



## **GROUNDWATER, DRAINAGE AND STORMWATER PROTECTION TRAINING**



MTBM Group Sdn. Bhd. (1600656-M)

Level 8, MCT Tower, Sky Park, One City, Jalan USJ 25/1, 47650 Subang Jaya, Selangor

**Course Title:** Groundwater, Drainage and Stormwater Protection Training

**Course Validity:** 2 Days

**Validity:** Not Applicable

**HRD Corp Scheme:** Claimable

## **INTRODUCTION**

This training provides participants with knowledge and practical skills related to groundwater protection, drainage management and stormwater pollution control. It covers hydrological principles, groundwater vulnerability, drainage system design concepts, stormwater pollution sources, control strategies and Malaysian environmental regulatory requirements. Participants will learn how to plan, implement and monitor groundwater and stormwater protection measures to minimise environmental risks, support compliance and strengthen site-level environmental management.

## **OBJECTIVE(S):**

- Understand the fundamentals of groundwater systems and hydrology.
- Identify drainage and stormwater pollution risks at industrial and commercial sites.
- Apply effective groundwater, drainage and stormwater protection measures.
- Understand legal requirements under the Environmental Quality Act (EQA) 1974.
- Conduct inspections and monitoring of drainage and stormwater systems.
- Implement pollution control strategies such as detention ponds, oil traps and silt barriers.
- Strengthen operational controls for preventing contamination and runoff pollution.
- Improve environmental sustainability and compliance performance.

**TARGET GROUP(S):**

- Environmental Officers and Executives
- Facility Managers, Engineers and Technicians
- Maintenance and Operations Personnel
- Safety, Health and Environmental Practitioners
- Construction and Project Managers
- Water Management and Drainage Personnel
- Anyone involved in stormwater, drainage or groundwater protection

**ENTRY REQUIREMENT(S):**

- Able to read, write and communicate verbally in Malay/English

**TOPIC(S):**

1. Introduction to Groundwater, Drainage and Stormwater Protection
2. Hydrological Principles and Groundwater Movement
3. Groundwater Vulnerability, Contamination Sources and Risk Pathways
4. Drainage System Components and Flow Management
5. Stormwater Pollution Sources and Control Strategies
6. Legal Requirements: EQA 1974 and DOE Guidelines for Water Management
7. Engineering Controls: Silt Fences, Oil Interceptors, Sedimentation Ponds and Filters
8. Monitoring of Groundwater, Drainage and Stormwater Quality
9. Inspection, Maintenance and Operational Controls
10. Case Studies, Site Scenarios and Protection Planning

**LIST OF REFERENCE BOOK(S):**

- Environmental Quality Act 1974
- DOE Guidelines for Industrial Water and Stormwater Management
- National Water Quality Standards (NWQS)
- Hydrology and Drainage Engineering References
- ISO 14001:2015 (Monitoring and Measurement Requirements)

**LIST OF TEACHING AID(S):**

- LCD projector
- Groundwater and drainage diagrams
- Stormwater control device samples (demo)
- Case study worksheets
- Flip chart or whiteboard

**METHODOLOGY(S):**

- Interactive lecture
- Group discussion
- Case studies
- Demonstrations
- Scenario-based exercises

## TRAINING SCHEDULE

### Day 1

Time	Activity / Topic
8:30 am – 9:00 am	Registration and Introduction
9:00 am – 10:15 am	Topic 1: Groundwater, Drainage and Stormwater Fundamentals
10:15 am – 10:30 am	<b>Morning Tea Break</b>
10:30 am – 12:30 pm	Topic 2–3: Hydrology and Groundwater Vulnerability
12:30 pm – 1:30 pm	<b>Lunch Break</b>
1:30 pm – 3:30 pm	Topic 4: Drainage Systems and Flow Management
3:30 pm – 3:45 pm	<b>Afternoon Tea Break</b>
3:45 pm – 5:00 pm	Topic 5: Stormwater Pollution Sources and Controls

## TRAINING SCHEDULE

### Day 2

Time	Activity / Topic
8:30 am – 9:00 am	Recap of Day 1
9:00 am – 10:15 am	Topic 6: Legal Requirements for Water Management
10:15 am – 10:30 am	<b>Morning Tea Break</b>
10:30 am – 12:30 pm	Topic 7–8: Engineering Controls and Water Monitoring
12:30 pm – 1:30 pm	<b>Lunch Break</b>
1:30 pm – 3:30 pm	Topic 9: Inspection, Maintenance and Operational Controls
3:30 pm – 3:45 pm	<b>Afternoon Tea Break</b>
3:45 pm – 5:00 pm	Topic 10: Case Studies and Protection Planning Workshop