



3. REGULATORY FRAMEWORK

Section 49A of the Environmental Quality Act, 1974 requires that only those who have been certified by the DOE as **Competent Persons (CPs)** can carry out the **DOE-regulated functions** which include the preparation of IETS design calculations, engineering drawings and documents related to IETS which are meant for submission to the DOE. The extract of section 49A is reproduced in **Appendix A**.

4. CERTIFICATION PROCESS

Any **professional engineer** in the discipline of chemical engineering, environmental engineering, civil engineering, or other disciplines which have a strong emphasis on IETS design, who holds current registration with the Board of Engineers Malaysia (BEM) is eligible to undertake the program. The certification process comprises the following:

- (i) Passing the comprehensive examination
- (ii) Submission of Technical Experience Report
- (iii) Passing the Interview

Details of the above requirements are explained in the relevant sections below.

5. SYLLABUS / REFERENCES

- (i) **Regulatory Framework in Malaysia**
 - a) Section 49 (A) of the Environmental Quality Act, 1974;
 - b) Environmental Quality (Industrial Effluent) Regulation 2009; and
 - c) Effluent Discharged Standards as stated in the Environmental Quality (Industrial Effluent) Regulation 2009.



**ENVIRONMENT INSTITUTE OF MALAYSIA (EIMAS)
DEPARTMENT OF ENVIRONMENT**



(ii) Applicable Technical Reference Documents

- a) Environmental Quality Act 1974 and Environmental Quality (Industrial Effluent) Regulation 2009, published by International Law Publishers, Kuala Lumpur
- b) DOE Technical Guidance Document Series Number-DOE-IETS-9 : Guidance Document on the Design and Operation of Industrial Effluent Treatment Systems, Fourth Edition 2012, published by DOE Malaysia;
- c) DOE Technical Guidance Document Series Number-DOE-IETS-1 : Guidance Document on the Performance Monitoring of Industrial Effluent Treatment Systems, Fifth Edition 2012, published by DOE Malaysia; and
- d) DOE Technical Guidance Document Series Number-DOE-IETS-4 : Guidance Document on Industrial Effluent Characterization Study, First Edition Dec 2006, published by DOE Malaysia

(iii) Industrial Effluent Characteristics Studies

- a) Physical Parameters
- b) Chemical Parameters
- c) Bacteriological/Biological Parameters

(iv) Treatment Technologies

- a) Basic concept of IETS treatment processes
- b) Performance monitoring for Physical chemical and Biological treatment processes
- c) Operation and maintenance of Industrial Effluent Treatment Systems
- d) Engineering approach to addressing IETS noncompliance problems
- e) IETS reporting requirements