness, toxicity
    - Environmental interactions: water reactivity, heat generation, vapor release
    - General rule: If it requires special PPE, storage precautions, or hazard symbols → likely SW
3. **Basic Risk Evaluation Techniques**
    - Preliminary risk assessment based on:
        - Quantity generated
        - Frequency of waste generation
        - Storage location and surrounding environment
    - Use of simple **3×3 or 5×5 Risk Matrix** (likelihood × severity)
    - Case examples:
        - Spillage of solvent waste in processing line
        - Temporary sludge buildup in tank farm
        - Faded or missing label on a chemical drum
4. **Interactive Activities**
    - *Hands-On Identification:* Review real SDS or mock labels—determine SW classification
    - *Group Exercise:* Risk assess 2–3 simulated waste scenarios using a matrix template
    - *Quick Poll:* "Which of these waste types is considered high-risk and why?"

Module 4: Labelling, Storage & Recordkeeping of Scheduled Waste

Time: 3:45 PM – 5:00 PM

Learning Objectives:

Module Content:

1. **Labelling Requirements**
    - As prescribed in the *First Schedule of SW Regs 2005*
    - Required info:
        - SW Code (e.g. SW305)
        - Waste description (e.g. "Used Solvent")
        - Date of generation
        - Name of waste generator
    - Colour coding, visibility, hazard symbols (NFPA/GHS)
    - Real-world label example:
        - *"SW409 – Used Lead-Acid Battery, Date: 03/07/2025, Generator: ABC Chemicals Sdn. Bhd."*
2. **Storage Guidelines & 180-Day / 20MT Rule**
    - Legal threshold:
        - Max. **180 days** or **20 metric tonnes**, whichever comes first
    - Storage conditions:
        - Covered, ventilated, spill-proof flooring
        - Away from water sources or ignition
        - Signage: “SCHEDULED WASTE STORAGE AREA – NO SMOKING”
    - Layout principles:
        - Clear segregation by waste type
        - FIFO (First-In-First-Out) management for rotation
3. **Recordkeeping Essentials**
    - Types of records:
        - e-Schedule reports
        - e-Consignment notes
        - Waste generation logbook
        - Monthly summary submission to DOE
    - Retention period: **Minimum 3 years**
    - Digital vs hardcopy systems: filing protocols, access control
    - Assigning a responsible person or custodian
4. **Interactive Activities**
    - *Labelling Simulation:* Teams draft mock SW labels based on case scenarios
    - *Mini-Audit Walkthrough:* Identify storage compliance issues in a sample layout
    - *Check & Correct:* Review a “faulty” label—participants fix errors collaboratively

Module 5: Transportation, Consignment & Disposal of Scheduled Waste

Time: 9:00 AM – 10:45 AM (Day 2)

Module Content:

1. **Transportation Requirements**
    - Only licensed transporters registered with the **Department of Environment (DOE)** may transport SW
    - Vehicle requirements:
        - Display of hazard signage (e.g. GHS/NFPA)
        - Emergency spill kit onboard
        - Secure containers and route planning
    - No open transport of SW; sealed, leak-proof containment mandatory
    - Driver training and awareness (defensive driving, SW protocols)
2. **Consignment Documentation (e-SW System)**
    - **e-Consignment Note (e-SW):**
        - Prepared by generator, confirmed by transporter, closed by disposal facility
        - Mandatory before any waste is moved
    - Key elements:
        - Waste code, generator info, transporter license, disposal location
    - Retention period: minimum **3 years**
    - Digital signature workflow and submission timelines
    - Avoiding ghost deliveries or skipped approvals
3. **Disposal Methods & Licensed Contractors**
    - Only approved contractors can treat/dispose SW
    - Types of disposal:
        - **Thermal treatment (incineration)**
        - **Secure landfill**
        - **Recovery/Recycling** for specific wastes (e.g. SW410 – waste oil)
    - Directory of licensed contractors (DOE registry)
    - Generators retain full responsibility until disposal is complete (cradle-to-grave principle)
4. **Interactive Activities**
    - *Simulated e-SW Walkthrough:* Fill out sample e-Consignment forms based on case study
    - *Flow Mapping:* Team builds visual map of the complete SW transport & disposal process
    - *Spot the Gap:* Evaluate a flawed consignment note for missing/inaccurate data

Module 6: Documentation & Internal Audit of Scheduled Waste

Time: 11:00 AM – 1:00 PM (Day 2)

Module Content:

1. **Mandatory & Supporting Documents**
    - **Primary Documents:**
        - e-Schedule (Monthly Waste Summary)
        - e-Consignment Notes (each waste transfer)
        - Waste generation logbook
        - DOE annual reports

- **Supporting Documents:**
  - SDS (Safety Data Sheet) for chemical identification
  - Training records for workers handling SW
  - Waste transfer receipts and proof of disposal
  - Inspection reports, internal memos, supplier correspondence

2. **Document Control & Retention**
   - **Retention Requirements:**
     - Minimum 3 years (as per SW Regs 2005)
   - Storage best practices:
     - Electronic vs physical folders
     - Backup protocols (cloud + local)
     - Access control and indexing
   - Assigning a waste document custodian—clarify roles and responsibilities
3. **Internal Audit Essentials**
   - **Purpose:** Evaluate compliance, identify gaps, and implement improvements
   - Audit flow:

     Establish audit scope

     Review documentation and on-site practices

     Identify non-conformities

     Recommend corrective actions

     Record & follow-up (CAPA tracking)
   - Use of audit checklists (e.g. "SW Storage Compliance", "Label Review", "e-SW Record Audit")

Module 7: Case Studies & Emerging Issues in Scheduled Waste Management

Time: 2:00 PM – 3:30 PM (Day 2)

Learning Objectives:

Module Content:

1. **Real-World Case Studies**
   - **Case 1: Illegal disposal of solvent waste near water bodies**
     - Root cause: lack of contractor verification and proper recordkeeping
     - Outcome: fine under Section 34B, reputational damage
   - **Case 2: Audit failure due to missing e-SW records**
     - Root cause: poor documentation control, lack of training
     - Recovery: internal retraining and system revamp
   - **Case 3: Fire outbreak from unlabelled hazardous waste**
     - Root cause: improper segregation, expired storage limit
     - Highlight: breach of 180-day rule and lack of internal audit
   - ***Discussion Focus:***
     - What went wrong?
     - What controls could have prevented the incident?
     - What are the lessons for your own workplace**?**

Module 8: Evaluation, Practical Activities & Closing

Time: 3:45 PM – 5:00 PM (Day 2)
Learning Objectives:

Module Content:

1. Final Assessment (Quiz / Knowledge Check)
2. Practical Rotating Stations (Simulation-Based)
3. Reflection & Action Planning
4. Course Wrap-Up & Certificate Handover