MTBM

INDUSTRIAL EFFLUENT TREATMENT SYSTEM (IETS) TRAINING

REGISTERED HRD CORP TRAINING PROVIDER

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MTBM Group Sdn. Bhd. (1600656-M)

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Course Title: Industrial Effluent Treatment System (IETS) Training

Course Validity: 2 Days

Validity: Not Applicable

HRD Corp Scheme: Claimable

INTRODUCTION

This training provides participants with comprehensive knowledge of Industrial Effluent Treatment Systems (IETS), including design concepts, operational processes, troubleshooting, monitoring, and regulatory compliance. It covers industrial effluent characteristics, treatment technologies, plant operation, sludge handling, analytical requirements and DOE obligations under the Environmental Quality (Industrial Effluent) Regulations. Participants will learn practical skills to manage IETS efficiently to ensure compliance, operational reliability and improved environmental performance.

OBJECTIVE(S):

- Understand the fundamentals of industrial effluent characteristics and pollution sources.
- Learn the design principles and components of IETS.
- Operate IETS effectively, including monitoring and process control.
- Identify common operational issues and apply troubleshooting techniques.
- Understand legal requirements related to IETS operation and effluent discharge.
- Conduct sampling, laboratory coordination and compliance monitoring.
- Implement preventive maintenance and optimise system performance.
- Strengthen organisational environmental compliance and pollution prevention efforts.

TARGET GROUP(S):

- Wastewater Treatment Plant (WWTP) Operators
- Environmental Officers and Executives
- Engineers, Technicians and Plant Maintenance Personnel
- Facility and Utility Management Teams
- Safety, Health and Environmental Practitioners
- Quality, Compliance and Process Control Personnel
- Anyone involved in effluent treatment or environmental operations

ENTRY REQUIREMENT(S):

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

TOPIC(S):

1. Introduction to Industrial Effluent and Pollution Sources
2. Overview of IETS and Treatment Process Flow
3. Physical, Chemical and Biological Treatment Methods
4. IETS Components: Equalisation Tank, Aeration, Sedimentation, Filtration etc.
5. Chemical Dosing, pH Adjustment and Coagulation–Flocculation
6. Sludge Management and Dewatering Techniques
7. Monitoring Parameters and Effluent Quality Standards
8. Instrumentation, Process Control and Troubleshooting
9. Legal Requirements: EQA 1974 and Industrial Effluent Regulations
10. Case Studies, Practical Scenarios and Performance Improvement

LIST OF REFERENCE BOOK(S):

- Environmental Quality Act 1974
- Environmental Quality (Industrial Effluent) Regulations
- DOE Guidelines for IETS Design and Operation
- Wastewater Treatment Engineering References
- ISO 14001:2015 (Monitoring and Measurement Requirements)

LIST OF TEACHING AID(S):

- LCD projector
- IETS process diagrams and flow schematics
- Sampling and monitoring equipment (demo)
- Case study worksheets
- Flip chart or whiteboard

METHODOLOGY(S):

- Interactive lecture
- Group discussion
- Case studies
- Demonstrations
- Troubleshooting exercises and simulation

TRAINING SCHEDULE

Day 1

Time	Activity / Topic
8:30 am – 9:00 am	Registration and Introduction
9:00 am – 10:15 am	Topic 1: Industrial Effluent and Pollution Fundamentals
10:15 am – 10:30 am	**Morning Tea Break**
10:30 am – 12:30 pm	Topic 2–3: IETS Overview, Process Flow and Treatment Methods
12:30 pm – 1:30 pm	**Lunch Break**
1:30 pm – 3:30 pm	Topic 4: IETS Components and Operational Principles
3:30 pm – 3:45 pm	**Afternoon Tea Break**
3:45 pm – 5:00 pm	Topic 5: Chemical Dosing and pH Adjustment

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: Sludge Management and Dewatering
10:15 am – 10:30 am	**Morning Tea Break**
10:30 am – 12:30 pm	Topic 7–8: Monitoring, Instrumentation and Troubleshooting
12:30 pm – 1:30 pm	**Lunch Break**
1:30 pm – 3:30 pm	Topic 9: Legal Requirements and Compliance Standards
3:30 pm – 3:45 pm	**Afternoon Tea Break**
3:45 pm – 5:00 pm	Topic 10: Case Studies and Operational Improvement Workshop