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## **1.0 Introduction**

Industrial training is an important component in engineering curriculum. Theories learnt in all the core and non-core courses will have to be applied into the real working environment in chemical industries.

At the end of this industrial training, students should be able to identify the types of work that chemical engineers do in real engineering world and appreciate the theoretical knowledge learnt. Perform basic engineering practices, including technical writing report, communication with colleagues, handling project and generating proposal for betterment of the industries. Lastly, have higher level of integrity, ethical and accountability in practicing engineering.



Figure 2.2: Location of the company according to the Google Maps

**Company Address :** No. 55, Jalan Timur 1, Kawasan Perindustrian Timur, 81000 Kulai, Johor.



Figure 2.3: Frontal view of the office building

## 2.1 Organization chart

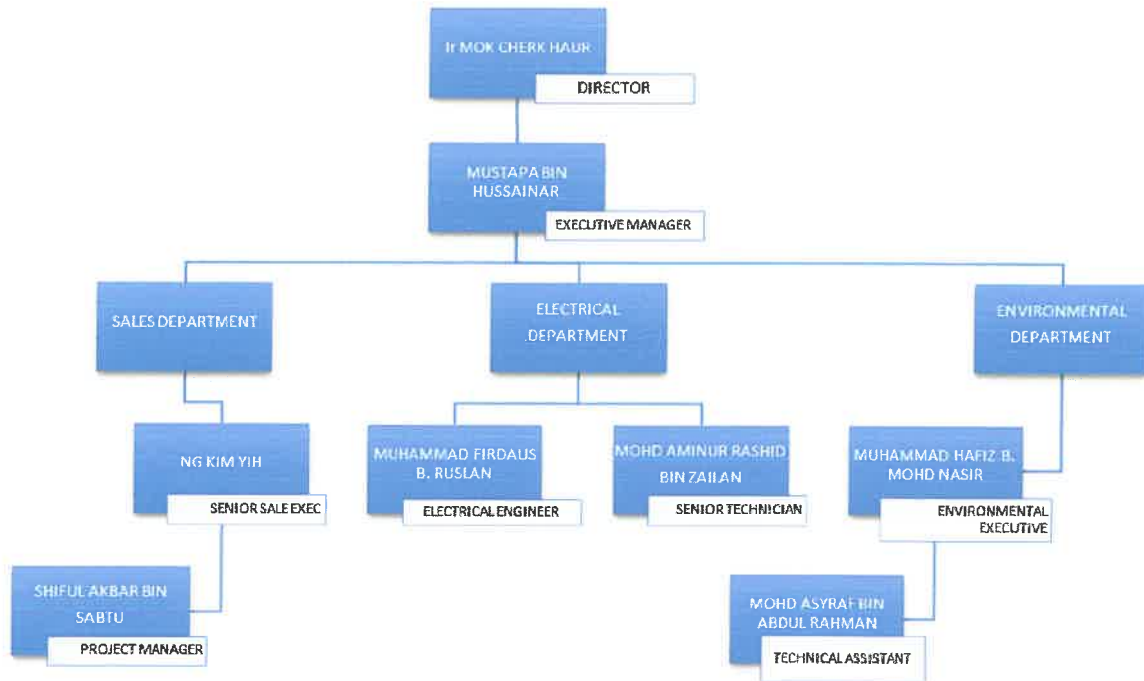


Figure 2.1.1: Engineering department organization chart

## 2.2 Vision and mission

### Vision

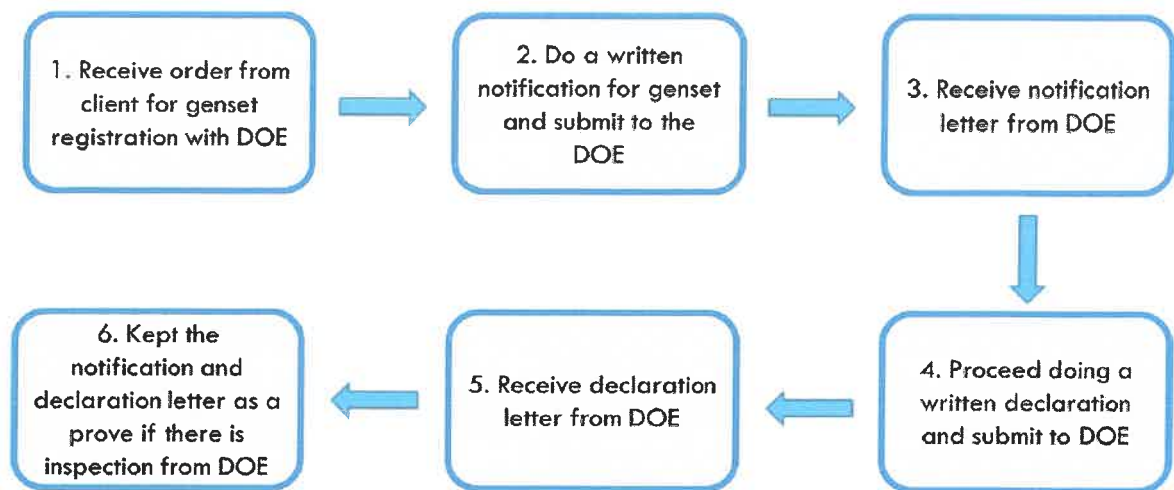
We are committed to grow our business through embracing technology, delivering strong partnership and by emphasizing on providing high level of customers satisfaction.

### Mission

Our mission is to provide high quality service that exceeds our client expectations.

### 3.0 Process flow

#### Registration of generator sets/genset with Department of environment (DOE)



#### **Description**

All generators including standby generator consuming more than 15 kg per hour of liquid fuel shall require a written notification from the Department of Environment before the commencement of installation work. The owners are legally bounded to submit such notification under Clean Air Regulation.

The company will receive an order from client for genset registration with DOE. The company will do a written notification for genset which include things like the specification of the genset and drawings of the genset and then submit to the DOE. Notification letter will be received from DOE as an approval of the written notification. Then, proceed doing a written declaration which include our declaration to strict compliance with the laws and that the information that has been provided is truth and complete. Declaration letter will be received from DOE as an approval of the written declaration. Both notification letter and declaration letter should be kept as a prove if there is inspection from DOE.

## 4.0 Daily activities

### 4.1 Preparation and submission of a written declaration of genset to DOE

Most of the time my daily activities involve in the preparation and submission of a written declaration of genset to DOE. The first weeks of my internship I was briefed about the purpose of a written declaration of genset and the steps to do it. The activities include fill in the declaration form where it requires the specification of the genset like its brand, model, engine capacity and the place where the genset will be commission.

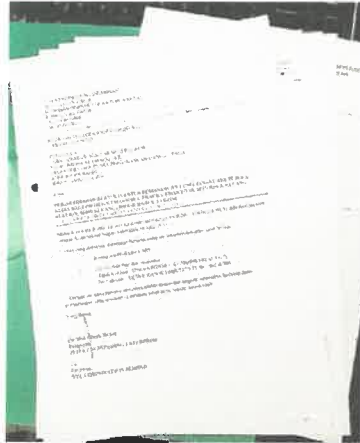


Figure 4.1: Examples of the declaration paper

Print the A1 size drawings of the genset like its site plan, details of genset plan layout and cross section and then highlight important point on the drawing and folds it into A4 size.

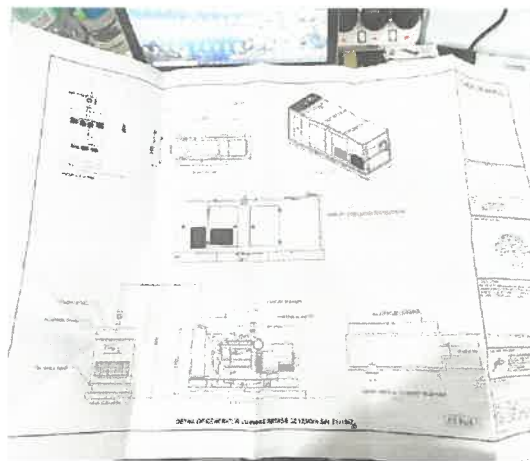


Figure 4.2: Detail drawing of the genset

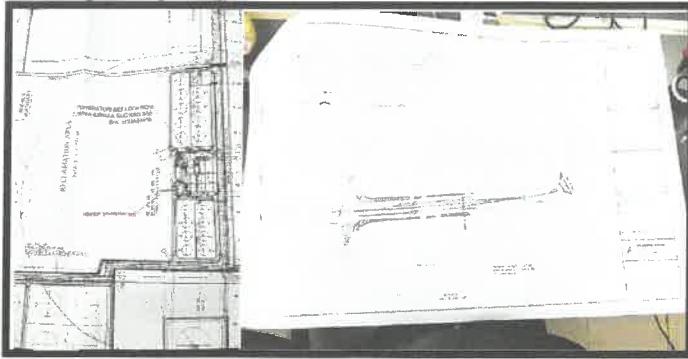


Figure 4.3: Detail of site plan drawing

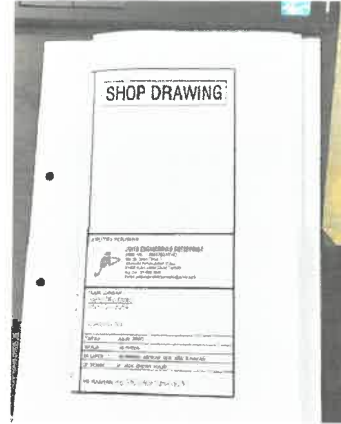


Figure 4.4: A1 drawing folded into A4 size

Arrange and filing the declaration paper and label it. Submit the complete written declaration to DOE. The soft copy and hard copy of the written declaration should be kept as a proof for example for DOE inspection.

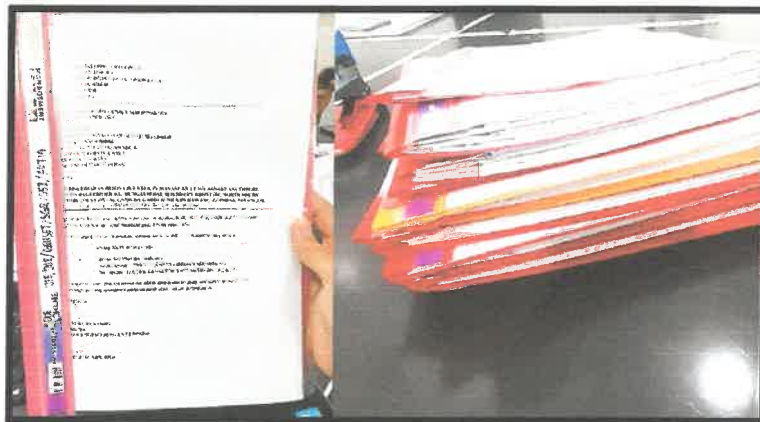


Figure 4.5: A complete written declaration

This daily activity has taught me about how to read drawings and increasing my drawing reading comprehension and also improve my document editing, filing and documenting skills.



## 4.2 Site visit

### 1. GKN Aerospace ( an aerospace company )

For my first site visit I have to follow my environmental officer for consultation on industrial effluent treatment system (IETS) with the client at GKN Aerospace which is an aerospace company. The client talks about their wastewater problems and discuss about the possibilities doing the project with us. I help him bringing important documents, take relevant picture inside the facilities and take notes on the important point from the discussion. My background in taking Introduction to Environmental Engineering subject has help me to catch-up with the conversation and the terms that being used.



Figure 4.6: Site visit at GKN Aerospace

## 2. Eik Lam Engineering ( a steel engineering plant )

Follow my environmental officer for consultation/proposal on installation of bagfilter and local exhaust ventilation (LEV) and site survey to determine the location and placement of the equipment. I have to take relevant picture inside the plant and take important point from the conversation such as important dates and numbers.



Figure 4.6: Site visit at Eik Lam Engineering

Overall site visit has improves my communication skills, it gives me an opportunity to observe and witness how business talk or consultation are carried out. It gives me an experience and idea of how it is done. It is also increase my general knowledge since i was given the opportunities to go inside the factory/facilities , it makes me being aware of essential equipment that can be found inside facilities/factories for example most factory have chimney, local exhaust ventilation (LEV) and their own air pollution control system which give a business opportunities to my company.

## 5.0 Description of mini project

### 5.1 Schedule waste management briefing

This briefing is important as our client complaint that some of our technician commit an offense of oil spillage when servicing a machine which can lead to a fine. We were given a chance to be exempt from the fine if we do a briefing about schedule waste management to the employees. So, I was given a task to execute the schedule waste management briefing to the employees.

The activities include researching about what constitute as a schedule waste and how to dispose it properly and create a presentation slide to be printed in A3 paper to be used during briefing and pick up a real schedule waste like oil filter and air filter to set an example during briefing.



Figure 5.1: Schedule waste management presentation slide



Figure 5.2: Schedule waste examples like oil filter and air filter



Create memorandum to inform other employees about the briefing and create an attendance list. Give a talk in front of more than 20 employees about schedule waste management. Lastly, create a report as a prove for the client that we have done the briefing.



Figure 5.3: Schedule waste management briefing

PK JUIITA Sdn Bhd

## REPORT OF SCHEDULED WASTE MANAGEMENT BRIEFING

NO. 55, JALAN TEMER 3, KAWASAN  
PARIKOSTERAN TEMER,  
81002, KUALA LUMPUR

PK JUIITA Sdn Bhd  
JUIITA ENGINEERING ENTERPRISE  
No. 55, Jalan Temer 3, Kawasan Perindustrian Temer, 81002 Kuala Lumpur  
www.pkjuita.com, www.juiita.com.my, Tel: 07-6633385 Fax: 07-6637021

Memorandum

Tarikh : 31<sup>st</sup> MAC 2021  
Kepada : Pegawai PK Juiita dan Juiita Engineering      PKJH-MEMO-012/21  
Dari : Bahagian Alam Sekitar (Environmental)  
Perkara : Tahap Awal Perancangan dan Bimbingan Terjadual

Untuk makluman, syarikat akan mengadakan latihan pengurusan sisa buangan terjadual khususnya kepada semua pekerja dari Juiita/Ent. Tahap awal ini diadakan kerana pihak syarikat telah mendapat aduan dari Syarikat Pembinaan Yeh Tieng Lay Sisa Basa - YTL yang mana syarikat akan melaksanakan amalan mihak ( servis Emission ) bagi mesin yang berada di lokasi pembinaan. Berhadapan tuntutan sisa mihak berhadapan dengan tuntutan dan pampasan tersebut, telah ditetapkan dengan skema RM2,000.00 kepada syarikat yang terlibat.

Berikut adalah seperti berikut :-

No	Tarikh/Waktu	Perkara	Sasaran
1.	1th April 2021 (Enam) 7.30 pagi - 8.00 pagi	Tahap Awal Pengurusan Sisa Buangan Terjadual	-Penerangan mengenai cara dan pampasan untuk menguruskan sisa buangan terjadual (Minyak, enjin, bateri, mampas udara)

Syarikat berharap semua pekerja dapat hadir seperti ditetapkan dalam dan ketepatan yang dibenarkan oleh semua pekerja amatlah diharapkan.

Sekian Terima Kasih

Yang Berbah,  
Istikomah Nur Huda  
Pegawai  
PK Juiita Sdn Bhd & Juiita Engineering Enterprise

Figure 5.4: Schedule waste management report and memorandum

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The outcome of the project has increase my confidence in public speaking and also communication with other employees, give me an event planning experience and applied my technical report writing skills. My knowledge about schedule waste from the Introduction to Environmental Engineering subject course are being applied.

## 5.2 Doing checklist for notification form for the construction of Industrial Effluent Treatment System (IETS)

Before any construction or commission of IETS, it has to get an approval first from DOE by submitting a written notification. In this project it is the construction of oily water separator. The activities include reading and understanding the notification form for construction of Industrial Effluent Treatment System (IETS). Then, summarise the content and prepare a checklist of all the requirement needed to present for the notification form.

The form is titled 'BUKUAN 59' and 'JURUH 57'. It is a notification form for the construction of an Industrial Effluent Treatment System (IETS). The form is divided into several sections:

- Section B: MAKLUMAT OPERASI** (Operational Information)
  - 1. Lokasi dan jenis perniagaan (Location and type of business)
  - 2. Alamat dan jenis/kuantiti/kegunaan air buangan (Address and type/quantity/usage of effluent)
  - 3. Jenis perolehan air buangan (Type of effluent)
  - 4. Jenis perolehan air buangan (Type of effluent)
  - 5. Jumlah air buangan (Quantity of effluent)
  - 6. Bilangan dan jenis peralatan (Number and type of equipment)
- Section C: MAKLUMAT MENGENAI PERALIHAN DAN PENGHUBUNGAN** (Information on Transfer and Connection)
  - 17. Bilangan dan jenis peralatan (Number and type of equipment)
  - 18. Bilangan dan jenis peralatan (Number and type of equipment)
  - 19. Bilangan dan jenis peralatan (Number and type of equipment)
  - 20. Bilangan dan jenis peralatan (Number and type of equipment)
  - 21. Bilangan dan jenis peralatan (Number and type of equipment)
  - 22. Bilangan dan jenis peralatan (Number and type of equipment)
- Table: Spesifikasi bahan mentah/hasil** (Raw material/finished product specifications)
 

Jenis/Spesifikasi	Unit/kuantiti	Kandungan/Nilai
...	...	...
...	...	...

Figure 5.5: Notification form for the construction of Industrial Effluent Treatment System (IETS)

Read the technical description of the Oily Water Separator to make sure they have provided information such as water design flow rate, treated effluent characteristics, process flow diagram, engineering drawing and etc. which is required by the notification form. This task is to make sure that our Oily Water Separator have provided all of the relevant information needed to get approval for its construction from DOE.

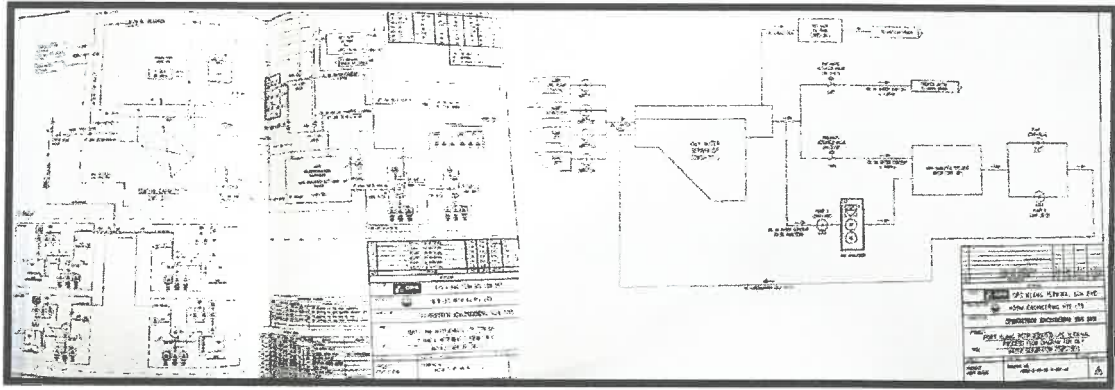


Figure 5.6: Oily Water Separator drawing and process flow diagram

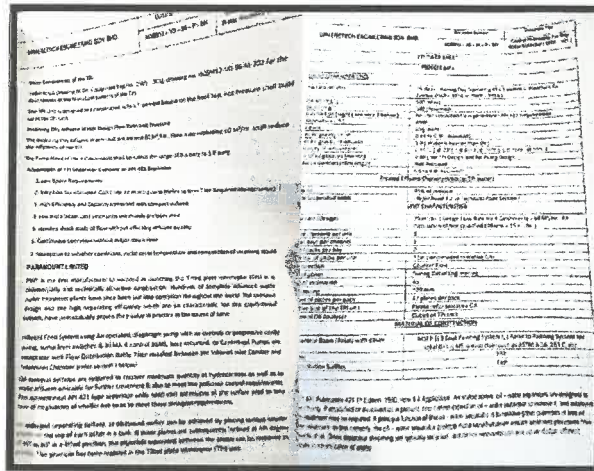


Figure 5.7: Technical description of the Oily Water Separator

This task has given me an exposure to technical reading comprehension and also reading and identifying different type of drawing.

### 5.3 Create a company profile for wastewater treatment

Company profile is something that will be given to client to attract them to do business with us and to show them that we are a legitimate business. I was given a task to revise and create new company profile slide for the wastewater treatment. In this task I have to understand the purpose of company profile and its structure. I design the company profile and find the updated information for example the corporate information, business activities, vision and mission, certificates, track record of past project, organization structure and so on.

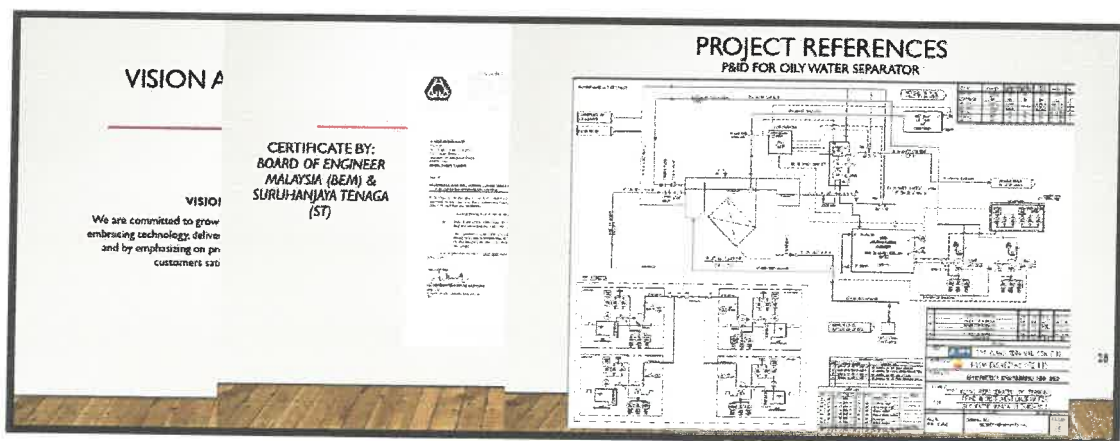


Figure 5.8: Company profile for wastewater treatment

I get to ask the manager to know more about the history of the company and expose me to the structure and organization of the company, its nature of business and in general business planning and marketing. It also implement my editing tools skills.

## **6.0 Conclusion**

My industrial training has been beneficial to me, it gives me an exposure to a real working environment thus helping me to build my confidence to face a real working experience. I was able to apply some of theoretical knowledge learnt especially in the chemical engineering subject in environment. Overtime I learn to understand and adapt to the working culture. It has improves my soft skills for example my confidence in communication with other colleagues and my experience in event planning and management. It also improves my technical skills such as in technical reading and engineering drawing reading comprehension.